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**THE STATE OF SOUTH CAROLINA
In The Supreme Court**

S.C. Supreme Court

APPEAL FROM THE ADMINISTRATIVE LAW COURT

Ralph K. Anderson III, Administrative Law Judge

Opinion No. 5274 (S.C. Ct. App. filed October 8, 2014)

Duke Energy Corporation.....Petitioner,

v.

South Carolina Department of Revenue.....Respondent.

APPENDIX FOR PETITION FOR A WRIT OF CERTIORARI

VOLUME IX

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Manufacture: From middle French about 1560, literally "made by hand". Thus, Make and Manufacture are closely related terms and ideas. Manufacture has changed in meaning. Hand-made now implies craft shop (or sweat shop?) technology and organization. Manufacture now implies mechanically-powered technology and division of labor. Merriam-Webster lists four definitions, two of which center on material goods, and two of which are more general and inclusive. Taken as a whole, manufacture relates to the process model of input – process – output, with the process being mechanized or at least organized. This model is only sensible if the product is well defined and the input is consumed to suit production.

The commercial-economic characterization of product as "goods and services" does not correlate with the legal formula quoted in Duke's 2002 letter "manufacturing of goods and materials". In the former, the goods are physical material and the services are immaterial (only incidentally involve physical transfer of material). In the latter, goods is either redundant or must include products other than physical material, such as electrical energy. This is in line with two more general dictionary definitions of goods:

That which is produced, then traded, bought or sold, then finally consumed.

Something that has economic utility or satisfies an economic want.

I would conclude that the language "manufacturing of goods and materials" is deliberately broad so as to avoid inadvertent exemptions. "Goods and Materials" here would fall under the "Goods" part of "Goods and Services" in economic terms.

1. Services
2. Goods
 - a. Goods other than materials
 - b. Materials

I believe you stated that production of electricity is specifically defined as manufacture in SC law.

That would be consistent with my conclusion.

Another way to analyze this is to look at the distinction between service (servile) activities and manufacturing activities. The former has the flavor of (slavishly) following orders that are peculiar to the instant. Today I order one sort of action, tomorrow another. The difference may be quantitative, but more generally is not. For example, an oil change today and a brake job tomorrow (but not two oil changes). The service may not even be "product-ized" (well defined and priced). For example, "What it will cost me to fix that funny noise in my engine?". Compare that with the time-invariant concept of a product or commodity. A pig tomorrow is a pig today, but I may buy two pigs or none. I would conclude that if a product (other than hours of service) can be metered, it is the result of manufacturing, not service. Taken to its logical conclusion, if delivering electricity was a service then I would pay a flat monthly fee, regardless of consumption (like my garbage service).

Finally, the language, even though mutable, has pre-Einsteinian roots. Traditional language did not even recognize the concept of energy. The only physical interpretation that will serve the future must be consistent with the idea that energy and mass are interchangeable. Transfer of any form of energy as a commodity should be treated on the same legal basis as transfer of mass. This is consistent with existing cases where geothermal energy is piped and metered, and cases where natural gas is sold in terms of heat value, not mass. The transfer of electricity is no more ethereal than the transfer of heat.

SCDOR00017212

117-1700.3. Definition of Utility.

The word "utilities" is hereby defined to include but not necessarily be limited to (1) water companies; (2) power companies, whether hydroelectric, steam, atomic, or other kinds for the transmission of power; (3) electric light companies; (4) electric cooperatives; (5) telephone and telegraph companies. Utilities engaged in the transportation for hire of persons or property are classified separately.

SCDOR00017213

DOCKET NO. 2009-226-E

Application of Duke Energy Carolinas, LLC for Authority to Adjust and Increase Its Electric Rates and Charges

**DIRECT TESTIMONY OF
DHIAA M. JAMIL FOR
DUKE ENERGY CAROLINAS, LLC**

3818

1 I. INTRODUCTION AND PURPOSE

2 Q. PLEASE STATE YOUR NAME, ADDRESS, AND POSITION.

3 A. My name is Dhiaa M. Jamil. My business address is 526 South Church Street,
4 Charlotte, North Carolina. I am Group Executive and Chief Generation Officer for
5 Duke Energy Corporation ("Duke Energy") and Chief Nuclear Officer ("CNO") for
6 Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company").

7 Q. WHAT ARE YOUR PRESENT RESPONSIBILITIES AT DUKE ENERGY?

8 A. As Group Executive and Chief Generation Officer, I am responsible for the safe,
9 reliable, and efficient operation of the Company's nuclear, fossil, and hydro fleets.

10 Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND
11 PROFESSIONAL EXPERIENCE.

12 A. I graduated from the University of North Carolina at Charlotte with a Bachelor of
13 Science degree in electrical engineering. I am a professional engineer in North
14 Carolina and South Carolina and have completed the Institute of Nuclear Power
15 Operations' ("INPO") senior nuclear plant management course and received my
16 Duke Energy technical nuclear certification. I served as a senior member of the
17 Institute of Electrical & Electronics Engineers ("IEEE") and recently completed a
18 three-year assignment as a member of the Council of the National Academy for
19 Nuclear Training. I was also a member of Dominion Energy Management Safety
20 Review Advisory Committee, the Tennessee Valley Authority Nuclear Safety
21 Review Board, and currently serve on the INPO Executive Advisory Group and the
22 Charlotte Research Institute board of directors.

23 I am currently the chairman of the Energy Production and Infrastructure
24 Center ("EPIC") Advisory Board for the University of North Carolina at Charlotte. I

DIRECT TESTIMONY OF DHIAA M. JAMIL
DUKE ENERGY CAROLINAS, LLC

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1 began my career at Duke Energy Carolinas in 1981 as a design engineer in the
2 design engineering department. After a series of promotions, I was named Oconee
3 Nuclear Station Electrical Systems Engineering Supervisor in 1989; Electrical
4 Engineering Manager in 1994; Maintenance Superintendent, McGuire Nuclear
5 Station, in 1997; Station Manager of McGuire in September 1999; and Vice
6 President of McGuire Nuclear Site in September 2002. I was named Vice President
7 of Catawba Nuclear Station in July 2003, with responsibility for all aspects of the
8 safe and efficient operation of the nuclear site. In December 2006, I was named
9 Senior Vice President of Nuclear Support, where I was responsible for plant support,
10 major projects and fuel management for the nuclear fleet. I was also responsible for
11 regulatory support, nuclear oversight and safety analysis functions. I was named
12 Group Executive and Chief Nuclear Officer in January 2008. Earlier this month I
13 was named to my current role as Group Executive and Chief Generation Officer for
14 Duke Energy and continue in the role of Chief Nuclear Officer for Duke Energy
15 Carolinas.

16 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS
17 PROCEEDING?

18 A. The purpose of my testimony is to (1) provide an overview of the nuclear and fossil-
19 hydro generation assets; (2) discuss the purchase of a portion of Saluda River
20 Electric Cooperative, Inc.'s ("Saluda River") interest in the Catawba Nuclear Station
21 and other nuclear and fossil-hydro capital additions since the 1991 rate case; (3)
22 discuss the operational performance of Duke Energy Carolinas' nuclear generation
23 and fossil-hydro fleet during the January 2008 through December 2008 test period;

1 and (4) discuss key drivers impacting O&M costs for nuclear and fossil-hydro
2 operations.

3 Q. PLEASE DESCRIBE DUKE ENERGY CAROLINAS' NUCLEAR
4 GENERATION PORTFOLIO.

5 A. Duke Energy Carolinas' nuclear generation portfolio consists of approximately
6 5,200 megawatts ("MWs") of generating capacity, made up as follows:

7 Oconee Nuclear Station - 2,538 MWs

8 McGuire Nuclear Station - 2,200 MWs

9 Catawba Nuclear Station - 435 MWs (Duke Energy Carolinas' 19.2%
10 ownership of the Catawba Nuclear Plant)

11 Q. MR. JAMIL, PLEASE PROVIDE A GENERAL DESCRIPTION OF DUKE
12 ENERGY CAROLINAS' NUCLEAR GENERATION ASSETS.

13 A. Duke Energy Carolinas' nuclear fleet consists of three generating stations. Oconee
14 Nuclear Station, located in Oconee County, South Carolina, began commercial
15 operation in 1973 and was the first nuclear station designed, built and operated by
16 Duke Energy Carolinas. It has the distinction of being the second nuclear station in
17 the country to have its license renewed, originally issued for 40 years, by the U.S.
18 Nuclear Regulatory Commission ("NRC") for an additional 20 years.

19 McGuire Nuclear Station, located in Mecklenburg County, North Carolina,
20 began commercial operation in 1981. Duke Energy Carolinas jointly owns the
21 Catawba Nuclear Station, located on Lake Wylie in York County, South Carolina,
22 with North Carolina Municipal Power Agency Number One, North Carolina Electric
23 Membership Corporation ("NCEMC"), and Piedmont Municipal Power Agency.
24 Catawba began commercial operation in 1985. In 2003, the NRC renewed the

1 licenses for McGuire and Catawba for an additional 20-years each. On September
2 30, 2008, the Company and NCEMC closed on the purchase of Saluda River's
3 ownership interest in Unit 1 of Catawba Nuclear Station. Following the close of the
4 purchase, Duke Energy Carolinas' ownership interest in the Catawba station
5 increased from 12.5% to 19.2%.

6 Q. PLEASE DESCRIBE DUKE ENERGY CAROLINAS' FOSSIL-HYDRO
7 GENERATION PORTFOLIO.

8 A. Duke Energy Carolinas' fossil-hydro generation portfolio consists of approximately
9 14,000 megawatts ("MW") of generating capacity, made up as follows:

10 Coal-fired generation - 7,672 MWs

11 Hydroelectric - 3,218 MWs

12 Combustion Turbines - 3,142 MWs

13 (Combustion turbines can operate on natural gas or fuel oil)

14 This portfolio includes a diverse mix of units that, along with Duke Energy
15 Carolinas' nuclear capacity, allow the Company to meet our customers' dynamic
16 load requirements in a logical and cost-effective manner. As customer load has
17 grown, a greater percentage of load has been served from the coal-fired units. In
18 2008, the nuclear units provided approximately 47% of Duke Energy Carolinas'
19 total generation, the coal units provided 53%, and the hydroelectric system and the
20 combustion turbines were available to provide critical peaking power.

1 II. INCREASED OWNERSHIP INTEREST IN CATAWBA AND
2 OTHER NUCLEAR AND FOSSIL-HYDRO CAPITAL PROJECTS

3 A. CATAWBA NUCLEAR STATION

4 Q. PLEASE DESCRIBE THE TRANSACTION THAT LED TO DUKE
5 ENERGY CAROLINAS' INCREASED OWNERSHIP INTEREST IN THE
6 CATAWBA NUCLEAR STATION.

7 A. The Commission approved the amendment to the Certificate of Environmental
8 Compatibility and Public Convenience and Necessity (the "Certificate") for the
9 Catawba station to reflect the transfer of Saluda River's interest to Duke Energy
10 Carolinas and NCEMC by Order No. 2008-468 in Docket No. 2008-117-E. On
11 September 30, 2008, Duke Energy Carolinas completed the purchase of a portion of
12 Saluda River's approximately seven percent ownership interest ("Saluda River
13 Interest") in the Catawba Nuclear Station, thereby increasing its ownership interest
14 in the Station from 12.5% to 19.2% (282 MW to 435 MW). Under the terms of the
15 agreement, Duke Energy Carolinas paid approximately \$150 million for the
16 additional ownership interest in Catawba. The assets purchased included
17 decommissioning funds of approximately \$41.5 million that Saluda River had
18 accumulated for its share of decommissioning the plant. The funds were transferred
19 to the external trustee responsible for managing Duke Energy Carolinas'
20 decommissioning fund. Following the closing of the transaction, the Company
21 owns approximately 19.2% of the Catawba Nuclear Station.

1 Q. HOW DID THE COMPANY DETERMINE THAT THIS WAS THE BEST
2 RESOURCE OPTION FOR ITS CUSTOMERS?

3 A. As reflected in the Joint Application of Duke Energy Carolinas, LLC; N.C. Electric
4 Membership Corporation; and Saluda River Electric Cooperative, Inc. to Amend the
5 Certificate of Environmental Compatibility and Public Convenience and Necessity
6 for Catawba Nuclear Station filed in Docket No. 2008-117-E, Duke Energy
7 Carolinas evaluated the purchase of 71.96% of the Saluda River Interest in Catawba
8 Nuclear Station as part of its 2006 and 2007 Integrated Resource Planning ("IRP")
9 process and determined that the addition of Saluda River's share of Catawba
10 Nuclear Station was a least-cost addition to the Company's generation portfolio and
11 would benefit its customers. I understand that Duke Energy Carolinas' 2006 IRP
12 filed with the Commission in Docket No. 2005-356-E showed a need for the
13 capacity in the timeframe of the acquisition, and the purchase of the Saluda River
14 Interest in Catawba and the gas-fired generation were the only viable options
15 available. To determine the maximum price the Company should pay for the
16 Saluda River Interest in Catawba the Company performed a life-cycle analysis
17 comparing it to an equal amount of capacity from a combined-cycle gas-fired
18 generation plant. The purchase price for the Saluda River Interest in Catawba did
19 not exceed the maximum price determined in the life-cycle analysis.

1 B. NUCLEAR FLEET

2 Q. WHAT MAJOR CAPITAL PROJECTS HAS THE COMPANY
3 UNDERTAKEN RELATIVE TO ITS NUCLEAR FLEET SINCE THE 1991
4 RATE CASE?

5 A. Since 1991, Duke Energy Carolinas has spent more than \$1.5 billion in capital
6 projects to improve the performance of its nuclear facilities and to address
7 refurbishments in order to ensure reliable extended life operations due to license
8 renewals granted by the NRC for Oconee, McGuire, and Catawba. Of the \$1.5
9 billion spent, the Company closed nuclear capital projects that cost more than \$330
10 million in 2007 and 2008 alone. These recent projects include work necessary to
11 comply with a NRC regulatory requirement to modify the containment sump at
12 McGuire and Catawba that Ron Jones discussed in his testimony in Docket Nos.
13 2008-3-E and 2007-3-E; Alloy 600 mitigation efforts and groundwater monitoring;
14 as well as mitigation of service water system piping degradation at Catawba due to
15 raw water corrosion and biological effects on the carbon steel piping.

16 Q. IN YOUR OPINION ARE THESE NEW NUCLEAR GENERATION
17 ADDITIONS USED AND USEFUL IN PROVIDING ELECTRIC SERVICE
18 TO DUKE ENERGY CAROLINAS' RETAIL ELECTRIC CUSTOMERS IN
19 SOUTH CAROLINA?

20 A. Yes they are. The acquisition of a larger percentage ownership of Catawba provides
21 the Company with additional base load capacity from a low cost generation asset
22 that has been successfully operating for over 20 years. As I discussed above, the
23 Company determined this acquisition was the least cost resource to meet increases in
24 customer demand. Additionally, customers already are benefiting from reduced fuel

1 costs associated with additional nuclear capacity. As a result of the Company's
2 successful efforts to renew the licenses of its nuclear fleet, each for an additional 20
3 years, customers will continue to benefit from the generation provided by this
4 reliable, cost-effective, and greenhouse gas emission-free base load source of
5 electricity into the early-2040s. Our investments in refurbishment and enhanced
6 performance of our existing nuclear fleet allow for the continued reliable and
7 efficient operation of these assets that is reflected in the nuclear capacity factors I
8 discuss below.

9 **Q. WHAT TYPES OF PROJECTS ARE IN THE CAPITAL BUDGET FOR**
10 **NUCLEAR OPERATIONS FOR THE NEXT THREE YEARS?**

11 **A.** Over the next three years, the Company's plans include approximately \$1 billion
12 in capital spending. This budget includes similar types of projects to those in
13 2007 and 2008; however, projects related to regulatory commitments to the NRC
14 for the continued operation of the Oconee Nuclear Station are driving the budget
15 higher than in prior years. For the next several years, we will continue to pursue
16 numerous projects necessary to support the extended life of our existing units,
17 increase their reliability and upgrade technology. We also are performing a study
18 to evaluate the potential to develop additional nuclear capacity through increasing
19 the maximum power level at which our existing facilities may operate, called a
20 power uprate. Major capital projects for the next three years include work related
21 to the goal of continued safe, reliable operations, refurbishment of aging
22 equipment, replacement or upgrades of obsolete equipment, and upgrades and
23 additions to plant systems based on changing regulations and standards. We plan

1 for replacement of aged piping and components, based on systematic monitoring
2 that has been performed.

3 Some additional examples include upgrading obsolete and aging analog
4 controls systems to more reliable and accurate digital controls systems, and
5 upgrades and enhancements to plant systems to meet changing regulatory
6 requirements related to security, emergency response, and materials upgrades.
7 We are planning upgrades to plant structures and systems to address regulatory
8 guidance concerning nuclear safety associated with natural events such as
9 tornados. Additionally, the Company plans for capital expenditures associated
10 with development work to preserve the option to build the Lee Nuclear Station. A
11 description of such development work can be found in my direct testimony before
12 this Commission in Docket No. 2007-440-E.

13 In addition to the projects included in the capital budget, the Company is
14 also (1) reengineering certain of the Oconee projects necessary to meet NRC
15 commitments that I noted above and (2) considering the appropriate timeframe in
16 which to implement upgrades if the study results are positive. These considerations
17 may necessitate capital investment over and above the current capital budget.

18 **C. FOSSIL-HYDRO FLEET**

19 **Q. WHAT FOSSIL-HYDRO PLANTS HAVE BEEN ADDED SINCE THE 1991**
20 **RATE CASE?**

21 **A.** In 1995, we added 1,267 MWs of combustion turbines to the Duke Energy Carolinas
22 system at the Lincoln site in Stanley, North Carolina. In 2002 and 2003, we added
23 595 MWs of combustion turbines to the system at the Mill Creek site in Blacksburg,
24 South Carolina. In November 2006, we acquired 825 MWs of combustion turbines

1267
595
825
+ 2687

1 from Rockingham Power, LLC, a subsidiary of Dynegy, Inc., at the Rockingham
2 site in Rockingham County, North Carolina. In January 2007, we replaced the
3 combustion turbines at the Lee Steam Station in Anderson County, South Carolina
4 with new combustion turbine facilities constituting 84 MWs.

5 Q. FOCUSING ON MORE RECENT CAPITAL PROJECTS, WHAT FOSSIL-
6 HYDRO RATE BASE ADDITIONS HAVE BEEN ADDED SINCE 2007?

7 A. The Company's fossil-hydro rate base additions during the period 2007 through
8 2009 fall into three categories: environmental additions, reliability improvements,
9 and hydro relicensing projects. The most significant capital addition to the
10 Company's fossil-hydro fleet in this period is the flue gas desulfurization equipment
11 ("FGD" or "scrubber") at the Allen Steam Station. These two scrubbers serve all
12 five units at the Allen plant and began commercial operation between February and
13 May 2009. This equipment has the capacity to reduce sulfur dioxide ("SO₂")
14 emissions by greater than 95%. The direct capital cost associated with the Allen
15 scrubbers is projected to be \$502.8 million.

16 Additionally, in December 2008 we added selective catalytic reduction
17 ("SCR") equipment at Marshall Unit 3 in support of various nitrogen oxide ("NO_x")
18 control requirements, most notably the 8-hour ozone standard in the Charlotte
19 region. The direct capital cost associated with the Marshall Unit 3 SCR equipment
20 through June 30, 2009 is \$105.0 million, and we expect to spend an additional \$1.5
21 million on project close-out activities. This SCR equipment has the ability to reduce
22 the NO_x emission rate for the unit by 80%. Other environmental projects such as
23 coal combustion by-product ("CCP") landfill and dry storage, SCR catalyst

1 additions, and mercury monitoring requirements involved an additional \$84.3
2 million in capital spending.

3 Since 2007, we have completed numerous projects focusing on the improved
4 reliability of the Company's fossil-hydro fleet. Turbine and generator ("T/G")
5 equipment reliability has been a major focus area, and \$71.3 million has been spent
6 on projects such as generator stator and rotor rewinds, turbine steam path upgrades,
7 turbine valve replacements, turbine rotor replacements, and other supporting T/G
8 equipment. The coal fleet boilers continue to be a major focus of reliability
9 programs as well; \$72.7 million has been spent on boiler tube replacements and
10 supporting boiler equipment projects to minimize forced outage events. This focus
11 on unit availability and reliability also extends out to the remaining balance of plant
12 equipment where an additional \$78.8 million has been spent on projects related to
13 valves, coal mills, coal handling equipment, controls, electrical equipment, motors
14 and other equipment. In light of severe drought and low stream flow conditions
15 experienced in Duke Energy Carolinas' service territory during 2007 and 2008, the
16 Company spent \$21.2 million implementing capital projects to increase its ability to
17 operate its generation units at reduced reservoir levels and stream flows.

18 In addition to these projects I have described, Duke Energy Carolinas has
19 invested \$56.7 million on projects required for hydro relicensing and other smaller
20 programs related to its existing fossil-hydro fleet.

1 Q. IN YOUR OPINION ARE THESE POST-1991 GENERATION ADDITIONS
2 USED AND USEFUL IN PROVIDING SERVICE TO DUKE ENERGY
3 CAROLINAS' RETAIL ELECTRIC CUSTOMERS IN SOUTH
4 CAROLINA?

5 A. Yes, they are. The combustion turbine facilities provide critical peaking resources
6 for use in meeting our customers' energy needs during periods of highest demand.
7 In addition, the Rockingham CT facility is available to provide VAR support when
8 needed in our Northern Region and the Lee CTs provide backup power to the
9 Oconee Nuclear Station.

10 The environmental projects are necessary for compliance with local, State,
11 and Federal environmental regulations. The \$502.8 million cost of the Allen
12 scrubbers is necessary to comply with the North Carolina Clean Smokestack Act and
13 with Phase I of the Federal Clean Air Interstate Rule ("CAIR"). Phase I of CAIR
14 begins in 2010 for SO₂ unless and until the Environmental Protection Agency
15 ("EPA") promulgates a new rule.

16 The additional capital investments I discussed above have enabled the
17 Company to continue to provide reliable generation service to our customers at
18 reasonable costs.

19 Q. WHAT IS THE ANTICIPATED CAPITAL BUDGET FOR FOSSIL-HYDRO
20 OPERATIONS OVER THE NEXT THREE-YEAR PERIOD?

21 A. The Company has delayed some capital spending in light of the credit crunch;
22 however, in order to meet environmental compliance requirements and to continue
23 to provide reliable service to customers, Duke Energy Carolinas plans to invest
24 approximately \$1 billion in its fossil-hydro plant during the period 2009-2011.

1 **III. OPERATIONAL PERFORMANCE**

2 **Q. WHAT ARE THE COMPANY'S OBJECTIVES IN THE OPERATION OF**
3 **ITS GENERATION ASSETS?**

4 **A.** The primary objective of Duke Energy Carolinas' generation departments is to
5 safely provide reliable and cost effective electricity to the Company's Carolinas
6 customers. The Company achieves this objective through its focus in a number of
7 key areas. Operations personnel and other station employees are well-trained and
8 execute their responsibilities to the highest standards, in accordance with detailed
9 procedures, guidelines, and a standard operating model. The Company maintains
10 station equipment and systems reliably, and ensures timely implementation of work
11 plans and projects that enhance the performance of systems, equipment, and
12 personnel. Equipment inspections, maintenance outages and station refuelings are
13 conducted through the execution of well-planned, quality work activities, which
14 effectively ready the plant for operation until the next planned outage. Like safety,
15 regulatory compliance is a "first principle," and we work very hard to achieve
16 compliance with all applicable NRC and environmental regulations.

17 **A. NUCLEAR GENERATION TEST YEAR PERFORMANCE**

18 **Q. PLEASE DISCUSS THE COMPANY'S NUCLEAR GENERATING SYSTEM**
19 **PERFORMANCE DURING THE PERIOD JANUARY 2008 THROUGH**
20 **DECEMBER 2008.**

21 **A.** Overall, our nuclear plants operated extremely well, supplying almost half of the
22 power used by our customers during 2008. The Company's seven nuclear units
23 operated at a system average capacity factor of 91.50% during the test period, which
24 was the fourth highest capacity factor for a five refueling outage year. In addition,

1 Oconee Unit 3 and Catawba Unit 2 set capacity factor records of 101.94% and
2 102.88%, respectively. McGuire Unit 2 ended a 475.98 day breaker-to-breaker run
3 when it began its refueling outage in March 2008. According to statistical data
4 provided by the Electric Power Research Institute, Catawba Nuclear Station was the
5 third most thermally efficient nuclear power plant in the United States, in 2008. In
6 addition, the Nuclear Energy Institute ("NEI") recognized two Duke Energy
7 programs with its Top Industry Practice ("TIP") Awards. In the community
8 relations category, the Company was honored for 40 years of a formal nuclear
9 community relations program. In the material and services category, Catawba's
10 high-density polyethylene ("HDPE") piping project was honored. Catawba
11 participated as the pilot plant for this project, which used this piping for the complete
12 replacement of a metallic service water system. Completion of this project has
13 resulted in substantially improved performance at a lower capital and maintenance
14 cost because HDPE is not subject to corrosion or fouling.

15 The system average nuclear capacity factor has been above 90% for nine
16 consecutive years. As I testified above, the achieved test year system nuclear
17 capacity factor was 91.50%. In general, refueling requirements, maintenance
18 requirements, prudent maintenance practices, and NRC operating requirements
19 impact the availability of the Company's nuclear system. The Company's nuclear
20 performance has improved dramatically over the course of the years of operating its
21 nuclear fleet. In particular, improved reliability and lower forced outage rates have
22 contributed to increasing the capacity factors achieved by the Company's nuclear
23 fleet as discussed above.

1 In an effort to continue this trend, the nuclear organization is placing
2 additional focus on pre-outage planning and milestone adherence through a fleet-
3 wide approach to outage planning. An example of the emphasis put on this effort in
4 2008 is the Company's creation of a scheduled Outage Improvement Team, which is
5 assigned the task of maximizing scheduled outage predictability without
6 compromising safety and reliability.

7 **B. FOSSIL-HYDRO GENERATION TEST YEAR PERFORMANCE**

8 **Q. PLEASE DISCUSS THE PERFORMANCE OF DUKE ENERGY**
9 **CAROLINAS' FOSSIL GENERATING SYSTEM DURING THE TEST**
10 **PERIOD.**

11 **A.** Duke Energy Carolinas' fossil generating system operated efficiently and reliably
12 during the test period. Two key measures are used to evaluate the operational
13 performance of generating facilities: (1) equivalent availability factor; and (2)
14 capacity factor. Equivalent availability factor refers to the percent of a given time
15 period a facility was available to operate at full power if needed. Capacity factor
16 measures the generation a facility actually produces against the amount of
17 generation that theoretically could be produced in a given time period, based upon
18 its maximum dependable capacity.

19 Duke Energy Carolinas' seven base load coal units achieved results of 84.5%
20 equivalent availability factor and 76.6% capacity factor over the test period. During
21 the peak summer season within this test period, these base load units achieved
22 excellent results of 91.7% equivalent availability factor and 83.1% capacity factor.
23 The Company's thirteen intermediate coal units achieved results of 84.2%
24 equivalent availability factor and 55.8% capacity factor over the test period, and

1 performed similarly during the summer peak months at 86.0% equivalent
2 availability and 62.3% capacity. Duke Energy Carolinas' ten peaking coal units
3 achieved results of 88.7% equivalent availability factor and 32.7% capacity factor
4 for the test period, and performed similarly during the summer peak months at
5 84.7% equivalent availability and 36.2% capacity.

6 The Company's combustion turbines were available for use as needed in this
7 time period, with a 95.9% starting reliability result for the large combustion turbines
8 at the Lincoln, Mill Creek, and Rockingham plants.

9 These results are indicative of solid performance and good operation and
10 management of Duke Energy Carolinas' fossil fleet during the test period.

11 **Q. DURING THE TEST PERIOD, HOW DID THE COMPANY'S COAL UNITS**
12 **PERFORM AS COMPARED TO THE INDUSTRY?**

13 A. Duke Energy Carolinas has long been an industry leader in achieving low heat rates,
14 which indicates an efficient generating system that uses less heat energy from fuel to
15 generate electrical energy. Duke Energy Carolinas' Belews Creek Steam Station
16 and Marshall Steam Station consistently rank among the most efficient coal plants in
17 the nation. As an example, in the January/February 2009 issue of *Electric Light and*
18 *Power* magazine, Duke Energy Carolinas' Belews Creek Steam Station and
19 Marshall Steam Station ranked as the country's third and sixth most energy efficient
20 coal-fired generators, respectively.

21 The system coal units achieved a fleet-wide equivalent availability factor of
22 84.7% for the test period and 89.5% during the summer peak months. These results
23 are comparable with the most recently published NERC average equivalent
24 availability for all North American coal plants of 84.8%. This NERC availability

1 average covers the period 2003-2007 and represents the performance of over 800
2 North American coal-fired units.

3 Q. PLEASE DISCUSS THE PERFORMANCE OF THE COMPANY'S
4 HYDROELECTRIC FACILITIES DURING THE TEST PERIOD.

5 A. The hydroelectric fleet had outstanding operational performance during the test
6 period, with a system availability factor of 89.2% and with an excellent low forced
7 outage factor of 0.9%. Absent the impact of drought-related restrictions, this system
8 availability factor was 92.8% with a forced outage factor of 0.8%.

9 **IV. KEY DRIVERS IMPACTING O&M COSTS**

10 **A. NUCLEAR GENERATION COSTS AND CHALLENGES**

11 Q. WHAT ARE THE SIGNIFICANT COSTS IMPACTING OPERATIONS
12 AND MAINTENANCE EXPENSES FOR NUCLEAR OPERATIONS?

13 A. Operations & Maintenance ("O&M") expenditures for the Company's nuclear
14 facilities are made up of both fuel and non-fuel items. In 2008, Duke Energy
15 Carolinas' nuclear fleet had the lowest total operating cost for the industry, as
16 compared to other large fleet operators, based on Electric Utility Cost Group
17 ("EUCG") cost and performance results. EUCG is an industry group that provides
18 member utilities a high-level industry view of their own station performance in
19 relation to the industry. The Company's 2008 average total operating cost, which
20 includes operating and maintenance, administration, and fuel costs, was
21 \$19.26/megawatt-hour. During the test period, approximately 26% of the required
22 O&M expenditures for the nuclear fleet were fuel related. A complete discussion of
23 nuclear fuel costs in the current fuel proceeding review period can be found in

1 Company Witness Culp's testimony filed with this Commission in Docket No.
2 2009-3-E.

3 Non-fuel items comprise the remainder of O&M expenditures for the nuclear
4 fleet. Nuclear power plant operations are very labor intensive and therefore, a
5 significant portion of O&M costs are related to internal and contracted labor. As a
6 result of the Company's increased ownership interest in the Catawba Nuclear
7 Station, O&M costs will increase approximately \$17 million annually. Company
8 Witness Stillman addresses the accounting treatment for deferral of certain of these
9 costs. The Company expects to experience continued upward pressure on these
10 ongoing labor costs. In addition, Duke Energy Carolinas expects labor costs to
11 increase approximately \$7 million annually due to workforce increases necessary to
12 comply with the U.S. Nuclear Regulatory Commission's revision to its 10 CFR Part
13 26 rule ("the fatigue rule"). The fatigue rule places restrictions on the number of
14 hours covered personnel may work at a nuclear facility. The revisions are intended
15 to enhance fitness for duty ("FFD") for personnel at nuclear power plants and
16 include new requirements for work hour limits, break limits and minimum time-off
17 between shifts for work groups that perform covered work.

18 The Company has incurred additional expenses for the purposes of
19 augmenting our existing workforce pipeline development programs to address our
20 aging workforce. Since 2006, the Company has spent approximately \$1 million
21 annually on pipeline program expenses for development of our future engineering
22 and skilled nuclear workforce. These programs currently include the Spartanburg
23 Community College and Engineering Intern programs. Duke Energy Carolinas
24 partnered with Spartanburg Community College ("SCC") to develop an Associate's

1 Degree Program in Radiation Protection Technology. This two year program at
2 SCC provides a steady source of radiation protection technician candidates.
3 Likewise, the Engineering Intern Program assures a pipeline of replacement
4 engineers by providing internships to regional university engineering students. Due
5 to the demand for skills and age demographics, additional programs are being
6 considered for development of nuclear operators and maintenance technicians in
7 partnership with Gaston College. Expenses for these additional programs are
8 expected to be commensurate with existing costs.

9 Other significant non-fuel costs are NRC fees that nuclear owners and
10 operators pay annually pursuant to (1) Part 170, which covers review of applications
11 for new licenses, renewal applications, amendment requests, and inspections, and (2)
12 Part 171, which provides for recovery of regulatory and other generic costs. These
13 fees are expected to increase in 2009. In June 2009, the NRC issued its final
14 FY2009 Fee Rule in the Federal Register (74 FR 9130) indicating (1) an increase in
15 the hourly rate for Part 170 fees for both the reactor and materials programs and (2)
16 an increase in the Part 171 annual license fee that nuclear operators pay per reactor.
17 The reactor license fee is expected to be retroactive to the beginning of the
18 government fiscal year beginning October 2008. The increased NRC fees as
19 currently proposed, along with increases in required INPO and NEI fees, will cost
20 the Company in excess of \$5 million annually. Other non-fuel costs include project-
21 related costs and material and employee expenses.

1 Q. WHAT INITIATIVES HAS THE COMPANY TAKEN TO INCREASE
2 EFFICIENCIES IN NUCLEAR OPERATIONS?

3 A. The Company uses competitive benchmarking, long-range planning, work
4 prioritization tools, and other processes to continuously improve operational and
5 cost performance. Over the years, efficiencies have been gained from the
6 implementation of common policies, practices, and procedures across the Duke
7 Energy Carolinas nuclear fleet. In addition, efficiencies are sought through
8 incorporation of industry best practices.

9 In the mid-1990s, Duke Energy Carolinas used a strategy that involved
10 reducing unit output in order to conserve fuel so that the Company could avoid
11 refueling during peak summer months. The Company has since been able to shorten
12 and align refueling outages by increasing the length of fuel cycles, thereby ensuring
13 that the nuclear units are available during peak periods when replacement power
14 costs are very high. As a result of this and improved forced outage rates, the
15 Company's nuclear fleet capacity factor has increased from 72% in the last general
16 rate case to highs at or above 90% for the last nine consecutive years. The alignment
17 of refueling outages also has allowed the Company to manage contractor costs by
18 optimizing the use of contract labor as these resources are moved from site to site.

19 Currently, nuclear generation is working closely with major supplemental
20 workforce providers to increase the number of local workers being utilized across
21 the nuclear fleet, when individuals with needed skills are available. Traditionally,
22 the nuclear industry has heavily utilized workers who travel from site to site to
23 provide outage and other supplemental labor. These workers are typically eligible
24 for per diem living expenses when their permanent home is greater than fifty miles

1 from the assigned work location. This initiative serves to improve the local
2 economy and reduce nuclear operations costs. Overall, these efforts result in
3 improved fleet reliability and efficiency on a cost per KW generated basis.

4 Q. WHAT CHALLENGES DOES DUKE ENERGY CAROLINAS FACE AS TO
5 ITS NUCLEAR OPERATIONS?

6 A. Despite the success of the Company's efficiency initiatives, we continue to face
7 upward pressure on O&M costs including escalation of labor costs, as discussed
8 above. Duke Energy Carolinas is working with community colleges in North
9 Carolina and South Carolina to offer training programs to help attract and prepare
10 the needed, skilled workforce. In addition, the costs to perform maintenance work
11 necessary to address reliability and regulatory concerns are increasing due to rising
12 costs for materials and supplies.

13 As Witness Turner testified, one of the most significant challenges facing
14 our industry is the cost and technological obstacles of compliance with anticipated
15 climate change legislation. Nuclear energy emits zero greenhouse gases, has a
16 demonstrated safety record, it is efficient and economical, and the basic technology
17 is available today. Therefore, maintaining our existing nuclear fleet and adding
18 additional nuclear capacity is critical to realistically attaining significant levels of
19 carbon emissions reduction.

1 B. FOSSIL-HYDRO COST AND CHALLENGES

2 Q. WHAT ARE THE SIGNIFICANT COST DRIVERS IMPACTING
3 OPERATION AND MAINTENANCE EXPENSES FOR THE FOSSIL-
4 HYDRO FLEET?

5 A. O&M expenditures for the Company's fossil and hydro facilities are made up of
6 both fuel and non-fuel items. For the fossil units, approximately 85% of these
7 required O&M expenditures are fuel-related (primarily coal, but also natural gas,
8 fuel oil, environmental reagents, and net proceeds from sale of by-products). A
9 complete discussion of fossil fuel and fuel-related costs in the current fuel
10 proceeding review period is included in the testimony of Company Witnesses Stroud
11 and Roebel filed with this Commission in Docket No. 2009-3-E. Non-fuel items
12 comprise the remainder of these O&M expenditures for the fossil and hydro
13 facilities. The majority of these non-fuel expenditures are for labor costs from
14 Company or contract resources to operate, maintain, or support the facilities.

15 Duke Energy Carolinas will incur additional non-fuel O&M costs over the
16 next three years in order to operate and maintain the environmental control
17 equipment and new generation resources I discussed above. Over the last several
18 years we have seen rapid and substantial increases in labor, material, and contract
19 services required for the operation and maintenance of these new and existing
20 facilities. The recent economic downturn has moderated these increases; however,
21 we will continue to be challenged by high costs for these products and services
22 driven by market demand, limited availability of commodities and skilled technical
23 and craft resources, in addition to inflationary pressures. The Company will

1 continue to review these costs and their drivers, and pursue initiatives that optimize
2 the use of funds for the greatest benefit to overall cost and reliability.

3 Q. WHAT STEPS HAVE FOSSIL-HYDRO OPERATIONS TAKEN TO
4 CONTROL COSTS AND MITIGATE THE IMPACT OF THE INCREASES
5 YOU DISCUSSED?

6 A. Duke Energy Carolinas has maintained a continuous focus on improving operational
7 results and cost effectiveness in operation of its fossil-hydro fleet since the 1991 rate
8 case. Although these improvement programs have changed in name over the years,
9 the focus is always placed on evaluating processes and technological advancements
10 that can be consistently deployed throughout the fleet that allow personnel to
11 improve skills, adapt to change quickly, and generate ideas that can be implemented
12 for further improvement. These improvement initiatives over the years have resulted
13 in a higher-performing and leaner organization, a culture of continuous
14 improvement, and a more cost effective operating structure.

15 As a current example, the Fossil-Hydro Generation Excellence Program
16 provides each station with a structured process for identifying and evaluating cost
17 savings or process improvement ideas, initiating projects to implement these
18 improvement ideas, measuring results, and sharing of ideas with other stations for
19 implementation as applicable. These efforts support the overall goals of the program
20 to establish a culture of proactively striving for continuous improvement throughout
21 the generation fleet and to work collectively to achieve higher standards through
22 continuous and lasting improvement.

23 In addition to these continuous improvement and cost reduction efforts, by
24 virtue of operating a larger fleet the fossil-hydro organization has the opportunity to

1 expand its understanding and sharing of best practice and process improvement
2 ideas. Further, sharing of technical resources and other support functions results in
3 overall cost savings for the organization. The following examples demonstrate how
4 aligning our organization to serve customers of each of our operating companies has
5 improved operations and cost effectiveness:

- 6 • Sourcing teams evaluate combined needs for significant purchases of
7 materials and services, creating savings opportunities due to buying
8 power/leverage, streamlined procurement, etc.
- 9 • Process improvement initiatives are integrated, allowing for a broader
10 application of effective cost savings ideas and best practices.
- 11 • Technical expertise is leveraged over a larger fleet, allowing for a more cost
12 effective engineering/technical support structure.
- 13 • Environmental health and safety practices can be consistently applied across
14 a larger fleet, ensuring best practices are employed in these critical areas.

15 These improvement initiatives result in a higher-performing and leaner organization,
16 a culture of continuous improvement, and a more cost effective operating structure.
17 However, despite these efforts the Company continues to face the impacts of new
18 costs and inflationary pressures that are not offset by new revenues due to flattening
19 load growth.

20 Q. WHAT CHALLENGES DOES DUKE ENERGY CAROLINAS FACE AS TO
21 ITS FOSSIL-HYDRO OPERATIONS?

22 A. With the significant additions of environmental control equipment that have been
23 required by federal, state or local regulatory mandates, one of the biggest challenges

1 for the fossil-hydro fleet will be to effectively incorporate the operation and
2 maintenance of this equipment into the overall management of the fleet. As these
3 equipment additions are placed in service we must diligently expand and execute
4 continuous improvements efforts related to the availability and reliability of the fleet,
5 and cost control. As discussed by Witness Turner, we anticipate additional
6 environmental legislation and regulations will be enacted, which will intensify these
7 challenges. Our focus on generation excellence, process improvement, and cost
8 control also will be critical as older generating units are retired and new generating
9 units are placed in service.

10 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS ABOUT DUKE ENERGY
11 CAROLINAS' GENERATION OPERATIONS, INVESTMENTS, AND
12 COST MANAGEMENT.

13 A. In summary, Duke Energy Carolinas continues to safely operate its generation assets
14 in a manner that appropriately balances affordability, reliability, and environmental
15 stewardship. Since 1991, we have invested approximately \$6 billion in our
16 generation fleet for additions and capital improvements necessary to safely provide
17 reliable electric service to our customers in full compliance with NRC and
18 environmental requirements. Our operational track record demonstrates that we
19 have been successful in the balance we have struck and continue to strike on these
20 key attributes.

21 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

22 A. Yes, it does.



**SOUTH
CAROLINA
DEPARTMENT
OF REVENUE**

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3844

SCDOR0017240

SCDOR Harry Hancock
Lynn Baker

Corporate Income Tax

Taxpayer claims for refund ^{Duke Energy}

• gross receipts

← Taxpayer

• 3-factor formula

← SCDOR

property payroll t.p.p.

Allege infr. of electricity

Electricity Tangible pers. property

Nat geog? current article on grid

$$\frac{\text{payroll in SC} \times \text{gross receipts}}{\text{total payroll}}$$

$$\frac{\text{prop. pers. in SC}}{\text{total property}}$$

$$\frac{\text{t.p.p. in SC}}{\text{total t.p.p.}}$$

alt.
$$\frac{\text{gross receipts in SC}}{\text{total gross receipts}}$$

looking at retroactive application

mfr. of t.p.p.s

Lawsuit discovery phase

1. Filed amended returns to
claim tax ~~loss~~ refund

2. audit by DOR & denial

3. Reply by Duke

4. Reply by SDDR

5. Filing of Lawsuit

have

a. Stipulations of fact end of Aug

% svc / elec gen

0930
25th

docs to review

Fri → Fri wk

doc list to H

~~Fri wk~~
★

3-2-11

Research

Electrical Energy as physical
personal property

14th Duke
on 11th
3rd wk

other states

12-36-60

Google search elect → TPP

dest as
① which states have TPP

SC 12-20/00

SECTION 36-2-105. Definitions: transferability; "goods"; "future" goods; "lot"; "commercial unit".

(1) "Goods" means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Title 36, Chapter 8) and things in action. "Goods" also includes the unborn young of animals and growing crops and other identified things attached to realty as described in the section on goods to be severed from realty (Section 36-2-107).

(2) Goods must be both existing and identified before any interest in them can pass. Goods which are not both existing and identified are "future" goods. A purported present sale of future goods or of any interest therein operates as a contract to sell.

(3) There may be a sale of a part interest in existing identified goods.

(4) An undivided share in an identified bulk of fungible goods is sufficiently identified to be sold although the quantity of the bulk is not determined. Any agreed proportion of such a bulk or any quantity thereof agreed upon by number, weight or other measure may to the extent of the seller's interest in the bulk be sold to the buyer who then becomes an owner in common.

(5) "Lot" means a parcel or a single article which is the subject matter of a separate sale or delivery, whether or not it is sufficient to perform the contract.

(6) "Commercial unit" means such a unit of goods as by commercial usage is a single whole for purposes of sale and division of which materially impairs its character or value on the market or in use. A commercial unit may be a single article (as a machine) or a set of articles (as a suite of furniture or an assortment of sizes) or a quantity (as a bale, gross, or carload) or any other unit treated in use or in the relevant market as a single whole.

SC Commercial Code

SCDOR00017244

SECTION 36-2-105. Definitions: transferability; "goods"; "future" goods; "lot"; "commercial unit".

(1) "Goods" means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Title 36, Chapter 8) and things in action. "Goods" also includes the unborn young of animals and growing crops and other identified things attached to realty as described in the section on goods to be severed from realty (Section 36-2-107).

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(5) "Lot" means a parcel or a single article which is the subject matter of a separate sale or delivery, whether or not it is sufficient to perform the contract.

(6) "Commercial unit" means such a unit of goods as by commercial usage is a single whole for purposes of sale and division of which materially impairs its character or value on the market or in use. A commercial unit may be a single article (as a machine) or a set of articles (as a suite of furniture or an assortment of sizes) or a quantity (as a bale, gross, or carload) or any other unit treated in use or in the relevant market as a single whole.

SECTION 12-20-100. License tax on utilities and electric cooperatives; tax based on value of property; additional tax based on gross receipts; payment; consolidated or combined return; minimum license fee.

(A) In the place of the license fee imposed by Section 12-20-50, every express company, street railway company, navigation company, waterworks company, power company, electric cooperative, light company, gas company, telegraph company, and telephone company shall file an annual report with the department and pay a license fee as follows:

(1) one dollar for each thousand dollars, or fraction of a thousand dollars, of fair market value of property owned and used within this State in the conduct of business as determined by the department for property tax purposes for the preceding taxable year; and

(2)(a) three dollars for each thousand dollars, or fraction of a thousand dollars, of gross receipts derived from services rendered from regulated business within this State during the preceding taxable year, except that with regard to electric cooperatives, only distribution electric cooperatives are subject to the gross receipts portion of the license fee under this subitem (2)(a).

(b) When a consolidated return is filed pursuant to Section 12-6-5020, the phrase "the gross receipts derived from services rendered from regulated business" does not include gross receipts arising from transactions between the separate members of the return group;

(B) The minimum license fee under this section is the same as provided in Section 12-20-50(A). When a combined return is filed, the minimum license fee applies to each corporation in the combined group.

SCDOR00017245

SECTION 12-36-60, "Tangible personal property".

"Tangible personal property" means personal property which may be seen, weighed, measured, felt, touched, or which is in any other manner perceptible to the senses. It also includes services and intangibles, including communications, laundry and related services, furnishing of accommodations and sales of electricity, the sale or use of which is subject to tax under this chapter and does not include stocks, notes, bonds, mortgages, or other evidences of debt. Tangible personal property does not include the transmission of computer database information by a cooperative service when the database information has been assembled by and for the exclusive use of the members of the cooperative service.

SCDOR00017246

SECTION 12-20-100. License tax on utilities and electric cooperatives; tax based on value of property; additional tax based on gross receipts; payment; consolidated or combined return; minimum license fee.

(A) In the place of the license fee imposed by Section 12-20-50, every express company, street railway company, navigation company, waterworks company, power company, electric cooperative, light company, gas company, telegraph company, and telephone company shall file an annual report with the department and pay a license fee as follows:

(1) one dollar for each thousand dollars, or fraction of a thousand dollars, of fair market value of property owned and used within this State in the conduct of business as determined by the department for property tax purposes for the preceding taxable year; and

(2)(a) three dollars for each thousand dollars, or fraction of a thousand dollars, of gross receipts derived from services rendered from regulated business within this State during the preceding taxable year, except that with regard to electric cooperatives, only distribution electric cooperatives are subject to the gross receipts portion of the license fee under this subitem (2)(a).

(b) When a consolidated return is filed pursuant to Section 12-6-5020, the phrase "the gross receipts derived from services rendered from regulated business" does not include gross receipts arising from transactions between the separate members of the return group;

(B) The minimum license fee under this section is the same as provided in Section 12-20-50(A). When a combined return is filed, the minimum license fee applies to each corporation in the combined group.

Remote User

Hancoch

Microsoft Outlook - Memo Style
11/10/11 01:24 PM

XEROX®

SCDOR00017270

Harry Hancock

From: Harry Hancock
Sent: Monday, October 10, 2011 9:01 AM
To: 'Glenn Robinson'
Subject: RE: latest invoice

No problem,

Thanks for looking into this.

Harry

From: Glenn Robinson [mailto:GRobinson@edtengineers.com]
Sent: Friday, October 07, 2011 3:30 PM
To: Harry Hancock
Cc: Jan Musante; Gloria Smoak
Subject: RE: latest invoice

Harry,

Thank you for bringing this matter to my attention. Upon review, several errors were found. Beside the inclusion of local travel, which is client-specific, a couple of too-small items were billed, the description of services was unclear and the 2011 billing rate was not used. A corrected invoice is being prepared. I will give it an extra review before it is sent.

I apologize for this inconvenience. Thank you again for your patience.

Regards,

Glenn Robinson
Consulting Engineer
Engineering Design & Testing (ED&T)
Tel 803-791-8800 Fax 803-791-0427 Cell 803-960-7815

From: Harry Hancock [mailto:Hancoch@sctax.org]
Sent: Tuesday, October 04, 2011 2:45 PM
To: Glenn Robinson
Subject: latest Invoice

Glen,

Accounting called and advised me that we did not pay for local travel. If you can submit a bill without the local travel time, I can get it paid.

Thanks,

Harry
Managing Attorney for Revenue Litigation

South Carolina Department of Revenue
Tel.- 803 898 5598

Remote User

Hancoch

 Microsoft Outlook - Memo Style
 11/10/11 01:23 PM

X210X

SCDOR00017275

Harry Hancock

From: Harry Hancock
Sent: Tuesday, October 04, 2011 2:42 PM
To: grobinson@edtengineers.com
Subject: latest invoice

Glen,

Accounting called and advised me that we did not pay for local travel. If you can submit a bill without the local travel time, I can get it paid.

Thanks,

Harry
Managing Attorney for Revenue Litigation
South Carolina Department of Revenue
Tel.- 803 898 5598

14782 draft - Tangible Personal Property

It is understood that electricity is included by statute as Tangible Personal Property. We were asked to address this as a scientific/technical matter. This is not entirely a matter for science, since the terms are defined in law.

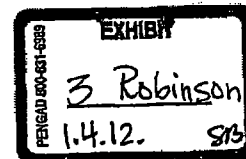
Definitions:

Real property and personal property are the two main subunits of property in English Common Law (Wikipedia). "Real property" is also called immovable property and applies to land and improvements. All other types property can be conveyed and are called personal property.

Tangible personal property refers to any type of property that can generally be moved, touched or felt.

Electrical current can be sensed by an individual weakly by taste and in several different ways by touch. Examples of the latter include being zapped by static charge, by a burning sensation in the skin, and by muscle response. The heating effects of electrical current can also be felt, and can result in burn injuries. Thus, electricity is personally tangible by itself and through its effects on an individual.

The conveyable personal property aspect is relevant to electricity in commerce. Electrical energy is used to do useful work. The sale and receipt of a specific quantity of electrical energy amounts to the sale and receipt of a specific quantity of the power to do useful work. In all commercial transactions, the parties are considered to be persons. Hence the concept of transfer of tangible personal property as a commercial good is applicable to the sale and purchase of electrical energy.



SCDOR00016971

Glenn Robinson

From: Glenn Robinson
Sent: Wednesday, September 01, 2010 2:29 PM
To: 'Harry Hancock'
Subject: RE: Document3
Harry,

The wording here is closely tied to materials, but if the "thing" is electrical energy, then the clause "changing things into new forms for use" would cover electric generation. This would be consistent with the earlier material I sent you regarding the definition of manufacture.

Noun

thing (plural things)

1. That which is considered to exist as a separate entity, object, quality or concept.
2. A word, symbol, sign or other referent that can be used to refer to any entity.
3. An individual object or distinct entity.
4. (Jaw) whatever can be owned.
5. the latest fad or fashion.
6. (In plural) clothes, possessions or equipment.
7. (Informal) A unit.
Get me a thing of apple juice at the store.
8. In Scandinavian countries, a legislative or judicial assembly.
9. (In certain fixed expressions) A problem, dilemma, or complicating factor.
The car looks cheap, but the thing is, I have doubts about its safety.
10. (Slang) A penis.
11. A living being or creature.
you poor thing
12. That which matters; the crux.
That's the thing: we don't know where he went.
The thing is, I don't have any money.

Considering its origin as a legislative assembly (definition 8), the term thing is pretty elastic; moreso than one would initially expect.

Bottom line: Yes, generation of electrical energy would be consistent (is not inconsistent) with the definition of "manufacturer" you provided.

Regards,

Glenn Robinson
Consulting Engineer
Engineering Design & Testing (ED&T)
Tel 803-791-8800 Fax 803-791-0427 Cell 803-960-7815

From: Harry Hancock [mailto:HancockH@sctax.org]
Sent: Monday, August 30, 2010 12:46 PM
To: Glenn Robinson
Cc: Jonathon A. Gutting
Subject: Document3

2/14/2011

SCDOR00017083

3-2-11

14782

Google search
"electricity as fungible
personal property"

AMRAD

SCDOR00017084

Manufacture: From middle French about 1560, literally "made by hand". Thus, Make and Manufacture are closely related terms and ideas. Manufacture has changed in meaning. Hand-made now implies craft shop (or sweat shop?) technology and organization. Manufacture now implies mechanically-powered technology and division of labor. Merriam-Webster lists four definitions, two of which center on material goods, and two of which are more general and inclusive. Taken as a whole, manufacture relates to the process model of input - process - output, with the process being mechanized or at least organized. This model is only sensible if the product is well defined and the input is consumed to suit production.

The commercial-economic characterization of product as "goods and services" does not correlate with the legal formula quoted in Duke's 2002 letter "manufacturing of goods and materials". In the former, the goods are physical material and the services are immaterial (only incidentally involve physical transfer of material). In the latter, goods is either redundant or must include products other than physical material, such as electrical energy. This is in line with two more general dictionary definitions of goods:

That which is produced, then traded, bought or sold, then finally consumed.

Something that has economic utility or satisfies an economic want.

I would conclude that the language "manufacturing of goods and materials" is deliberately broad so as to avoid inadvertent exemptions. "Goods and Materials" here would fall under the "Goods" part of "Goods and Services" in economic terms.

1. Services
2. Goods
 - a. Goods other than materials
 - b. Materials & energy

right to a thing
intangible
tangible

I believe you stated that production of electricity is specifically defined as manufacture in SC law.

That would be consistent with my conclusion.

Another way to analyze this is to look at the distinction between service (servile) activities and manufacturing activities. The former has the flavor of (slavishly) following orders that are peculiar to the instant. Today I order one sort of action, tomorrow another. The difference may be quantitative, but more generally is not. For example, an oil change today and a brake job tomorrow (but not two oil changes). The service may not even be "product-ized" (well defined and priced). For example, "What it will cost me to fix that funny noise in my engine?". Compare that with the time-invariant concept of a product or commodity. A pig tomorrow is a pig today, but I may buy two pigs or none. I would conclude that if a product (other than hours of service) can be metered, it is the result of manufacturing, not service. Taken to its logical conclusion, if delivering electricity ~~was~~ a service then I would pay a flat monthly fee, regardless of consumption (like my garbage service).

where

SCDOR00017101

Finally, the language, even though mutable, has pre-Einsteinian roots. Traditional language did not even recognize the concept of energy. The only physical interpretation that will serve the future must be consistent with the idea that energy and mass are interchangeable. Transfer of any form of energy as a commodity should be treated on the same legal basis as transfer of mass. This is consistent with existing cases where geothermal energy is piped and metered, and cases where natural gas is sold in terms of heat value, not mass. The transfer of electricity is no more ethereal than the transfer of heat.

SCDOR00017102

Manufacturing Draft

Definition of MANUFACTURE Merriam-Webster

- 1: something made from raw materials by hand or by machinery
- 2
- a: the process of making wares by hand or by machinery especially when carried on systematically with division of labor
- b: a productive industry using mechanical power and machinery
- 3: the act or process of producing something

Examples of MANUFACTURE

1. materials used in the manufacture of cars
2. We're developing new methods of ~~2021~~ manufacture.

Origin of MANUFACTURE

Middle French, from Medieval Latin *manufactura*, from Latin *manu* *factus*, literally, made by hand
First Known Use: 1567

Wiktionary Verb Produce

to produce (third-person singular simple present *produces*, present participle *producing*, simple past and past participle *produced*)

1. (*transitive*) To make or manufacture.

The factory will produce 10,000 iron shafts.

2. (*transitive*) To make (a thing) available to a person, an authority, etc.

By 2008, travellers must produce their passport when crossing from Canada to the USA.

3. (*transitive* (media)) To sponsor and present (a motion picture, etc) to an audience or to the public.

Spielberg produced that movie.

Wikipedia Verb Make

to make (third-person singular simple present *makes*, present participle *making*, simple past and past participle *made*)

1. (*transitive*, *intransitive*, *reciprocal*) To behave, to act.

To make like a deer caught in the headlights.

2. To create, construct or construct.

We made a bird feeder for our yard.

They hope to make a bigger profit.

We'll make a man out of him yet.

3. To speak.

They make a nice couple.

This makes the 10th infection.

4. (*constructed with of, typically interrogative*) To mislead.

I don't know what to make of it.

5. (*usually stressed*) To bring into existence.

SCDOR00017103

This company is what made you.

She married into wealth. She did it made.

6. (second object is an adjective, participle or noun) To make to be.

The citizens made their objections clear.

This might make you a bit woozy.

Did I make myself heard?

Scotch will make you a man.

7. (second object is a verb) To cause to do.

You're making her cry.

I was made to feel like a criminal.

8. (second object is a verb, can be stressed for emphasis or clarity) To cause to do.

The teacher made the student study.

Don't let them make you suffer.

9. (of a fact) To indicate or suggest to be.

His past mistakes don't make him a bad person.

10. (object is a bad, referred to by the word bad) To cover up with bad things.

11. (thing) (of a person being caught) To conceal (without being recognized in return). (conceal)

12. (adverb) To come at a destination, usually at or by a certain time.

We should make Cleveland by 7 tonight.

13. (adverb) (adverb) To move or be able to move at a particular speed.

The ship could make 20 knots an hour in calm seas.

14. (thing) To join into the line or a similar organization (to a made man). (make)

SCDOR00017104

14782 draft – Tangible Personal Property

It is understood that electricity is included by statute as Tangible Personal Property. We were asked to address this as a scientific/technical matter. This is not entirely a matter for science, since the terms are defined in law.

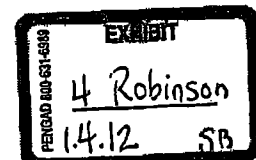
Definitions:

Real property and personal property are the two main subunits of property in English Common Law (Wikipedia). "Real property" is also called immovable property and applies to land and improvements. All other types property can be conveyed and are called personal property.

Tangible personal property refers to any type of property that can generally be moved, touched or felt.

Electrical current can be sensed by an individual weakly by taste and in several different ways by touch. Examples of the latter include being zapped by static charge, by a burning sensation in the skin, and by muscle response. The heating effects of electrical current can also be felt, and can result in burn injuries. Thus, electricity is personally tangible by itself and through its effects on an individual.

The conveyable personal property aspect is relevant to electricity in commerce. Electrical energy is used to do useful work. The sale and receipt of a specific quantity of electrical energy amounts to the sale and receipt of a specific quantity of the power to do useful work. In all commercial transactions, the parties are considered to be persons. Hence the concept of transfer of tangible personal property as a commercial good is applicable to the sale and purchase of electrical energy.



SCDOR00016971

14782 draft – Tangible Personal Property

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Definitions:

Real property and personal property are the two main subunits of property in English Common Law (Wikipedia). "Real property" is also called immovable property and applies to land and improvements. All other types of property can be conveyed and are called personal property.

Tangible personal property refers to any type of property that can generally be moved, touched or felt.

Property is any physical or intangible entity that is owned by a person or jointly by a group of people. Depending on the nature of the property, an owner of property has the right to consume, sell, rent, mortgage, transfer, exchange or destroy their property, and/or to exclude others from doing these things. Important widely recognized types of property include real property (land), personal property (physical possessions belonging to a person), private property (property owned by legal persons or business entities), public property (state owned or publicly owned and available possessions) and intellectual property (exclusive rights over artistic creations, inventions, etc.), although the latter is not always as widely recognized or enforced. A title, or a right of ownership, establishes the relation between the property and other persons, assuring the owner the right to dispose of the property as they see fit.

Electricity as property

Electrical current can be sensed by an individual weakly by taste and in several different ways by touch. Examples of the latter include being zapped by static charge, by a burning sensation in the skin, and by muscle response. The heating effects of electrical

SCDOR00016972

current can also be felt, and can result in burn injuries. Thus, electricity is personally tangible by itself and through its effects on an individual.

The conveyable personal property aspect is relevant to electricity in commerce. In all commercial transactions, the participating parties are considered to be persons. Electrical energy is used to do useful work. The sale and receipt of a specific quantity of electrical energy amounts to the sale and receipt of a specific quantity of the power (and the right) to do useful work. Importantly, the owner of property can elect not to transfer possession of the property. This is clearly the case with electric power, where control of the transfer rests with the provider, even while the amount transferred may be at the discretion of the receiver.

Hence the sale and purchase of electrical energy is consistent with the concept of transfer of tangible personal property as a commercial good.

SCDOR00016973

14782 DRAFT reply

Questions: What is required to make electricity? How does this relate to Duke operations in South Carolina?

Electricity is the manifestation of energy in electrical form. Electricity can be personally sensed by touch and taste, and it can be measured with appropriate instruments. In commerce, the good transferred is electrical energy, so the question is better stated "What is required to produce commercial electrical energy". Electrical energy that is not at present commercially common in the eastern United States is not addressed here.

To produce commercial electrical energy requires an original energy source, a means of converting the original energy into electrical form (generation), and a means of delivery of the resulting electrical energy. This is most economically described by working backwards.

The means of delivery of the resulting electrical energy in the United States is typically an alternating current (AC) transmission and distribution (T&D) network. In most places this consists of aluminum electrical conductors suspended from towers or poles. For reasons of economy, this network includes substations where the energy is transformed from one standardized voltage to another. It also requires metering devices and means of accounting and billing.

Electrical energy is provided to the T&D network by generating stations. The final element in these stations is a rotating electrical generator. The rotary motion is provided by equipment appropriate to the original energy source. In the case of hydro power, the gravitational potential energy of a raised body of water is used to spin a water turbine that is connected to a generator. In other cases, a two-step process is employed. A "Combustion Turbine" is driven directly by the gases heated by burning fuel oil or, preferably, natural gas. A Steam Turbine is driven by steam derived from water boiled by heat of nuclear decay or from burning coal. Other cases exist as well, but these cover our subject.

As a commercial producer of electrical energy in South Carolina, Duke maintains a T&D network and "fleets" of generating stations, grouped by type. The Duke fleets consist of three nuclear stations, thirty hydro stations, eight coal-fired stations and four gas-fired stations.

To make all this work requires much supporting and logistical infrastructure. The Duke infrastructure has been re-organized (as "Duke Energy") to allow it to sell services as well as electrical energy. However, generation and sales of electrical energy remains Duke's dominant source of revenues.

All this discussion rests on fundamental physical principles. Electrical power (watts, kilowatts, megawatts) is the rate of transmission of electrical energy. Any physical

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mechanical
system must generate less energy (and power) than it consumes. The remainder is waste heat. Any form of power can be employed to do work, and the reverse is true also. Work must be done, by applying power, to convert the stationary electrical charges in a metallic solid to the energetic charges that result in electrical current. Passing an electrical current through an energy-consuming device, such as a light bulb, results requires a substantial force on a hand-cranked generator, compared to the force required when the bulb is switched off. The more light, the harder the push.

A rotary electrical generator is based on the principle that moving a conductor in a magnetic field will generate a voltage between the ends of the conductor. A comparatively small amount of power is required to produce the magnetic field.

Summary in outline form
Making electricity requires

- an original energy source, such as
 - nuclear fuel or coal
 - fuel oil or natural gas
 - potential energy of a raised body of water (Hydro Power)
- a means of converting the original energy into electrical form (generation)
 - Except hydropower, generation requires the fuel energy to be first converted to an intermediate form, such as heat energy in a liquid or gas, and then converted into electrical energy in a rotating machine (generator).
 - An electromagnetic generator is a rotating machine that converts mechanical energy into electrical energy in a saleable form (medium voltage AC).
 - The rotary motion is provided by a turbine.
 - Examples of these combinations include
 - nuclear fuel or coal burner, boiler and Steam Turbine
 - fuel oil or natural gas burner and Combustion Turbine
 - energy of falling water and Water Turbine
- A means of delivering and receiving payment for the product.

SCDOR00016975

14782 DRAFT reply

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Electricity is the manifestation of energy in electrical form. Electricity can be personally sensed by touch and taste, and it can be measured with appropriate instruments. In commerce, the good transferred is electrical energy, so the question is better stated "What is required to produce commercial electrical energy". Electrical energy that is not at present commercially common in the eastern United States is not addressed here.

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system must generate less energy (and power) than it consumes. The remainder is waste heat. Any form of power can be employed to do work, and the reverse is true also. Work must be done, by applying power, to convert the stationary electrical charges in a metallic solid to the energetic charges that result in electrical current. Passing an electrical current through an energy-consuming device, such as a light bulb, results requires a substantial force on a hand-cranked generator, compared to the force required when the bulb is switched off. The more light, the harder the push.

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 - fuel oil or natural gas burner and Combustion Turbine
 - energy of falling water and Water Turbine
- A means of delivering and receiving payment for the product.

SCDOR00016977

1 STATE OF SOUTH CAROLINA
2 ADMINISTRATIVE LAW COURT

3
4 DUKE ENERGY CORPORATION,

5 Petitioner(s),

6 vs.

Case No: 10-ALJ-17-0270-CC

7 SOUTH CAROLINA DEPARTMENT OF REVENUE,

8 Respondent(s).

9

10 D E P O S I T I O N

11 WITNESS: DR. IOANNIS "JOHN" PAPAPOLYMEROU

12 DATE: Wednesday, January 11, 2012

13 TIME: 10:27 a.m.

14 LOCATION: Nexsen Pruet, LLC
15 1230 Main Street, 7th Floor
Columbia, South Carolina

16 TAKEN BY: Attorneys for the Respondent

17 REPORTED BY: SHERI L. BYERS
Registered Professional Reporter

18

19 - - - - -

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24 ALSO PRESENT:

25 J. ABRAHAM GUTTING, ESQUIRE

(INDEX AT REAR OF TRANSCRIPT)

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STIPULATION: It is stipulated among counsel that this deposition is being taken in accordance with the Rules of the Administrative Law Court, and that the deponent reserves the right to read and sign the deposition transcript.

- - - - -

DR. IOANNIS "JOHN" PAPAPOLYMEROU,
being first duly affirmed, testified as follows:

EXAMINATION

BY MR. GREEN:

Q. Would you state your full name for the record, Professor.

A. It's Ioannis, or John, Papapolymerou.

Q. And if it would be all right with you today, I think I'll refer to you as Professor, if that will be okay.

A. That is fine.

Q. Okay. You've been sworn in. Just a few ground rules, which I'm sure you're familiar with anyway. We're doing a deposition today to find out what testimony and your opinions you might give in this case. I'll be asking questions.

Your counsel may object from time to time if he doesn't like the form of the question I've stated or

1 something like that. He's just making that for the
2 record. You can still answer the question unless he
3 directs you for some other reason not to answer. But I
4 don't anticipate that happening.

5 I don't make these endurance contests. If
6 you want to take a break, that would certainly be fine
7 with me. Just let me know.

8 I think that's about -- I think that's about
9 it.

10 Do you have any questions of me before we get
11 started about procedures, anything?

12 A. No.

13 Q. Any reason today you can't give a deposition?

14 A. No.

15 MR. GREEN: Let me introduce what I believe
16 is the materials provided by you.

17 (RESPONDENT'S EXH. 1, Expert Report, was
18 marked for identification.)

19 BY MR. GREEN

20 Q. On top of that is your report. There's some
21 cases and other matters, I think, behind that. Are
22 those all the materials that were provided to you by
23 Sutherland Asbill in this case?

24 Take a few moments to look through that
25 packet.

1 A. Yes.

2 Q. Are there any other materials provided to you
3 by Sutherland other than that?

4 A. No.

5 Q. Are these all the materials in your file
6 regarding this matter?

7 A. I have these material, and I have also a
8 couple of pages from the Oxford English Dictionary.

9 Q. Okay. Can I take a look at those pages,
10 please.

11 A. Sure.

12 Q. What else do you have?

13 A. I also have a couple of pages on electricity
14 from Wikipedia.

15 Q. All right. Okay. And are these all the
16 other? I have copies of everything else you have?

17 A. I believe there's also another one from
18 LexisNexis and Exelon Corporation.

19 Q. Let me take a look at that if I might,
20 please.

21 This case, Exelon Corporation, were you
22 provided that or did you print it out on your own?

23 A. If I remember, I was provided that.

24 Q. Okay. I see you have some invoices here.

25 A. Correct.

1 Q. And your rate is \$300 an hour?

2 A. Yes.

3 Q. Is that typically what you charge for
4 rendering expert services?

5 A. Typically, yes.

6 Q. Do you ever charge more?

7 A. From my recollection, no.

8 Q. Do you ever charge less?

9 A. Not recently, no.

10 Q. When you say "not recently"?

11 A. Well, it was -- I charge less for a -- if
12 it's not for expert consulting, but if it's consulting
13 in the case and providing designing work for an
14 engineering company, depending on the project.

15 Q. Why do you charge less for that?

16 A. I charge less -- again, that was mostly in
17 the past when I had different, say, a few years ago.
18 So I just, you know, adjusting for, you know, the
19 inflation of the economy and, you know, mostly the
20 economics. But my rate, you know, last year is about
21 \$300 per hour.

22 MR. GREEN: Okay. Okay. I'd like to get
23 copies. We don't have to do it right now, we can do it
24 at a break. If I can get copies of these.

25 MR. TRESH: Absolutely.

1 MR. GREEN: And I think these materials as
2 well. I can keep those right here for the time being.

3 THE WITNESS: Okay.

4 BY MR. GREEN:

5 Q. And those are all the materials in your file?

6 A. Correct.

7 Q. And these are the only items that you're
8 aware of that I have not been provided previously?

9 A. I believe so, yes.

10 Q. Okay. Thank you.

11 Are there any e-mails with counsel that
12 you've sent or received that aren't part of your file?

13 A. I just have e-mails with, you know, regarding
14 scheduling of events such as the deposition last week.

15 Q. Okay.

16 A. The deposition directions this week and then
17 e-mails regarding scheduling of the final trial dates.

18 Q. Okay. No e-mails regarding your substance of
19 your report or anything like that?

20 MR. TRESH: Objection, privileged.

21 MR. GREEN: How is an e-mail with an expert
22 privileged?

23 MR. TRESH: To the extent that we're
24 e-mailing on the substance of his report. Like if he's
25 e-mailing us about the substance of his report.

1 Well, he's a testifying expert. Fair enough.

2 MR. GREEN: He's a testifying expert. I can
3 always get something wrong.

4 MR. TRESH: Objection withdrawn.

5 MR. GREEN: Thank you.

6 BY MR. GREEN:

7 Q. So are there any e-mails with counsel
8 regarding substance of your report?

9 A. No. The only e-mail is that I e-mailed the
10 draft of my report, so that's the only e-mail that I
11 have.

12 Q. Okay. Was there a prior draft of your
13 report?

14 A. No, there's no prior draft.

15 Q. You just sent one draft?

16 A. Exactly.

17 Q. Okay. Did you have discussions with him,
18 though, about that draft prior to the time you issued
19 it?

20 A. I discussed, yes.

21 Q. Did you change what you put in the draft as a
22 result of your conversation with counsel?

23 A. Just conversation with counsel, so, you know,
24 no substantive changes.

25 Q. Okay. Any letters that aren't in your file?

1 You got the invoices and things like that, anything
2 other than that?

3 A. No. I don't believe I have any letters.

4 Q. The materials that you've been provided and
5 the ones you printed out, the ones that were provided
6 you by Sutherland Asbill, did you rely on those in
7 rendering your decision?

8 A. No. I just read them more as a background
9 material.

10 Q. Okay. So the cases -- you didn't really rely
11 on the case law as part of your decision?

12 A. No, I did not rely on that.

13 Q. Did you use or rely on anything really that's
14 not represented in your file, the cases, Wikipedia, the
15 dictionary articles, things like that, did you rely on
16 anything else?

17 A. Well, as I have in my report, I looked into
18 literature, textbooks that we use in, you know,
19 university settings, we teach students. And I have
20 references. One is Power Transmission by Tom Scott and
21 the Fundamentals of Applied Electromagnetics.

22 Q. All right. Do you expect to use or rely on
23 any other material as part of preparing for the trial
24 testimony in this case?

25 A. I do not anticipate, but I don't know.

1 Q. Okay. All right. In the packet, I think we
2 introduced as Exhibit 1 -- I don't want her to lose her
3 exhibit.

4 A. Sorry, yeah.

5 Q. That's all right.

6 Toward the last few pages, 751, 752, and 753
7 is your faculty profile.

8 A. Part of it.

9 Q. Part of it?

10 A. Right.

11 Q. And, well, there are a lot of publications on
12 here.

13 A. Uh-huh.

14 Q. Are these all the publications that you have
15 generated? It says "selected."

16 A. Right. It's not all the publications.

17 Q. It's not all of them?

18 A. It's not all of them, no.

19 Q. Do any of these publications here pertain
20 really to the subject of your testimony today?

21 A. No.

22 Q. I confess, I can't even understand the titles
23 of these publications.

24 A. Okay.

25 Q. So I'm sure by reading them, I would not

1 understand them.

2 A. Okay.

3 Q. That is very impressive.

4 I guess, though, that you have indicated,
5 though, you have done other publications?

6 A. Correct.

7 Q. Any of these other publications not listed
8 here, do they pertain really to the subject of what
9 you're testifying here?

10 A. Not really. Just to say that we -- what I do
11 in my research is, you know, applications of
12 electricity and electromagnetics. So that would be
13 more accurate. That's what we do.

14 And a lot of these applications that we
15 study, we have to design circuits and systems that
16 basically, you know, are geared towards a certain
17 application and this is what, you know, you see in the
18 publications.

19 MR. GREEN: Okay. Let me -- I think the
20 easiest way, I printed this out. Let me mark that as
21 Exhibit 2.

22 (RESPONDENT'S EXH. 2, Faculty Profile, was
23 marked for identification.)

24 BY MR. GREEN:

25 Q. This is also from your Web site. This has

1 your biography and your educational background.

2 A. Correct.

3 Q. Is that -- a lot of times I find that
4 colleges and universities don't keep their professors'
5 data up to date. Is that biography pretty much up to
6 date for you?

7 A. With a few exceptions. For example, my
8 number of publications has increased since this was
9 updated. So now it's over 300 publications. Where it
10 says 250, it's over 300.

11 Let's see. And some of the most recent
12 awards are not listed here. But my title as a
13 professor and associate director of the Georgia
14 Electronic Design Center are correct.

15 Q. Okay. And it says you received the B.S.E.E.
16 degree from the National Technical University of Athens
17 in Athens, Greece.

18 What is a B.S.E.E. degree?

19 A. It's a Bachelor of Science in Electrical
20 Engineering. The European university, typically in the
21 Greek system, which is more or less after the German,
22 they call it a diploma. But it's equivalency with a
23 U.S. bachelor's degree.

24 Q. Okay.

25 A. However, European universities, because it's

1 a five-year degree, consider it Bachelor's plus.

2 Q. So your B.S.E.E. degree was a five-year
3 degree?

4 A. Correct.

5 Q. And then are you from Greece originally?

6 A. Originally, yes, sir.

7 Q. And then you came, I guess, to the United
8 States to get your M.S.E.E. and Ph.D. degrees from the
9 University of Michigan?

10 A. That's correct.

11 Q. When were you born, Professor?

12 A. 1970.

13 Q. 1970.

14 What are passive and active planar circuits
15 on semiconductor?

16 A. Passive circuits basically are structures
17 that do not provide any energy, whereas active circuits
18 are structures that produce energy. Semiconductor
19 materials is a category of materials between insulators
20 and conductors. So insulators are typical materials
21 that do not conduct electricity. Conductors are the
22 ones that easily, you know, allow the conduction of
23 electricity. And semiconductors are somewhere in
24 between.

25 Q. Okay. But your educational background as

1 reflected on here is correct?

2 A. That is correct.

3 Q. There are several, you serve as assistant
4 professor in different places, visiting professor and
5 things like that. Anything you have done in the
6 professor context in the last, I guess, 15 years that's
7 not listed on here?

8 A. No. As professors, we also part of our job
9 is to provide service for the -- especially for federal
10 government as in the National Science Foundation or
11 NASA. So we are requested from time to time to provide
12 an opinion on research proposals that get submitted.
13 National Science Foundation, for example, NASA or the
14 Department of Defense. So that is something else that
15 we also do.

16 We're also to volunteer our service with the
17 Institute of Electrical and Electronics Engineers, so
18 that is organizing professional meetings, reviewing
19 again technical papers, so ...

20 Q. Okay. I notice on page 2 of that exhibit, it
21 mentions for 2004 you received the U.S. Army Research
22 Office Young Investigator Award.

23 A. That is correct.

24 Q. What was that for?

25 A. That was for a research project to develop

1 lower cost high frequency, high power signal sources
2 that the Department of Defense would use.

3 Q. Why was that an investigator award?

4 A. They call that investigator because we -- you
5 know, we're performing research.

6 Q. Evaluating different possibilities and things
7 like that?

8 A. Correct. Typically, what you do, you submit
9 a proposal, a research proposal with your ideas and the
10 kind of research you want to do, explore, and the kinds
11 of things you want to explore. The proposals go to a
12 review committee, there's a selection process. And
13 then if your proposal, the decision is to be funded,
14 they fund your proposal. And then you start doing your
15 research work.

16 Q. Okay. And so you submit a proposal to do
17 research work for the Department of Defense and then as
18 a result of that, you got an award for --

19 A. Correct.

20 Q. -- the work you did as part of that?

21 A. Correct.

22 Q. When I saw "investigator," I just thought you
23 were, like, investigating something that had happened
24 wrong or --

25 A. No.

1 Q. -- something like that. And that's why I was
2 curious like that.

3 A. No. In the academic world, typically these
4 awards have names. Instead of saying "researchers," it
5 says "young investigator."

6 Q. All right. Thank you for clearing that up.
7 There are a number of -- like we discussed a
8 moment ago, there are a number of things that a
9 professor -- places you've worked as a professor. As
10 part of getting your education, did you perform any
11 internships, work on any internships that aren't listed
12 on here?

13 A. Not during my bachelor's M.S. or Ph.D. The
14 only thing that is not listed here is during the summer
15 of 2001, before moving from Arizona to Atlanta, I
16 worked for those two months with a research group in
17 Motorola in the Phoenix area.

18 Q. And what did you do with that research group?

19 A. I just consulted with them, advised them in
20 some of their circuit designs for their
21 telecommunication products.

22 Q. And you gave them advice on those designs?

23 A. Correct.

24 Q. What kind of work did you do that formed the
25 basis of your advice in that situation?

1 A. When you design circuits, you basically have
2 to come up with topologies that will perform a certain
3 functionality that would meet the spec of the product.
4 Same time trying to keep it low cost. So pretty much
5 that's what I did with them.

6 Q. And when you say "topology," what do you mean
7 by that?

8 A. I mean the way you put the circuit elements
9 together.

10 Q. Is that sort of a layout?

11 A. Sort of a layout, yes.

12 Q. In my terms, I guess.

13 A. Sort of a layout, yes.

14 Q. Okay. Who kind of work -- that's one
15 example. What other kinds of work have you done, I
16 guess, in these years that really are not part of the
17 academic field? I think you indicated you had done a
18 research proposal to do work for the Army, for the
19 Department of Defense. Would you classify that more as
20 academic or more as a -- because it's involving
21 research, or would you classify that as doing something
22 else in a nonacademic context?

23 A. No. I would classify that as research in an
24 academic context.

25 Q. What nonacademic research or work have you

1 done?

2 A. I have done consulting with some companies,
3 engineering companies in a similar format with the
4 Motorola. I have also done consulting in the forms of
5 expert witnessing in legal cases.

6 Q. Okay. And how often do you, I guess, enter
7 into consulting engagements with engineering companies?

8 A. I would say roughly maybe about once a year.
9 Once or twice.

10 Q. I see.

11 A. But it varies a lot.

12 Q. And how often do you provide consulting in
13 the form of a legal expert, how often do you do that?

14 A. Not that often. I would say probably the
15 last three, four years, I had two to three probably
16 engagements and this one.

17 Q. And you may be bound, I don't know, but to
18 the extent you can tell me, what were those other types
19 of engagements that you performed other than this one?

20 A. So I'm not involved in them anymore. So one
21 was a lawsuit between two engineering companies. And I
22 was asked, along with another colleague, to basically
23 evaluate if the company, that company, one of the
24 companies, rather, did the engineering work in a
25 correct way, in the right way, for the other one.

1 The other one I was engaged in was to look
2 into some -- that involved, again, two companies with
3 product being a cell phone. And I was asked to
4 basically see how the one part of the phone works and
5 what it's doing, it's not doing.

6 Q. Was the phone not performing as it was
7 designed to perform?

8 A. There were some issues.

9 Q. Were you evaluating it from a patent context?

10 A. It was more from a patent context, yes.

11 Q. Do you -- you hold any patents?

12 A. Yes, five.

13 Q. What types of products, just generally
14 speaking, do you hold patents on?

15 A. I hold patents in -- for circuits that
16 basically will be employed in telecommunication and
17 radar products.

18 Q. Do those patents -- you said "radar." Do
19 most of those patents have a military use?

20 A. No. It can be both commercial.

21 Q. Both commercial. Okay.
22 Have you ever testified before?

23 A. I have done one deposition.

24 Q. One deposition.

25 When did you give a deposition?

1 A. I believe that was in 2010, early fall of
2 2010.

3 Q. What was the subject of your deposition?

4 A. The subject of my deposition was to provide
5 my opinion on, you know, specific steps that one
6 company took to do a design project for the other
7 company and if that was done the correct engineering
8 way or not.

9 Q. So that was given in that first case you
10 described to me?

11 A. That is correct, yes.

12 Q. Okay. And that's the only time you have
13 given a deposition?

14 A. That is correct.

15 Q. Have you ever testified in trial before?

16 A. No.

17 Q. Okay. What professional credentials do you
18 have other than you're a professor, you got your
19 doctorate. Are you a professional engineer?

20 A. No. I'm not a professional engineer.
21 However, I'm a fellow of the IEEE, which is listed on
22 page 2 of Exhibit 2.

23 Q. What is the IEEE?

24 A. The Institute of Electrical and Electronics
25 Engineers. So it's the first and oldest society,

1 professional society for electrical and electronics
2 engineers. Going back to the Thomas Edison days. A
3 fellow is the highest rank that you can get in that
4 professional association.

5 Q. How long have you been a fellow?

6 A. I've have been a fellow since January of
7 2011. January 1st, yeah.

8 Q. Seems like a pretty prestigious designation.
9 Congratulations.

10 A. Thank you. It is prestigious especially for
11 people that are, you know, not that old. Younger
12 people.

13 Q. That's kind of what I was getting at. You
14 seem very young for that.

15 A. Not because I'm saying so, it's not easy to
16 get this distinction. Especially in the younger stages
17 of someone's career.

18 Q. No, congratulations. Like I said, you do
19 seem very young for that, so ...

20 Now, did you have to apply for that? Are you
21 nominated? Did you join and then you were --

22 A. No. You get nominated and typically they
23 award it to less than 1 percent of the whole members
24 because that's an international organization per year.
25 Less than a tenth of 1 percent. I don't remember

1 exactly, but it's highly, extremely selective.

2 Q. Do you know how many fellows there are?

3 A. I don't remember exactly.

4 Q. Sure.

5 A. It's a very small percentage of the entire
6 body of IEEE.

7 Q. And then no -- no -- I should say no
8 additional professional designations?

9 A. No, that's it.

10 Q. And I just noticed this. What is the NSF
11 Career Award?

12 A. So the NSF Career Award is the award given to
13 young assistant professors, basically professors within
14 the first five years of their academic career by the
15 National Science Foundation. And it's an award to
16 perform a research project, but, again, it's more than
17 a research contract award. It's an award that -- it's
18 a prestigious award that, again, is highly selective
19 given by the National Science Foundation.

20 Q. Okay. When were you retained to serve as an
21 expert in this case?

22 A. It was around June, July of 2011.

23 Q. And you provided some invoices or you made
24 them available as part of your file here today. Do you
25 have a written agreement regarding your services in

1 this case?

2 A. I do.

3 Q. Is that part of your file?

4 A. No, I don't have it. It's not part of my
5 file.

6 Q. Okay. Do you recall what it sets forth?

7 A. I don't recall exactly.

8 Q. Did you draft it or did the attorneys draft
9 it?

10 A. No. The attorneys drafted it.

11 Q. And I think we discussed your rate was \$300
12 an hour in this case.

13 And how much have you been paid so far? If
14 you need to refer to your invoices, please do.

15 A. \$3,900.

16 Q. Okay. What did you do to prepare for this
17 deposition today?

18 A. Just reviewed my report.

19 Q. Okay. Did you discuss matters with counsel?

20 A. I did.

21 Q. Did you ever meet with any Duke personnel in
22 this matter?

23 A. No. The only -- I only met with the
24 representative from Duke last week during the
25 deposition.

1 Q. Okay. You didn't call them up, though, to
2 discuss your opinion in this case or like that?

3 A. I don't recall calling them.

4 Q. Okay. All right. You have been tendered
5 today, as I understand it, as an expert to discuss the
6 nature and occurrence of electricity as a scientific
7 fact. The process of generating electricity and the
8 provision of electricity services to consumers.

9 Is that your understanding of what you've --

10 A. Yes.

11 Q. -- been engaged to opine about?

12 Now, we've talked a little bit about your
13 expert report. An updated copy with no substantive
14 changes was provided to us today. Does that report
15 encompass your entire opinion in this case?

16 A. Yes.

17 Q. Okay. And did you prepare that report
18 yourself?

19 A. Yes.

20 Q. You didn't have an intern prepare it?

21 A. No.

22 Q. You prepared it yourself?

23 A. Yes.

24 Q. Okay. And that report states that -- I think
25 there on page -- the next to last page, if I remember

1 right, it states that you have been -- you were asked
2 to answer the question, "Can the sale of electricity
3 provided by Duke Energy be considered as manufacturing
4 and sale of tangible personal property, where
5 manufacturing involves the creation of a new and
6 substantially different article having a distinctive
7 name and substantially different character or use?"

8 Is that the only question you were asked to
9 answer as part of your report?

10 A. Yes.

11 Q. And how were you provided that question? Was
12 it submitted to you in writing?

13 A. Yes.

14 Q. And was it submitted to you by letter or by
15 e-mail?

16 A. I believe it was just written down as a
17 question, as a letter.

18 Q. As a letter?

19 A. As a letter, on drafts paper.

20 Q. So it was written down to you as part of a
21 meeting?

22 A. Yes.

23 Q. And just put on a sheet of paper?

24 A. Correct.

25 Q. Provided to you?

- 1 A. Correct.
- 2 Q. Is that paper part of your file here today?
- 3 A. No.
- 4 Q. Do you know what happened to that paper?
- 5 A. I threw it out.
- 6 Q. Okay. Did you throw anything else out that
- 7 you used as part of your report?
- 8 A. No.
- 9 Q. Just that?
- 10 A. Just that.
- 11 Q. Why did you throw just that out?
- 12 A. Because I incorporated it in my report, and
- 13 it was just the question, so ...
- 14 Q. But there were no other draft writings or
- 15 anything that you had --
- 16 A. No.
- 17 Q. -- that you threw out?
- 18 A. No.
- 19 Q. Just that?
- 20 A. Yes.
- 21 Q. Okay. All right. In your report, you go
- 22 through and you use a number of terms in the case to
- 23 explain your opinion in this case. I wanted to ask you
- 24 about those terms and work through them and see if I
- 25 understand -- if I understand as much as I can what the

1 definitions are.

2 Now, you often use electricity, and you use
3 electric energy. You use electrical, electromagnetic,
4 electromagnetic waves, electromagnetic force,
5 electricity and magnetism, electric force, electric
6 current, and electric field, and there are some others.

7 And I just give you all those kind of quickly
8 to go through -- to set up. I want to work through
9 those definitions to see if some of those terms mean
10 roughly the same or explore how you're using them so
11 that I understand if there are any differences in the
12 terms as you have used them.

13 A. Okay.

14 Q. Now, electricity, how do you define
15 electricity? What do you -- when you're using
16 electricity in your report, what are you using it to
17 mean?

18 A. Electricity is a field that is created by
19 electric charges that exert force. In that field it
20 exerts force in other charges are present in the
21 vicinity.

22 Q. And is electric energy the force that is
23 exerted in that context?

24 A. No. The electric field has energy stored in
25 it. As a result of the field, a force can be exerted

1 on an electric charge that is in the area of the field.

2 Q. Okay. What is electric energy?

3 A. Energy in general is the -- in physics is the
4 ability to be able to do something. So I would say
5 that ability exists rather -- that ability exists in an
6 electric field.

7 Q. Okay. So an electric -- okay. So an
8 electric field contains electric energy?

9 A. That is correct.

10 Q. But electric energy is different than
11 electricity?

12 A. Electric energy falls under the category of
13 energy. Electricity is a more general phenomenon.
14 Physically, in physics, electricity is a field created
15 by charges.

16 Q. Okay. And by all means, if you need to look
17 at your report for these words, feel free to do so.
18 I'm just trying to understand.

19 You also use the terms "electrical." What
20 does that mean?

21 A. Electrical means something associated with
22 electricity.

23 Q. Okay. And what about electromagnetic?

24 A. So in nature, we have one of the four
25 fundamental forces is the electromagnetic force. So we

1 have an electric field and a magnetic field. Okay.
2 Now, in some instances, these are separate but they
3 also go together.

4 If you have a charge that doesn't move, a
5 static charge, what we call that creates an electric
6 field. If you have a charge that move at a constant
7 rate, that creates a magnetic field. If you have the
8 more general case where you have charges that move not
9 in a constant, not at a constant rate, a random rate,
10 then you have an electromagnetic field.

11 So basically the two of them co-exist.

12 Q. And what -- you also use the term electro --
13 terms "electromagnetic waves" and "electromagnetic
14 force." What do those terms mean?

15 A. Electromagnetic force is the force exerted on
16 matter, on particles, by electromagnetic field.
17 Electromagnetic wave is a disturbance, in the most
18 general sense, that is created by an electromagnetic
19 field.

20 Q. Okay. And you use the term "electric force"
21 sometimes. Is that the term that you were using when
22 we were talking about electricity earlier?

23 A. No. Electric force is the result of an
24 electric field.

25 Q. Okay. What is an electric current?

1 A. Electric current is the flow of charges.

2 Q. Okay. And what is -- what is the difference
3 between an electromagnetic field and an electric
4 current?

5 A. An electric current, again, is a flow of
6 charges. An electromagnetic field is a force field.

7 Q. Force field?

8 A. Right.

9 Q. When you say "force field," I'm thinking of
10 like science fiction where the Enterprise throws up a
11 shield.

12 A. No.

13 Q. I know that's not what you mean, so help me
14 with that.

15 A. A field is a domain in space where forces can
16 be exerted on charged particles, in this case, because
17 it's electromagnetic. In the most general sense, going
18 back to the four fundamental forces in the universe,
19 for example, we have a gravitational field. So a body
20 like the planets, they can create a force field, so
21 that means they can exert a force on other bodies. For
22 example, the earth and the moon.

23 Okay. So if you wish, it's something that
24 exists and in the presence of other objects, whether
25 it's a mass of charges, which is matter with charge, it

1 can apply a force.

2 Q. Okay. What is -- you use -- we may come back
3 to those two.

4 You use the term a couple of times "propagate
5 electromagnetic energy." What does "propagate" mean as
6 you use it?

7 A. As we use it, it means transfer of energy.

8 Q. Okay. And you use the term "kinetic energy."
9 What is kinetic energy?

10 A. Kinetic energy is the energy that exists when
11 things move. When objects move.

12 Q. Okay. And you use the term "mechanical
13 energy." How do you use that term?

14 A. I use it similar to the kinetic energy.

15 Q. Okay. The force exerted by things in
16 motion -- the energy exerted by things in motion?

17 A. The energy that is required to move things,
18 that's kinetic energy.

19 Q. Okay. The energy that's required to move
20 things?

21 A. Or the energy that, you know, a moving thing
22 basically has.

23 Q. Okay. Okay. You mentioned in your report on
24 page 5, I think it was --

25 A. Uh-huh.

1 Q. -- "Electric and magnetic energy can
2 propagate in the form of waves even in a vacuum.
3 Actually, this is how we know that other galaxies or
4 start systems exist in outer space."

5 What did you mean by that passage? It's at
6 the very bottom part of that paragraph, the last, say,
7 four lines.

8 A. Could you clarify? You mean you ask me to --
9 regarding the first two sentences or the last two
10 sentences?

11 Q. The last sentence. "Actually, this is how we
12 know that other galaxies or start systems exist in
13 outer space."

14 Explain that to me.

15 A. So as part of the universe, when you have
16 formation of new planets or other phenomena that happen
17 in the universe, what typically happens is that they
18 meet -- they radiate waves. And it could be waves such
19 as light that we can see or other waves that we cannot
20 see.

21 When we detect those waves, we can basically
22 backtrack it to things that happen in the universe.
23 And, for example, we can conclude that a certain planet
24 has been born or something else has happened in the
25 universe.

1 Q. And so that determination is made based on
2 electromagnetic waves that are detected, I guess, here
3 on earth?

4 A. That is correct.

5 Q. Now, that's not a detection of light ray?
6 You're talking about something different other than
7 light?

8 A. Both.

9 Q. Both?

10 A. Right.

11 Q. Is light an electromagnetic wave?

12 A. Absolutely.

13 Q. So you tell how much I know about physics.
14 That's why I'm asking this question.

15 A. No comment.

16 Q. Okay. All right. And on that same page,
17 you've got the diagram of the energy supply system.

18 A. Correct.

19 Q. And this sort of lays out the process by
20 which electricity comes from the -- where it's produced
21 and transmitted and it goes through the lines and
22 transformers.

23 As I understand it, electric companies deal
24 with what is called, I guess, the electric transmission
25 grid?

1 A. Correct.

2 Q. What is that?

3 A. It's the system that the companies put
4 together to basically transmit electromagnetic energy
5 from one point to the other, deliver to the customers
6 in an efficient and safe way.

7 Q. How does the electric grid play into your
8 diagram?

9 A. Well, actually, what I have in the diagram,
10 you can say it's a small version of an electric grid
11 showing a power plant, the transmission lines, and then
12 the distribution lines to the various customers.
13 Whether that is an industrial customer or commercial or
14 residential.

15 Q. And are all -- I guess all electric companies
16 are connected to the grid?

17 A. Correct.

18 Q. Here in your diagram and me in my house,
19 residential customer uses arriving AC for heating and
20 cooling, cooking and lighting, that is stepped down
21 from a higher voltage?

22 A. Correct.

23 Q. By a transformer?

24 A. Correct.

25 Q. How does that transformer work?

1 A. So what the transformer does, it basically
2 transforms one voltage to the other one. What happens
3 is that it consists of two coils that are wound around
4 in material, which in this case some magnetic type of
5 material, typically iron. What happens is that the
6 current in the first coil produces a magnetic field and
7 that magnetic field induces a voltage in the second
8 coil. That's at a different value compared to the
9 voltage of the first coil.

10 Q. And the step-up and step-down transformers
11 work essentially the same?

12 A. It is essentially the same. Basically what
13 you have to do is you have to swap the coils. So you
14 go from a coil that has a smaller number of turns to a
15 coil that would have a lower number of turns.
16 Depending on if you want to step up or step down.

17 Q. Okay. And I think you said in your report, I
18 think you said electrons are not delivered to the load.
19 If I remember right.

20 A. Correct.

21 Q. What is -- when I flip on a switch, to me
22 it's electricity. What is delivered to my house when I
23 flip on a switch?

24 A. What is delivered to your house is a
25 connection to an electric -- more active

1 electromagnetic field.

2 Q. A connection to an electromagnetic field.

3 And where is that electromagnetic field?

4 A. That electromagnetic field propagates from
5 the power plant along the transmission lines on the way
6 to the customer.

7 Q. So the field is all along the lines?

8 A. On the lines and outside the lines.

9 Q. Okay.

10 A. Most of the field is close to the lines.

11 Q. Okay. You use in here, and I think it may be
12 on the same page. No, maybe it wasn't. Anyway, you
13 use in here -- yes, it is on the same page. You talk
14 about a cell phone. And cell phone receives
15 electromagnetic energy from the antenna at the base
16 station and transmits energy back. I presume it
17 transmits -- your definition, transmits electromagnetic
18 energy back when we talk?

19 A. Correct.

20 Q. How does a -- how does a cell phone generate
21 electromagnetic energy?

22 A. Cell phone generates electromagnetic energy
23 via an antenna.

24 Q. So the antenna generates that energy?

25 A. The antenna -- the antenna -- cell phone has

1 a battery that provides electrical energy and a lot of
2 other circuitry. And at the end what happens is that
3 the signal that needs to be sent to the base station
4 or, you know, that will send to the other cell phone
5 gets transmitted from the antenna of the cell phone.
6 So the electromagnetic waves that are to be transmitted
7 from the cell phone to the base station are generated
8 by the antenna.

9 Q. Okay. And that electromagnetic energy
10 generated by that cell phone antenna, is that the same
11 as the electric or electromagnetic energy coming into
12 my home?

13 A. As far as the fundamental concern, yes. The
14 differences are the power levels and the frequencies of
15 the signals. But both of them are electromagnetic
16 waves.

17 Q. Okay. I think you said in here the
18 frequencies were different. I think the cell is at 1
19 gigahertz. And I gather the electricity coming into my
20 house is probably 60 hertz?

21 A. That is correct.

22 Q. What about power level?

23 A. Power levels are -- the cell phone are much
24 lower than what comes to your house.

25 Q. Sure. Okay. And then on page -- bottom of

1 page 7 and really on the top of page 8, mostly on page
2 7, you talk about electric energy can be harvested with
3 an antenna from telecommunication or radio signals that
4 exist around us.

5 So that's what a cell phone does, I guess, in
6 one way. The antenna is pulling electromagnetic waves?

7 A. Correct.

8 Q. And so if I lived -- if I lived, say, next to
9 a transmission line, could I use an antenna to pull
10 some of the electromagnetic waves from that
11 transmission?

12 A. Theoretically, yes. Practically, no.
13 Because the frequency of the signal on the transmission
14 line is very low, so you would need an extremely,
15 extremely long antenna.

16 The way to do it, which we actually do it in,
17 you know, is to use a coil close to your transmission
18 line that will basically pick up the field and then
19 would provide you a voltage, you know, and thus power.

20 Q. When you say a "coil," what do you mean by
21 that?

22 A. It's a piece of wire that you make in turns.
23 So basically it's --

24 Q. It's a looped -- would it be a looped antenna
25 essentially?

1 A. Laymen's terms, you can say it is a loop
2 antenna.

3 Q. Okay. But you could use a coil, and it could
4 pull some electricity from that?

5 A. Correct.

6 Q. Because it would be connected to the field?

7 A. Yes. It would sense the field and basically
8 be changing magnetic field that it senses will provide
9 a voltage and a current when connected to a load.

10 Q. And, now, if I'm under the transmission line,
11 for instance, it's a very high voltage that I can't use
12 for my home?

13 A. Typically, yes.

14 Q. So would the energy, what would I have to
15 do -- if I'm doing the antenna, what would I have to do
16 to convert that energy into something I could use for
17 my home?

18 A. Well, depending on what energy harvesting
19 device you are going to put next to the grid, you may
20 have to use some transformers and converters to get it
21 to a level that is usable by your home.

22 Q. So it would a pretty complicated process?

23 A. Correct.

24 Q. Okay. How about a telephone, not a cell
25 phone, but a landline telephone, as we call it, does it

1 use electromagnetic energy?

2 A. Correct.

3 Q. It just transmits it down a line?

4 A. Correct.

5 Q. And a telephone, hardly any of them do now
6 because they're electric, but years ago I grew up with
7 just a regular ringing phone. It would stay on even
8 when the power went off. Say, I grew up in the
9 upstate, in fact, and we were on a co-op up there.
10 They provide electricity, that electricity might go
11 out, but I could still use the phone. Why is that?

12 A. Well, because that system was powered
13 somewhere else. So say even if you didn't have power
14 in your house, which would be due to a problem in the
15 nearby area where your house is, those telephone lines
16 are basically powered at some other location and, you
17 know, that was not susceptible to the event that cut
18 the power to your house.

19 Q. Do you know, does a telephone company
20 typically use -- does it generate its own electricity?

21 A. What they do is that they get the electricity
22 from the grid, some locations, and they power their own
23 system with that energy.

24 Q. And do they have generators for when, say,
25 the electric grid goes out?

1 A. They may have that, too.

2 Q. But the telephone is using electromagnetic
3 energy?

4 A. Absolutely.

5 Q. That is in your opinion the same as the
6 electromagnetic energy used by the cell phone?

7 A. Yes. In the general sense, yes.

8 Q. And is it -- are the frequencies similar or
9 different to a cell phone?

10 A. Different.

11 Q. And then they're different, I guess, from the
12 electricity that's going across the transmission line?

13 A. Correct.

14 Q. You describe in your report, I think on page
15 4, an electric generator. Is that basically how every
16 electric generator is designed?

17 A. Most of them, yes.

18 Q. And you say "most," so some may be designed
19 differently. What are the differences that may exist?

20 A. I would say the electric generator that I
21 have described on page 4 is what is for the vast
22 majority from power companies used to generate the
23 electricity where you have a moving part, a shaft, in a
24 magnetic field providing you the output and
25 electromagnetic field. However, you can have a

1 photovoltaic electric generator. So there are other
2 ways you can generate electromagnetic field.

3 Q. You can have what kind of electric generator?

4 A. Photovoltaic.

5 Q. Can you spell that?

6 A. P-h-o-t-o-v-o-l-t-a-i-c.

7 Q. In the beginning of your report, you talk a
8 little bit about the history of electricity. Why is
9 that important to your analysis?

10 A. It is important to provide the historical
11 context, so I think we can better understand the
12 phenomenon of electricity and put everything in the
13 right context.

14 Q. You're going back to sort of in the sixth
15 century, but I would say to the 1800s. Has the
16 understanding of electricity really changed
17 substantially since that time?

18 A. Do you mean since the 1600s?

19 Q. No, I mean since I guess the 1800s and 1900s.

20 A. No. The fundamentals have not changed.

21 Q. The fundamentals are basically the same.

22 Okay. The end of your report you provide
23 your conclusions, which summarizes what you worked
24 through earlier, and you say that, "Based on the
25 previous analysis, it is my opinion that what Duke

1 Energy provides is a service." and you described that
2 service as transforming energy from one form to
3 another.

4 Why do you conclude that what Duke energy
5 provides is a service?

6 A. I conclude that it is a service because Duke
7 Energy is not, you know, providing something in
8 material form as is an object. So in my opinion,
9 transforming energy from one form to the other is a
10 service.

11 Q. Okay. Is that -- is that substantially based
12 upon your conclusion, then, that electricity is not
13 tangible personal property?

14 A. That's correct.

15 Q. What is the electricity or electromagnetic
16 field that Duke Energy provides? What is that? It's
17 not -- your conclusion is it is not tangible personal
18 property?

19 A. Correct.

20 Q. What is it?

21 A. It's something intangible.. It's a field.

22 Q. So you believe it is an intangible property?

23 A. No, it is intangible.

24 Q. Okay. So it's intangible, but it is not
25 property?

1 A. Yeah. From a physics perspective, it is
2 intangible. It's a field.

3 Q. Okay. So it's intangible. You don't really
4 conclude it's property, you conclude it is not
5 property, it's just intangible. Is it a product?

6 A. No, it's not a product.

7 Q. Okay. And you conclude that it's not
8 tangible personal property because you can't possess it
9 and it doesn't have physical dimensions?

10 A. Correct.

11 Q. Why did you use that definition?

12 A. I use that definition because according to
13 the dictionary, tangible property is something that has
14 a material form and someone can possess.

15 Q. Okay. And you base that upon the dictionary?

16 A. Correct.

17 Q. And I believe you had as part of that, you
18 had a printout from The New Shorter Oxford English
19 Dictionary?

20 A. That's correct.

21 Q. And let me find tangible. It says, "Able to
22 be touched, discernable, or perceptible by touch,
23 having material form."

24 A. Correct.

25 Q. And it's your opinion you cannot touch

1 electricity?

2 A. That is correct.

3 Q. You can certainly sense electricity?

4 A. You can sense the effect of electricity.

5 Q. You say "the effect." How is that different
6 than me sensing electricity?

7 A. The effect is that you bring in the presence
8 of the field something that upon which the field will
9 exert a force given the right conditions.

10 Q. Sometimes in the case of, say, a hurricane,
11 Hurricane Hugo that came through here over 20 years
12 ago, power lines get downed, they get severed.

13 A. Correct.

14 Q. And electricity may arc from those severed
15 power lines, as I understand it.

16 A. Correct.

17 Q. But I can't touch that electricity?

18 A. No, you don't touch it.

19 Q. If I walk up to it, though, it will shock me?

20 A. Correct. The field will shock you.

21 Q. But I am not touching the electricity, in
22 your opinion?

23 A. No. Your senses basically feel the effect of
24 the electric field.

25 Q. And let's go back to the definitions. Help

1 me. What is the difference between the electricity and
2 the electric field?

3 A. I will say in the general sense electricity
4 is a field of force that is produced by, you know,
5 charge particles that exist in the universe. So it's
6 more of a phenomenon.

7 Q. Okay. Well, I guess I'm having a little time
8 grasping and, again, it's because I don't understand
9 physics very well. I'm having a hard time grasping I'm
10 not sensing electricity, I'm sensing the electrical
11 field.

12 A. Correct.

13 Q. What is the difference? That's what I -- it
14 seems to me I'm sensing the electricity if I'm shocked.
15 What is the difference between electricity and electric
16 field that I'm sensing electric field but not
17 electricity?

18 A. You are sensing the -- you are sensing the
19 electric field. And you can say electricity in the
20 general term, as I said before, is a field. Right. So
21 you can sense the field.

22 Q. Well, if electricity is the electric field,
23 then I'm sensing the electricity?

24 A. Yes. You can say that.

25 Q. Okay. But it's still your opinion I can't

1 touch the electricity?

2 A. You cannot touch it.

3 Q. I just feel the effects of it?

4 A. You feel the effects of it.

5 Q. So that sounds like it can touch me, but I
6 can't touch it.

7 MR. TRESH: Objection as to form.

8 THE WITNESS: You cannot touch electricity
9 like you touch a glass. Electricity is not an object.

10 BY MR. GREEN:

11 Q. Okay. And I can't see electricity?

12 MR. TRESH: Objection as to form.

13 THE WITNESS: In general, you cannot see
14 electricity. You can see the effects of electricity.

15 BY MR. GREEN:

16 Q. And you say "in general," explain what you
17 mean by in general.

18 A. What I mean is under certain conditions you
19 see the effect. For example, when there's lightning
20 that occurs, you see the effect of a very strong
21 electric field.

22 Q. In the case of lightning, what is that
23 effect?

24 A. The effect, it's a very -- there's a high
25 concentration of charges and basically is what we call

1 breaking down of the atmosphere. And as part of that
2 breakdown that occurs, there are photons emitted.
3 Basically visible radiation, things we can't see with
4 our eyes.

5 Q. Okay. Can I measure electricity?

6 A. You can measure the electric field, yes.

7 Q. Can I move electricity?

8 A. No.

9 Q. So electricity that's coming to my house is
10 not moving, in your opinion. It is just the field is
11 the field?

12 A. The field is propagating. It's not the same
13 thing as moving a car or moving an object.

14 Q. Are electrons moving as part of that field
15 into my home?

16 A. The electrons are oscillating and that
17 facilitates the efficient propagation of
18 electromagnetic energy.

19 Q. And when you say oscillating, are they moving
20 in a stream? Are they moving around? How are they
21 moving in the context of the field?

22 A. They -- basically the field applies a force,
23 and depending on the polarity, oscillate back and
24 forth.

25 Q. Back and forth between two wires or part of

1 the field?

2 A. As part of the field. If you look into the
3 inside of the atoms, the electrons that are existing
4 conductors are what we call loose electrons. So with
5 the application of the right amount of force, they can
6 move to the next atom, okay. And they can move back if
7 you reverse the direction of the force.

8 So what that translates in the microscopic
9 level is that it efficiently propagates the
10 electromagnetic field along the way. That's what it
11 does basically.

12 Q. Okay. And an electric -- we talked about
13 this before. An electric current, I mean, I think in
14 common parlance one would think of a current as like a
15 water current, where the water is just flowing along
16 and the water is going from point A to point Z. If I
17 understand you correctly, an electric current is
18 different than that?

19 A. That's correct.

20 Q. How does an electric current differ?

21 A. So the electric current is flow of charged
22 particles. Okay. Water is substance, it has
23 molecules. And the example I have in my report is if I
24 go and poke a hole in the water pipe, the water will
25 come out. It's an object. If I do the same thing in

1 my transmission line, you know, there's no electrons
2 that will come out of the transmission line.

3 Q. So electrons wouldn't come out?

4 A. Correct.

5 Q. What would happen, though, if you poked a
6 hole in the transmission line?

7 A. Well --

8 Q. Other than bad things to you.

9 A. Other than bad things to you, you will create
10 a discontinuity in the wire, and that will affect
11 the -- depending on the discontinuity, the amount of
12 power that will be delivered to the load, what we call.
13 So you will disrupt basically, you know, the function
14 of the electrons delivery.

15 Q. What -- I think people that deal with
16 electricity talk about the concept of line loss. What
17 is "line loss"?

18 A. Line loss is the -- what happens in the
19 subatomic level in the flow of electrons where they
20 collide with the stationary atoms. So part of that
21 energy that is a result of exerted force, part of that
22 energy basically becomes heat. So it's lost energy.
23 For efficient transmission, if we want to deliver a
24 hundred percent of the energy from point A to point B,
25 you basically want to minimize those losses that are

1 due to collisions and become heat. So line loss is in
2 that sense.

3 In other transmission lines that have
4 insulators, line loss is also currents that you may
5 have unwanted flow of electrons inside an insulator.
6 Line loss is also radiation loss. So part of the
7 energy, instead of propagating in the wire, gets
8 radiated into free space. Typically in standard power
9 systems, these losses are very low. But as you go in
10 higher frequencies, those losses start to become more
11 important.

12 Q. You use in your report a definition of
13 manufacturing that was provided to you. Does your
14 conclusion on page 8 depend on that definition of
15 manufacturing?

16 A. Yes.

17 Q. What -- using that definition, you talk a
18 little bit about substantial different article having a
19 distinctive name and a substantially different
20 character, and you reference it wood being used to
21 create a chair.

22 A. Correct.

23 Q. Why -- I assume from that you conclude that
24 making a chair is manufacturing?

25 A. Correct.

1 Q. Why is converting wood into a chair
2 manufacturing but converting kinetic energy into
3 electromagnetic energy not manufacturing?

4 A. Well, first of all, because energy is not an
5 article, so energy is not an object in physics. So in
6 the universe we have objects, which is matter, either
7 solid, liquid, or gas form. You have energy, which is
8 the ability to do something. Something very abstract.
9 So energy is not an article, so energy of one form to
10 the another form essentially, in my opinion, is still
11 energy.

12 Q. The chair is still wood, isn't it?

13 A. It's made of wood, yes.

14 Q. And some chairs are just pretty much wood
15 completely. They don't really add much of a design or
16 decorative nature or leather seat or anything to them,
17 it's still a wood chair?

18 MR. TRESH: Objection as to form.

19 THE WITNESS: Yes. But a chair is an object
20 versus energy which is not an object.

21 BY MR. GREEN:

22 Q. Okay. So do I take from that, do I correctly
23 take from that that your opinion is based opinion your
24 conclusion that energy is not an object?

25 A. Yes, energy is not an object.

1 Q. Well, if energy were an object, would that
2 change your conclusion, hypothetically?

3 A. It would but it's not. Including myself and
4 other colleagues and scientists who have been studying
5 this for 200 years or more, and in the physical world
6 you have objects, matter, and you have energy. So
7 energy is not an object.

8 Q. And on page 7, you have after the italics
9 question, that first paragraph, maybe two-thirds of the
10 way down, it says, "As a result, transform energy is
11 being delivered to the customer and not a substantially
12 different article that has a distinctive name and a
13 substantially different character." Right before the
14 parentheses about wood.

15 A. Okay.

16 Q. Do you see where I'm at?

17 A. Yes.

18 Q. You said "a substantially different
19 character," and you left off the "or use" that was set
20 forth in the question in italics above. Was the
21 omission of "or use" significant?

22 A. You will use that energy to do something, so
23 it's -- I did not, you know -- if you're asking, I did
24 not omit it here on purpose, but it's not -- you know,
25 energy, you use energy to do something. So you're

1 taking one form of energy to another form of energy to,
2 you know, do things. Whether it's moving your motor in
3 the washer.

4 Q. Okay. And so the "or use," you didn't --
5 that was not significant, you just failed to include it
6 there. If I understand you correctly.

7 A. Yes.

8 Q. Okay. And now, you talk there about
9 transforming kinetic energy and mechanical energy into
10 electromagnetic energy.

11 Now, kinetic and mechanical energy won't
12 power my kid's stereo, will it?

13 A. Not unless you use a generator that
14 transforms the kinetic energy to electromagnetic
15 energy.

16 Q. But in your opinion, that is not
17 substantially different use?

18 A. No, it's not. It's just energy.

19 Q. Okay. You provided to me or provided to me
20 as part of your file here a document which I believe
21 was also a printout from The Oxford English Dictionary
22 regarding definition of property. And is that the
23 definition that you used in preparing your report of
24 property?

25 A. Yes.

1 Q. Does property -- does the term "property"
2 have any unique significance in physics?

3 A. Could you please clarify what way.

4 Q. Well, do physics professors as yourself, do
5 you -- are you dealing with legal concepts of property
6 or things like that, or do you deal more with
7 principles of physics in the questions that you deal
8 with as service of professing?

9 A. No. We deal more with the physical world,
10 the universe.

11 Q. Okay.

12 A. We're not lawyers.

13 Q. Okay. But I guess where I'm going with that,
14 maybe to simplify it, we worked through terms and their
15 meaning to you in the context of electric and
16 electricity, electromagnetic. And those clearly have
17 significance in the world of physics. But the concept
18 of property here is really not a physics concept, it is
19 outside the realm of physics.

20 A. We use the word "property" to describe the
21 word properties of matter, properties of fields, in
22 that sense.

23 Q. Okay. Okay. I think I understand.

24 Okay. And you printed out the Wikipedia of
25 electricity. I noticed you printed it out today?

1 Yesterday?

2 A. I believe it was yesterday.

3 Q. Yesterday. Why did you print that out? What
4 purpose did that have for you?

5 A. I print that out because as part of the
6 deposition last week, the expert referred to some
7 extent that he had looked into -- you know, he got into
8 the Wikipedia domain. And as an educator, I was just
9 very curious to see what Wikipedia says about
10 electricity.

11 Q. Okay. What did you think about what
12 Wikipedia said about electricity?

13 A. I think it's extremely close to the
14 statements I made in my report.

15 Q. Okay. And I think you said -- I don't mean
16 to -- I think I've asked this, but I think you said the
17 Exelon case, you really did not rely upon it in
18 rendering your opinion in this case?

19 A. That is correct.

20 MR. GREEN: Okay. If we could do a couple of
21 things. If I could get copies of these right now and
22 then if I could talk to my team for just a few minutes.

23 MR. TRESH: Absolutely.

24 (Off the record.)

25 (RESPONDENT'S EXH. 3, Wikipedia Electricity

1 Printout, was marked for identification.)

2 (RESPONDENT'S EXH. 4, The New Shorter Oxford
3 English Dictionary "Tangible" Definition, was marked
4 for identification.)

5 (RESPONDENT'S EXH. 5, The New Shorter Oxford
6 English Dictionary "Property" Definition, was marked
7 for identification.)

8 BY MR. GREEN:

9 Q. Professor, I'm going to hand you what's
10 marked as Exhibit 3 and ask you if that is the
11 Wikipedia article on electricity that we were
12 discussing earlier from your file?

13 A. Yes, it.

14 Q. And I'll hand you what's marked as Exhibit 4
15 and ask you if that is the dictionary definition of
16 "tangible" that we were discussing earlier from your
17 file?

18 A. Yes, it is.

19 Q. And I'm going to hand you what is marked as
20 Exhibit 5 and ask you if that is the dictionary
21 definition of "property" from your file that we were
22 discussing?

23 A. That is correct.

24 MR. GREEN: Okay. I don't have any more
25 questions, so I think we're done unless you all have

1 any questions.

2 Thank you, Professor.

3 MR. TRESH: Just a couple of questions if
4 that's okay. Five more minutes.

5 MR. GREEN: Help yourself.

6 EXAMINATION

7 BY MR. TRESH:

8 Q. Professor, you referred earlier, the rest of
9 the question as to what the definition of property was,
10 whether there was any significance in terms from your
11 role as a professor, as a physicist, as an engineer.

12 Property and physics has a meaning; is that
13 correct? As you would use the term "property" in
14 discussions having nothing to do with this case, with
15 your colleagues, would that have any kind of meaning?

16 A. In what sense?

17 Q. Can property be a gas? Is gas property?

18 A. No. Gas is an object.

19 Q. Gas is an object. Is solid an object?

20 A. Yes.

21 Q. Liquid an object?

22 A. Yes.

23 Q. And electricity?

24 A. Is not an object.

25 Q. Okay. And you also mentioned you read some

1 questions around voltage and how the voltages stepped
2 up or step down as electricity is being propagated.
3 When you have a -- then you were also asked some
4 questions around telecommunication signals.

5 When a telecommunication signal, wireless
6 telecommunication signal, for example, when that's
7 being sent, are there any changes to that signal maybe
8 at a wireless facility or a switch, are there any
9 changes to the nature of that signal?

10 A. There are changes, so that, for example, the
11 base station is receiving electric power either from
12 the grid or if it's a remote base station, it could be
13 having a solar cell converting it, the energy, the
14 sound wave into electric energy. And then that signal
15 is then changed to a higher frequency signal that is
16 fed to the antenna. And then that antenna emits
17 electromagnetic radiation that is received by your cell
18 phone.

19 Q. So in the context of telecommunications as we
20 were talking about, at the lower frequency, before it's
21 converted, if you will, at the lower frequency, I
22 couldn't use that lower frequency to make a cell phone
23 call, right?

24 A. Correct.

25 Q. So I would -- the telephone company would

1 have to change the frequency, the signal to allow me to
2 make the telephone call, right?

3 A. That's correct.

4 Q. But you would still say that's in your
5 definition of use that Mr. Green asked you about
6 earlier, you would say that frequency, that signal is
7 still being transmitted for the same use, if you will?

8 A. Yes.

9 MR. TRESH: Okay. No further questions.

10 MR. GREEN: I don't have any follow up.

11 MR. TRESH: I think we're done.

12 (The deposition concluded at 12:01 p.m.)

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1 SIGNATURE OF DEPONENT

2

3 I, the undersigned, DR. IOANNIS "JOHN"
4 PAPAPOLYMEROU, do hereby certify that I have read the
5 foregoing deposition and find it to be a true and
6 accurate transcription of my testimony, with the
7 following corrections, if any:

8 PAGE LINE CHANGE REASON

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DR. IOANNIS "JOHN" PAPAPOLYMEROU DATE

24

25

1 CERTIFICATE OF REPORTER

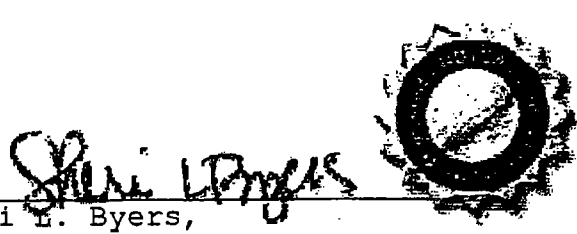
2 I, Sheri L. Byers, Registered
3 Professional Reporter and Notary Public for the
4 State of South Carolina at Large, do hereby
5 certify:

6 That the foregoing deposition was
7 taken before me on the date and at the time and
8 location stated on page 1 of this transcript; that
9 the deponent was duly sworn to testify to the
10 truth, the whole truth and nothing but the truth;
11 that the testimony of the deponent and all
12 objections made at the time of the examination were
13 recorded stenographically by me and were thereafter
14 transcribed; that the foregoing deposition as typed
15 is a true, accurate and complete record of the
16 testimony of the deponent and of all objections
17 made at the time of the examination to the best of
18 my ability.

19 I further certify that I am neither
20 related to nor counsel for any party to the cause
21 pending or interested in the events thereof.

22 Witness my hand, I have hereunto
23 affixed my official seal this 13th day of January,
24 2012, at Columbia, Richland County, South Carolina.

25


Sheri L. Byers,
Registered Professional Reporter,
Notary Public
State of South Carolina at Large
My Commission expires:
January 5, 2014

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25

tytone /praups'trɒksɪtəʊn/ a. & n.
 1. *proparoxetous*, f. as PRO- +
 -tytone. *Gram.* A *adj.* Designating or
 of a word in ancient Greek having an
 accent on the antepenultimate syllable;
 regarding or pertaining to a word in
 other languages having a stress on the
 antepenultimate syllable. M18. B n. An
 antepenultimate word. L19.
 2. *antepenultimate* a. having or characterized by
 an accent or stress L19. [*proparox-*
 (f. *PROPAROXETON*: only in M18.

EMOTION n. 116-119. [*med.L. propassio*(n-), *passio* - **PASSION** n.] A feeling that precedes or accompanies passion, esp. an emotion inspired by Jesus before the Passion.

ragium /prəʊpə'teɪdʒɪəm/ *n.* L19. [*f.* -*ragium*.] Ornith. The anterior part of the wing of a bird's wing.

1 'propel/ v.t. Infl. -ll-. LME. [L *propellere*
beare one, f-as PRO- + *pellere*-drive.] FT
out or away, expel. LME-M17. 2 Drive or
a person or thing) forward, cause to move
is. LI6. 3 Urge (a person) on,
urge; impel. M18.

MACAULAY Each gallery was propelled by . .
 2 B. BARNBROOK He propelled her . . up the
 1 propelling pencil a pencil of metal, plastic,
 1 a thin replaceable lead projected or retracted
 1 ing part of the casing. 3 S. QUINN A rejection
 1 led her toward study.
 1 Bible a. (rare) M19.

lant /prə'pels(ə)nt/ *a. & n.* Also (as adj.) *propellant*. *M17.* [Orig. *f. L. propellens* - pres. *of propellere* *PROPEL* *v.*; later *f. PROPEL* *n.*, -*ANTI*.] *A* adj. Capable of driving or impelling forward, propelling. *M17.* *B* meaning that propels, a propelling agent, an explosive that fires bullets etc. from a gun. (b) *fig.* an incentive, a stimulus. *Fig. 2* force that is used (alone, or reacting with *l* as a source of the hot gases that *propel* the thrust in a rocket engine. *Exo. 3* The compressed fluid in which the active *propellant* in an aerosol container etc. are *propelled*. *M20.*

propels / **n.** L18. [f. PROPEL + -ER.]
 1 person who or thing which propels
 2 spec. A mechanical device for
 propelling *esp.* = SCREW n¹ 8, E19. b
 ship powered by a propeller or

propeller shaft a shaft transmitting power
to a propeller or to the driven wheels
of a vehicle; propeller turbine *n.* & *a.* =
propeller turbine

pend/ *v.i.* arch. M16. [L
 "hang forward or down, $\mathcal{L}$ as PRO-¹ +
 (tag) $\uparrow$ 1 Hang or lean forward or
 incline. M16-L17. 2 Have an
 propensity, tend, be disposed, (to,

propend(ə)nt/ *a.* Now rare or obs.
propender- pres. ppl stem of *propendere*:
propend! Hanging or leaning forwards or

acrylamide/ n. M19. [I. PROP- + -ENE.]
ACRYLONE.
acrylonitrile = ACRYLONITRILE.
acrolein/ n. ACROLEIN M20. propenal
[I. I. M20. propenyl n. the radical
derived from acrolein M20.]

propens/ *a.* Now rare. Et6. [*L.* *propendere* PROPEND.] 1. Inclination or propensity, inclined, *zty*, willing. Foll. by *to*, *to do*. Et6. 2. Inclined, favourable, partial, (*to*). 1 = PROPENSE *a.* 1. M17-M18. 2 = PROPENSITY *n.* 1. M16.

propens (ə)n / n. Now rare. Etym. [L. *propens* - ppl stem of *propendere* = next.]

propensity /prə'pensiti/ *n.* L16. [*L. PROPENSE + -ITY*] (An) inclination, (a) tendency, (a) leaning; bent, disposition. (Foll. by *to*, *towards*, *for*, *to do*). Also, (a) favourable inclination, bias, partiality (to).

Syd. SMITH That dreadful propensity . . . for writing
verses, E. FROMM Selfishness and laziness are . .
propensities inherent in human beings. D. CECIL Hi
propensity to . . . morbid moods.

proper /'proʊpə/ *a., n., and adv.* ME. [(Of)
 propri *f.* L *proprius* one's own, special, peculiar
 (to).] *A* *adj.* 1. Belonging to as a possession
 quality, owned, own; intrinsic, inherent. *Usu.*
 preceded by a *possession*. Now chiefly *Sci.* ME.
 Belonging or relating to distinctively
 exclusively; particular, peculiar, spec-
 individual. (Foll. by *iv.*) ME. *B* Of a name
 noun: applicable to a particular individual
 person, animal, place, country, side, etc.
usu. spelt with a capital letter). *Opp. comm.*
 ME. *c* *Physics*. Measured as though standard
 with respect to the observer. *Ezo.* 30.
 Represented in the natural colours rather
 conventional tinctures. *Usu.* *postpositive*. 12.
Math. & Physics; [*u.* *G* *eigen* own, characteris-
 tic *EIGEN-*] *A* Of an oscillation: = *NORMAL*. *A.*
 119. *B* Of a function, value, etc.; that is
 eigenfunction, eigenvalue, etc. *M30.*

2 P. SIFMA A certain number of peculiarities in the system of vowels and consonants: these must be proper to the original Anglo-Frisian language

II.5 Strictly or accurately so called; genuine, true, real; regular, normal. Now for comparative MB to Mark Dominating a sub

subgroup, etc. that does not constitute the entire set; group, etc.; *spec.* designating such a subgroup that has more than one element. **2** Strictly belonging or applicable; strictly accurate, correct. L.M.E. † *b* Very, identical. **216-Mrg.** 7a Of good quality or character; excellent, admirable, fine. *arch.* L.M.E. **6** Good looking, handsome, attractive; elegant. *arch.* L.M.E. **8** Answering fully to the description; thorough, complete, veritable. *Now colloq.* L.M.E. **5** **P. LARKIN** Too much trouble to make a proper meal. **8** **PYM** A kind of one-to-one leading to a restaurant proper. **A. THWAITES** He had never before proper microscope. **6** **COLERIDGE** Felicity, in its proper sense, is . . . happiness. **8** **M. BIRCHY** She was a proper little madam.

ME. 9 Of requisite standard or type; fit, suitable, appropriate; fitting, right. ME. 10 Conforms to recognized social standards or etiquette; seemingly, decent, decorous; (of a person) respectable, correct, esp. excessively so. ME. 11

9 J. BUCHAN A tailed coat... a garb... he thought proper for a country laird. R. THOMAS Present your accusations through the proper channels. 10 B. WORKBOLLS I abominate your goody-goody, circus respect, infallibly-proper young lady. G. SANTAYANA You can't talk to an elderly man about your infirmities; it wouldn't be proper.

Special allocations & phrases: Proper Bostonian
BRAINHAM 2. proper fraction *Math.* a fraction whose
value is less than one, with the numerator less than the
denominator. proper lesson *Ecclesi.* appointed. *Pro-*
particular day, occasion, or season. proper motion
Astron. the part of the apparent motion of a celestial
object relative to the solar system due to its ac-
tual movement in space (i.e. allowing for the rotation
of the earth parallel, and aberration). *proper fraction*
RESPONSE 1. 1. proper *psalm Ecclesi.* appointed. *Pro-*
particular day, occasion, or season. *with all pro-*
portion: see RESERVE n.

B n. † 1 That which is one's own; a possession; one's property. LME-M16. 2 *Sec.* An office; part of an office, as a psalm, lesson, &c. appointed for a particular occasion or season. OED. COMMON n. 4. 115.

C *adv.* Properly, *spec.* extremely, very thoroughly, completely; (of speech) in received pronunciation, correctly. Now *dial.* & *colloq.*
; MB

K. S. PRICHARD They got proper wet out there. ALLINGHAM Teachin' me to speak proper. E. WAT We couldn't bury him proper. M. GRAY He will sort out good and proper.

properdin /prəu'pə:di:n/ *n.* Mzo. [f. PRO-¹ + *perdere* destroy + -IN-'] *Physiol.* Any of a group

of proteins found in the blood and involved in the body's response to certain kinds of infection.

properispomenon /prə(u)'pɛtɪspəʊmən/ *a.*
& *n.* Pl. -mēnā /-mɪnə/. Also Anglicized as
properispome /prə'u'pɛtɪspəʊm/. *sig.* [Gk
properispōmenon, *f.* as PRO-³ + FERISOMENON.]
Gk Gram. (A word) having a circumflex accent
on the penultimate syllable.

properly /'prop(ə)l/ *adv.* ME. [*f.* PROPER *a.* +
-LY.] 1 *a* Particularly, distinctively, specially.
ME. *b* In itself, intrinsically, essentially;
private property, privately. Now rare or
LME. 2 In the strict sense, strictly speaking,
accurately, exactly. ME. 3 Fittingly, suitably,
appropriately; rightly, duly, respectably, with
propriety or decency. ME. 4 Excellently, finely,
well. arch. LME. 5 Thoroughly, completely,
utterly; exceedingly, very. Now *colloq.* LME.
Maths. So as to form a proper subset
subgroup. M20.

2 W. CATHER The French Church, properly Church of Sainte-Agnes, stood upon a hill. 3 H. JA I had not been properly introduced. E. BOWEN doors shut properly. A. CARTER She had a chance see him properly. 5 K. AMUS She's properly fed up.

properness /'prɒpərs/ *n.* Now rare. LME.
PROPER *a.* + **-NESS**] 1 Excellence, goodness
 esp. of appearance; handsomeness, elegance.
 LME. 2 Fitness, suitability; propriety,
 respectability. M16. 3 The fact of belong-
 ing specially to a thing or person; special quality
 or character. M17.

Propertian /prə'pɜ:(ə)n/ *a.* Litg. [*f. Propertius* (see below) + *-AN.*] Of, pertaining to, characteristic of Sextus Aurelius Propertius, Latin elegiac poet of the first cent. BC, or poetry.

propertied /'propatɪd/ *a.* B17. [f. next + -ED]
 1 Having a specified property, quality, or nature. Long *rars.* B17. 2 Owning or holding property. esp. land or real estate; M18. 3 Provided with stage props. B20.

2 D. PIPER. The . . . landed and propertied classes.

property, *propriet*, *n.* & *v.* ME. [Repr. An T. of (O)ff. *propriet*, *se. propriety*.] A *n.* 1. That which one owns; a thing or things belonging to a person or persons; possessions collectively; *n.* real estate, housing. ME. b A house or piece of land owned. *n*8. c In pl. Shares or investments in property. M20. d An artist, performer, work regarded as a commercial asset, a success, a sensation. Freq. in *hor. property*. *collog.* M20. An attribute, quality, or characteristic, *esp.* essential one; an inherent power or capacity, *virtue*. ME. *th* 7b The characteristic quality of a person or thing; character, nature. ME-*n*18 *Logic*. A non-essential characteristic common to all, and only, the members of a class. M16 The condition or fact of owning or being owned (the exclusive) right to the possession, use, disposal of a thing, ownership. LME. 4 *Thes* = *en*or *n* LME. 75 The quality of being proper or appropriate; suitability. LME-M18. *th* 6 *g* means to an end; a person or thing to be made use of. L16-M10.

I D. CARNEGIE A real-estate operator who bought and sold property on Long Island. C. F. The houses were... council property. P. VAN SOMME We trust those we love as our property. B. J. BARNE... white, eighteenth-century property. 2 B. RUSS Some property of all triangles. K. FRY ART had property of conveying... nesthuc emotion. F. HO This simple property of transparency to sunlight. McMURRAY The culinary properties of mathematics. F. DRUMMOND Property has its duties. OBM Attacks on the rights of property.

Plurality: common property: see COMMON *a.* intellectual property: see INTELLECTUAL *a.* I. internal property: INTERNAL *a.* literary property: see LITERARY *a.* property: see LOST *a.* personal property: see PERSONAL PROTECTIVE property. TOPOLOGICAL property.

Comb: property man, mistress, etc.; in charge stage props in a theatre etc.; property qualification for office, or for the exercise of a right based on the possession of a certain amount of property; property tax or tax levied directly on property.

† B v. l. 1 Use (a person or thing) for one's o
ends, exploit. L16-M12 2 Make one's c

EXHIBIT

5 Parabolas
1.11.12 SB

peripheral. 179. b Going off at a tangent; erratic; divergent; digressive. M19.

2a *Guardian* He played only a *tangential* role in all this. *Nature* Reporting... is seriously deficient in *utens tangential* to the main argument. b J. FANE John probably hid his shy sensitivity behind his tangential talk.

tangent/alky n. 119. *tangentially* adv. M19.

tanger /'tæŋgə/ n. 119. [f. TANG v.], n. + -ER. 1 A person who has a noticeable effect on others. Also, a deceitful person. 119. 2 A person who fits implements with a tang. 220.

tangerine /'tæŋ(dʒ)ɪn/ a. & n. In senses A.1, B.1 T. 218. [f. *Tanger*, *Tangier* (see below) + -INE. 1 A. 1 Of or pertaining to Tangier, a seaport in Morocco on the Strait of Gibraltar. 218. 2 Of the colour tangerine; reddish-orange. 220. B n. 1 A native or inhabitant of Tangier. M19. 2 A mandarin orange, esp. one with a deep reddish-orange peel; the tree bearing such a fruit, *Citrus reticulata*. M19. 3 A reddish-orange colour. L19.

tanghin /'tæŋɡɪn/ n. Also -gūn, -gena /-ɡɪna/, & other vars. L18. [Fr. f. *Malagasy tangena*, -gen. 1 A poison formerly used in Madagascar in trial by ordeal and obtained from the kernels of *Carbera tanghin* (family Apocynaceae). 2 A Madagascan shrub with large purplish fruit. L18. 3 The shrub yielding this poison. M19.

tangi /'tæŋɡi/ n. & v. NZ. M19. [Maori.] A n. A ceremonial Maori funeral; a traditional funeral feast; a lamentation. M19. B v. (Formally) lament or mourn someone or something. M19.

tangi /'tæŋɡi/ n. 220. [f. Pers. & Urdu *tangi* narrowness, f. *tang* narrow.] A gorge or defile in north-western Pakistan.

tangible /'tæŋ(dʒ)əb(ə)l/ a. & n. L16. [Fr., or late L. *tangibilis*, f. L. *tangere* touch: see -BLE.] A adj. 1 Able to be touched; discernible or perceptible by touch; having material form. L16. 2 fig. That can be grasped by the mind or dealt with as fact; definite, objective; substantial. 218. 3 Able to be affected emotionally. rare. 219.

1 Ld MACAULAY Desire of having some visible and tangible object of adoration. C. D. E. FORTNUM A very early period... known to us... by the tangible remains of primitive inhabitants. J. HENRIET The atmosphere was charged, the expectation almost tangible, tangible masses, physical and material, which can be precisely valued or measured. 2 D. L. SAYERS Some tangible sort of person, like money. *Rarian* No evidence that oaths affected behavior in any tangible way.

B n. A tangible thing; something material or objective. L19. *tangibility* n. M19. *tangibleness* n. 218. *tangibly* adv. M19.

tangle /'tæŋɡ(ə)l/ n. Chiefly Sc. M16. [Prob. f. Norw. *tangel*, *tangil*, repr. ON *þengill* ult. rel. to TANG v.] Coarse seaweed; seaweed; spec. either of two species of seaweed with long feathery fronds, *Laminaria digitata* and *L. saccharina*, the young stalks and fronds of which are sometimes eaten. Also *sea-tangle*, *tangle-weed*.

tangle /'tæŋɡ(ə)l/ n. 217. [f. the vb.] 1 A tangled condition; a tangled mass; a confused mass of intertwined threads, hairs, branches, etc.; a single long thread, line, etc., coiled or knotted confusingly, a snarl, a tangle. 217. 2 *trav* & fig. A complicated and confused assemblage; a muddle, a jumble; an intricate system of routes, etc.; a confused network of opinions, facts, etc.; a confused or complicated state. M18. 3 Any of various plants having long, winding, tangled stalks, or of tangled growth. M19. 4 *Med.* A tangled mass of neurofibrils found in or around cells of the central nervous system esp. as a characteristic feature of Alzheimer's disease and other neurological disorders. 220.

1 OED This string is all in a tangle. J. M. COATZEE He fixed three fenceposts from the tangle of broken fencing. U. HOLDEN The knobby branches growing in a tangle. 2 J. BUCHAN The only man that can straighten out the tangle. J. CARVER His father: 'left nothing but a tangle of debts. M. MARRIN To the north a tangle of motorways rises. 3: blue tangle(s) US a kind of huckleberry, *Gaylussia frondosa*, red tangle dial. a dodder; *Cuscuta epithymum*.

b but, d dog, f few, g get, h he, j yes, k cat, l leg, m man, a no, p pea, r red, s sit, t top, v van, w we, z zoo, j she, y vision, θ chin, ð this, ŋ r

tangle /'tæŋɡ(ə)l/ v. ME. [Prob. of Scand. origin.] 1 v. i. = ENTANGLE v. 2. ME. 2 v. i. = ENTANGLE v. 1. Also, cover with intertwined vegetation etc. 216. 3 v. i. Catch and hold fast (as) in a net or snare; entrap. 216. 4 v. i. Intertwine in a confused mass; intertwine the parts or threads of in this way; make tangled. Freq. foll. by up. M16. 5 v. i. A become involved in conflict or argument; fight, contend; get involved, associate. (Foll. by *against*, *with*, *up* with.) Now *colloq.* (rare bef. 20) M16. b Be or become entangled or intertwined. Also, have a tangled course, twist about confusedly. L16.

1 Milton Tang'd in the fold Of dire necessity. *Time* Horals tangled in bankruptcy proceedings. 2 M. E. HUGHES Gardens... tangled over with... bright creepers. D. LEAVITT There were clothes and underwear tangled among the bedsheets. 3 fig. *Times* Men 22:15 The furries... took counsel how they might tangle him in his words. 4 Ld MACAULAY He had cut the knot which the Congress had only twisted and tangled. G. VIVAL A sharp wind tangled her hair. 5a D. HAKAMETTY While we're tangleing, them hums will eat us up. L. GAMBLE No better fun in the world than tangleing with the Hun. *Lianur* He... tangle romantically with his producer's wife. b J. CANRY You could... catch crabs where the hangover room tangled by the seashore. P. SCOTCHMAN The cockpit tangleing on the shrouded hill. A. CANTON A kitten tangleing up in a ball of wool.

Comp. *tanglefoot* (chiefly N. Amer.) (a) slang intoxicating liquor; (b) *colloq.* material applied to a wet-sunk or a grease-band; *tangle-footed* a. having tangled feet; *tangleing* *tangle-log(s)* (a) = 'tanglelog' s.v. *ROULETTE*; (b) slang = *tanglefoot* (a) above.

tangle'd ppl a. Intertwined in a complicated and confused manner; mated, mixed up; fig. complicated, intricate. L16. *tanglement* n. the condition of being tangled; an instance of this; a tangle. M19. *tangler* n. (rare) 216. *tangleing* n. (a) the action of the vb; (b) in pl., something tangled. M16. *tangleingly* adv. in a tangleing manner. M19.

tanglely /'tæŋɡli/ a. M18. [f. TANGLE n. + -LY.] Scurvy with or consisting of tangle or seaweed.

tanglely /'tæŋɡli/ a. 219. [f. TANGLE n. + -LY.] Full of tangles; tangled.

tango /'tæŋɡəʊ/ n. & v. Pl. -os, (now rare) -oes. L19. [Amer. Sp., prob. of African origin.] A n. 1 A kind of Spanish flamenco dance. L19. 2 A syncretized ballroom dance in 2/4 or 4/4 time, of S. American origin; characterized by slow gliding movements and abrupt pauses; a piece of music intended to accompany or in the rhythm of this dance. L19.

B v. i. Dance a-tango. 220. *Powert* It takes two to tango.

tangoist n. an exponent of the tango 220.

tango /'tæŋɡəʊ/ n. & a. 220. [Abbrev. of TANGORANGE, prob. infl. by prec.: see -O.] (Of) a deep orange colour.

tangor /'tæŋɡə/ n. M20. [f. TANGORANGE + -OR (ANOS) n.] A natural hybrid citrus fruit, a cross between the tangerine and the sweet orange.

tangoreceptor /'tæŋɡəʊrɪsɛptə/ n. 220. [f. L. *tangere* to touch + -O- + RECEPTOR.] *Physiol.* A sensory receptor which responds to touch or pressure.

tangram /'tæŋɡræm/ n. M19. [Origin unk.] A Chinese geometrical puzzle consisting of a square cut into seven pieces which can be combined to make various shapes.

tanguin n. var. of TANGORANGE.

tanguin /'tæŋɡɪn/ n. L18. [Tib. *na-nan*.] A pony from Tibet or Bhutan.

Tangut /'tæŋɡʊt/ n. & a. L16. [App. f. Mongolian, f. Chin. *Dang Xiang* (Wade-Giles *Tanghiang*).] *Hist.* A n. Pl. same, -a. A member of a Tibetan people who inhabited north- and western China and western Inner Mongolia, and formed an independent kingdom from the late 10th to the mid 13th cent.; the language of this people. L16. B adj. Pertaining to or designating this people or their language. L19.

tangy /'tæŋɡi/ a. L19. [f. TANG n. + -Y.] 1 Having a sharp, distinct, or spicy taste or smell. L19. 2 Disagreeable in style or content; esp. mildly sensational or scandalous, spicy. L19.

2 *Punch* Despite a twindly fondness for... his style isn't exactly tangy. H. WOOD tangy tale or two about Mudge.

tangly adv. M20. *tanginess* n. L10.

tanh /'tæŋk/ n. L19. [f. TAN hyperbolic.] *Math.* Hyperbolic tangent; -tans n. var. of TANGIA.

tanist /'tænist/ n. M16. [Ir., Gael 'second in excellence, second in TANAISTE.] *Hist.* The heir apparent chief, usu. the most vigorous adult elected during the chief's lifetime.

tanistry n. the system of determining the succession of a tanist. L16.

taniwha /'tæniwə/ foreign 'tanifia' (Maori.) A water monster of Maori.

tanjib /'tæŋdʒɪb/ n. 218. (Pers., f. *tan* adornment.) A fine kind of chiefly in Uttar Pradesh, Ind lightweight plain-woven cotton fabric produced in Britain for the Far East.

tank /'tæŋk/ n. 217. [Gujarati *dhak*, underground cistern, pers. also: *tang* = Sp. *cratango*, Fr. *étang* pond.] 1 In branch 1, f. use of tank n. for secrecy during manufacture. 1915. 11 In the Indian subcontinent (usu. man-made) or a large cistern or reservoir for storing water; a man-made reservoir. 217. b A *sub* pond, dial. & US: 217. 2 A large storage chamber for liquid or gas; a container in a motor vehicle, aircraft receptacle with transparent sides keep fish, an aquarium. L17. 3 *Eng.* engine. 220. b A tank top. L20.

police station, jail, etc.; esp. one in are held. US slang. 220. 2 K. AMIS 'Low on petrol, fuel?' tank when I picked you up. I've got tank, storage tank, water tank, etc. a fig. 'tanker' n. *dep* tank: see *DEP* a. *serp* a. 3a *prim* tank, *valde* tank, any place you're going in the maximum. 11 5 An armoured military vehicle tracked carriage and mounted weapons and guns and other weapons. 2: Royal Tank Corps of the British 220.

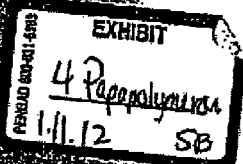
M20. D. LEAVITT Four foot eleven and 3 *Couk*: tank-buster slang an aircraft designed to combat tanks; tank car: wagon below; tank circuit *Elect* circuit placed in the anode circuit of in order to supply energy to an aerial tank engine a railway engine which fuel receptacles on its own frame separate tender, tank farm an oil storage tank; tank-farming by locomotive = *tank engine* above; *cu* a woman's one-piece swimming scooped neck; tank top a sleeveless garment with round neck and deep to the top of a tank suit; tank v. *unimportant* tows, *orig.* one at whi to take on water; tank transporter for the transportation of a railway u obstacle intended to impede or prevent tank; tank wagon a railway wagon transporting liquid in bulk.

tankful n. as much as a tank will: a. L19.

tank /'tæŋk/ n. 217. [Hind. see TANGA n.] In the Indian sub of weight, esp. for pearls, vary locations.

tank /'tæŋk/ n. 217. [f. TANKARD.] The amount held vessel; a drink esp. of beer.

tank /'tæŋk/ v. M19. [f. TANK n.] in a tank; duck dial. M19. 2 v. i. into a tank store, keep, or treat Chiefly foll. by up. a v. i. & refl. (alcoholic) drink, get drunk. *ib* i. Fill the tank of (a vehicle fuel). *colloq.* M20. 4 v. i. *Tanni* finish a match deliberately. *lang* 3a J. McCLELLAN He'd arrived hat *man*: ALDOUS HUXLEY A child u



The new shorter Oxford English Dictionary
Edited by Lesley Brown, Clarendon Press, Oxford 1993
3937

Electricity

From Wikipedia, the free encyclopedia

Electricity is a general term encompassing a variety of phenomena resulting from the presence and flow of electric charge. These include many easily recognizable phenomena, such as lightning, static electricity, and the flow of electrical current in an electrical wire. In addition, electricity encompasses less familiar concepts such as the electromagnetic field and electromagnetic induction.

The word is from the New Latin *electricus*, "amber-like"^[a], coined in the year 1600 from the Greek *ἤλεκτρον* (electron) meaning amber, because electrical effects were produced classically by rubbing amber.

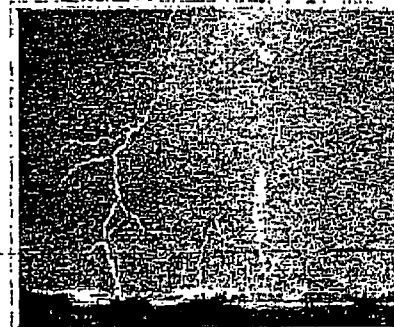
In general usage, the word "electricity" adequately refers to a number of physical effects. In a scientific context, however, the term is vague, and these related, but distinct, concepts are better identified by more precise terms:

- **Electric charge:** a property of some subatomic particles, which determines their electromagnetic interactions. Electrically charged matter is influenced by, and produces, electromagnetic fields.
- **Electric current:** a movement or flow of electrically charged particles, typically measured in amperes.
- **Electric field:** an influence produced by an electric charge on other charges in its vicinity.
- **Electric potential:** the capacity of an electric field to do work on an electric charge, typically measured in volts.
- **Electromagnetism:** a fundamental interaction between the magnetic field and the presence and motion of an electric charge.

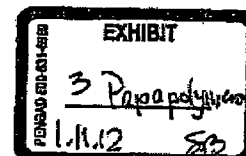
The most common use of the word "electricity" is less precise. It refers to:

- **Electric power** (which can refer imprecisely to a quantity of electrical potential energy or else more correctly to electrical energy per time) that is provided commercially, by the electrical power industry. In a loose but common use of the term, "electricity" may be used to mean "wired for electricity" which means a working connection to an electric power station. Such a connection grants the user of "electricity" access to the electric field present in electrical wiring, and thus to electric power.

Electrical phenomena have been studied since antiquity, though advances in the science were not made until the seventeenth and eighteenth centuries. Practical applications for electricity however remained few, and it would not be until the late nineteenth century that engineers were able to put it to industrial and residential use. The rapid expansion in electrical technology at this time transformed industry and society. Electricity's extraordinary versatility as a source of energy means it can be put to an almost limitless set of applications which include transport, heating, lighting, communications, and computation. Electrical power is the backbone of modern industrial society, and is expected to remain so for the foreseeable future.^[1]



Lightning is one of the most dramatic effects of electricity.



Contents

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History

Main articles: History of electromagnetism and History of electrical engineering

See also: Etymology of electricity

Long before any knowledge of electricity existed people were aware of shocks from electric fish. Ancient Egyptian texts dating from 2750 BC referred to these fish as the "Thunderer of the Nile", and described them as the "protectors" of all other fish. Electric fish were again reported millennia later by ancient Greek, Roman and Arabic naturalists and physicians.^[2] Several ancient writers, such as Pliny the Elder and Scribonius Largus, attested to the numbing effect of electric shocks delivered by catfish and torpedo rays, and knew that such shocks could travel along conducting objects.^[3] Patients suffering from ailments such as gout or headache were directed to touch electric fish in the hope that the powerful jolt might cure them.^[4] Possibly the earliest and nearest approach to the discovery of the identity of lightning, and electricity from any other source, is to be attributed to the Arabs, who before the 15th century had the Arabic word for lightning (*raad*) applied to the electric ray.^[5]



Thales, the earliest researcher into electricity

Ancient cultures around the Mediterranean knew that certain objects, such as rods of amber, could be rubbed with cat's fur to attract light objects like feathers. Thales of Miletos made a series of observations on static electricity around 600 BC, from which he believed that friction rendered amber magnetic, in contrast to minerals such as magnetite, which needed no rubbing.^{[6][7]} Thales was incorrect in believing the attraction was due to a magnetic effect, but later science would prove a link between magnetism and electricity. According to a controversial theory, the Parthians may have had knowledge of electroplating, based on the 1936 discovery of the Baghdad Battery, which resembles a galvanic cell, though it is uncertain whether the artifact was electrical in nature.^[8]



Benjamin Franklin conducted extensive research on electricity in the 18th century, as documented by Joseph Priestley (1767) *History and Present Status of Electricity*, with whom Franklin carried on extended correspondence.

Electricity would remain little more than an intellectual curiosity for millennia until 1600, when the English scientist William Gilbert made a careful study of electricity and magnetism, distinguishing the lodestone effect from static electricity produced by rubbing amber.^[6] He coined the New Latin word *electricus* ("of amber" or "like amber", from *ἤλεκτρον* [*elektron*], the Greek word for "amber") to refer to the property of attracting small objects after being rubbed.^[9] This association gave rise to the English words "electric" and "electricity", which made their first appearance in print in Thomas Browne's *Pseudodoxia Epidemica* of 1646.^[10]

Further work was conducted by Otto von Guericke, Robert Boyle, Stephen Gray and C. F. du Fay. In the 18th century, Benjamin Franklin conducted extensive research in electricity, selling his possessions to fund his work. In June 1752 he is reputed to have attached a metal key to the bottom of a dampened kite string and flown the kite in a storm-threatened sky.^[11] A succession of sparks jumping from the key to the back of his hand showed that lightning was indeed electrical in nature.^[12]

In 1791, Luigi Galvani published his discovery of bioelectricity, demonstrating that electricity was the medium by which nerve cells passed signals to the muscles.^[13] Alessandro Volta's battery, or voltaic pile, of 1800, made from alternating layers of zinc and copper, provided scientists with a more reliable source of electrical energy than the electrostatic machines previously used.^[13] The recognition of electromagnetism, the unity of electric and magnetic phenomena, is due to Hans Christian Ørsted and André-Marie Ampère in 1819–1820; Michael Faraday invented the electric motor in 1821, and Georg Ohm mathematically analysed the electrical circuit in 1827.^[13] Electricity and magnetism (and light) were definitively linked by James Clerk Maxwell, in particular in his "On Physical Lines of Force" in 1861 and 1862.^[14]

While it had been the early 19th century that had seen rapid progress in electrical science, the late 19th century would see the greatest progress in electrical engineering. Through such people as Nikola Tesla, Galileo Ferraris, Oliver Heaviside, Thomas Edison, Ottó Bláthy, Ányos Jedlik, Sir Charles Parsons, Joseph Swan, George Westinghouse,



Michael Faraday formed the foundation of electric motor technology

Ernst Werner von Siemens, Alexander Graham Bell and Lord Kelvin, electricity was turned from a scientific curiosity into an essential tool for modern life, becoming a driving force for the Second Industrial Revolution.^[15]

Concepts

Electric charge

Main article: Electric charge

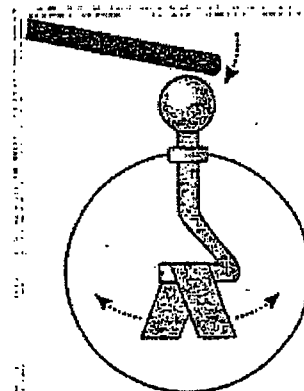
See also: electron, proton, and ion

Electric charge is a property of certain subatomic particles, which gives rise to and interacts with the electromagnetic force, one of the four fundamental forces of nature. Charge originates in the atom, in which its most familiar carriers are the electron and proton. It is a conserved quantity, that is, the net charge within an isolated system will always remain constant regardless of any changes taking place within that system.^[16] Within the system, charge may be transferred between bodies, either by direct contact, or by passing along a conducting material, such as a wire.^[17] The informal term static electricity refers to the net presence (or 'imbalance') of charge on a body, usually caused when dissimilar materials are rubbed together, transferring charge from one to the other.

The presence of charge gives rise to the electromagnetic force: charges exert a force on each other, an effect that was known, though not understood, in antiquity.^[18] A lightweight ball suspended from a string can be charged by touching it with a glass rod that has itself been charged by rubbing with a cloth. If a similar ball is charged by the same glass rod, it is found to repel the first: the charge acts to force the two balls apart. Two balls that are charged with a rubbed amber rod also repel each other. However, if one ball is charged by the glass rod, and the other by an amber rod, the two balls are found to attract each other. These phenomena were investigated in the late eighteenth century by Charles-Augustin de Coulomb, who deduced that charge manifests itself in two opposing forms. This discovery led to the well-known axiom: *like-charged objects repel and opposite-charged objects attract*.^[18]

The force acts on the charged particles themselves, hence charge has a tendency to spread itself as evenly as possible over a conducting surface. The magnitude of the electromagnetic force, whether attractive or repulsive, is given by Coulomb's law, which relates the force to the product of the charges and has an inverse-square relation to the distance between them.^{[19][20]} The electromagnetic force is very strong, second only in strength to the strong interaction,^[21] but unlike that force it operates over all distances.^[22] In comparison with the much weaker gravitational force, the electromagnetic force pushing two electrons apart is 10^{42} times that of the gravitational attraction pulling them together.^[23]

The charge on electrons and protons is opposite in sign, hence an amount of charge may be expressed as being either negative or positive. By convention, the charge carried by electrons is deemed negative, and that by protons positive, a custom that originated with the work of Benjamin Franklin.^[24] The amount of charge is usually given the symbol Q and expressed in coulombs;^[25] each electron carries the same



Charge on a gold-leaf electroscope causes the leaves to visibly repel each other

COLLEGE OF ENGINEERING

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School of Electrical and Computer Engineering

Great Minds Think Differently

Faculty Profile - Ioannis "John" Papapolymerou



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Biography

John Papapolymerou received the B.S.E.E. degree from the National Technical University of Athens, Athens, Greece, in 1993, the M.S.E.E. and Ph.D. degrees from the University of Michigan, Ann Arbor, in 1994 and 1999, respectively. From 1999-2001 he was an Assistant Professor at the Department of Electrical and Computer Engineering of the University of Arizona, Tucson and during the summers of 2000 and 2003 he was a visiting professor at The University of Limoges, France. From 2001-2005 and 2005-2009 he was an Assistant and Associate Professor, respectively, at the School of Electrical and Computer Engineering of the Georgia Institute of Technology, where he is currently a Professor. He has authored or coauthored over 250 publications in peer-reviewed journals and conferences. His research interests include the implementation of micromachining techniques and MEMS devices in microwave, millimeter-wave and THz circuits and the development of both passive and active planar circuits on semiconductor (Si/SiGe, GaAs) and organic substrates (liquid crystal polymer-LCP, LTCC) for System-on-a-Chip (SOC)/ System-on-a-Package (SOP) RF front ends.

Dr. Papapolymerou is the Chair for Commission D of the US National Committee of URSI. He is currently an Associate Editor for *IEEE Transactions on Antennas and Propagation*. During 2004, he was the Chair of the IEEE MTT/AP Atlanta Chapter. He was the recipient of the 2009 IEEE MTT-S Outstanding Young Engineer Award, the 2009 Georgia Tech School of ECE Outstanding Junior Faculty Award, the 2004 Army Research Office (ARO) Young Investigator Award, the 2002 National Science Foundation (NSF) CAREER award, the best paper award at the 3rd IEEE International Conference on Microwave and Millimeter-Wave Technology (ICMMT2002), Beijing, China and the 1997 Outstanding Graduate Student Instructional Assistant Award presented by the American Society for Engineering Education (ASEE), The University of Michigan Chapter. His students have also been recipients of several awards including the Best Student Paper Award presented at the 2004 IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, the 2007 IEEE MTT-S Graduate Fellowship, and the 2007/2008 and 2008/2009 IEEE MTT-S Undergraduate Scholarship/Fellowship.

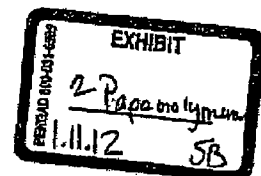
Selected Publications, Patents

Research Interests

- Monolithic microwave/mm-wave integrated circuits
- Silicon micromachining for high-frequency applications
- RF MEMS
- EBG structures
- Packaging and wireless interconnects
- W-band transmit/receive modules

Distinctions

- Outstanding Teaching Award, College of Engineering, The University of Michigan, April 1997.
- Chair of the Tucson IEEE Joint MTT/AP/EMC/COM chapter (1999-2001)
- Workshop organizer for the 2001 Intern. Microwave Symposium and European Microwave Conference
- Chair of the 2001 Intern. Microwave Symposium Student Paper Competition
- Member of the 2001 Intern. Microwave Symposium steering and technical program committees



- Best paper award with student Guizhen (Emily) Zheng at the 3rd IEEE International Conference on Microwave and Millimeter-Wave Technology (ICMMT2002), Beijing, China, August 17-19, 2002
- NSF CAREER award, 2002
- US Army Research Office Young Investigator Award, 2004
- Best student paper award with student Guizhen (Emily) Zheng at the 2004 IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (2004 SIRF), Atlanta, GA, September 8-10, 2004
- IEEE Fellow

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Expert Report

Prepared by

Dr. Ioannis "John" Papapolymerou

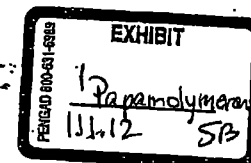
Professor

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Atlanta, GA 30332

Atlanta - October 21, 2011



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I. Introduction

Electrical/electromagnetic devices are widely used today by people in their everyday lives to cover a variety of their needs: from washing/drying their clothes and illuminating their house, to warming up their food, talking to their friends on their cell phones and watching the news or a favorite movie on their TV set. All of this is possible due to electricity and magnetism or more precisely the electromagnetic force that exists in our physical universe (the latter is governed by four fundamental forces: nuclear; electromagnetic; weak-interaction; and gravitational).

Electricity is known since the 6th century B.C. when *Thales of Miletus* (624 B.C.-546 B.C.), an ancient Greek philosopher and mathematician, wrote that when a piece of amber was rubbed in wool it attracted light objects such as straws and feathers (we know now that this is a manifestation of an electrostatic force by friction). Magnetism was also known in ancient Greece, as rocks that attracted pieces of iron or other pieces of similar rock had been observed. It was not until 1600 A.D. that the term "electric" appeared in a treatise on the electric force generated by friction, authored by *William Gilbert* a physician to Queen Elizabeth I (he christened it electricity from the Greek word for amber, "electron", in honor of Thales' experiments). It was not until a century later (1752 A.D.) that one of our founding fathers and greatest scientists of modern times, *Benjamin Franklin*, demonstrated that lightning is a form of electricity and also introduced the terms of positive and negative charges to account for the fact that some materials would repel while others would attract after rubbing a piece of amber with various materials (silk, wool etc.). By that time it was also understood that charges create an electric field. Electrical forces were first investigated systematically by *Charles de Coulomb*, a colonel in the Engineering Corps of the French Army, in 1784 who found experimentally that the intensity of the electric force between two charges is proportional to the product of their charges and inversely proportional to the square of the distance R between them (the unit of charge was named Coulomb in his honor). The electric force is in the direction of the line that connects the two charges.

In the early 1800s scientists understood how electric currents induce magnetism and *Joseph Henry* (an American physicist and first secretary of the Smithsonian Institution) developed the first electric motor and discovered electromagnetic induction (he also assisted *Morse* in the development of the telegraph). Shortly thereafter, *Michael Faraday* (an English physicist and chemist) doing similar experiments as Henry built the first electric generator (the converse of the electric motor) and published his results in 1831 (before Henry published his). Faraday in essence demonstrated that a changing magnetic field induces an electric field. His device (the Faraday wheel) was the world's first *dynamo* or electric generator. It was Faraday's discovery, more than any other one, that allowed electricity to be transformed from a topic of scientific curiosity for the few to a powerful technology utilized by everybody. In 1873, *James Clerk Maxwell*, a Scottish physicist and the greatest name in electromagnetic theory, incorporated into his four famous equations all the experimental findings of the previous scientists that represent the foundation of classical electromagnetic theory (he also proved

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experimentally that a changing electric field must be accompanied by a changing magnetic field). Maxwell's theory predicted the existence of electromagnetic waves which are the foundation for wireless and wired telecommunications, electric power transmission, laser systems, medical systems (e.g. MRI) and other applications. He also concluded that light is an electromagnetic wave.

II. Analysis

Since it was clearly understood from the various 19th century experiments that electricity is very practical and convenient, various devices and systems based on electricity were developed to accommodate humankind's needs. The first and most important application was the generation, transmission and distribution of electric energy to households for lighting and heating purposes, as well as providing prime mover energy in the form of electric motors. Another application was energy delivery to industrial customers for manufacturing and control purposes. Power companies, like *Duke Energy Corporation* ("*Duke Energy*"), are in the business of performing the above functions. These companies are essentially in the business of first transforming kinetic/mechanical energy into electric energy, and then transmitting, distributing and delivering the electric (electromagnetic) energy in an efficient and economical way. The process typically involves three steps: generation, transmission and distribution. Electric energy generation is based on *Faraday's* experiment and basically involves the transformation of kinetic/mechanical energy to electric via a time varying magnetic field. The kinetic/mechanical energy is provided by turbines that can turn/rotate from waterfalls (hydroelectric plants), wind (wind generators) or steam pressure (steam is created by burning coal or by causing a controlled nuclear reaction that heats up a water tank). An alternative method is to use solar cells that transform solar energy to electric energy. One should emphasize here that the electric generator is efficiently transforming energy from one form to the other (a fundamental law of physics is the conservation of energy and the fact that energy cannot be created or destroyed - it simply exists), and as such the entire generation process deals with energy that already exists in nature.

The electric generator typically consists of a loop of wires that can rotate inside a steady magnetic field (the magnetic field is provided either by permanent magnets or electromagnets/coils - this is called the stator). This loop of wires (the rotor) is connected to the turbine that makes them rotate once in motion. This motion causes electromagnetic induction (per *Faraday*) between the two ends of the wire loop. Individual slip rings are fitted to each of the two ends of the rotor's wire loop to provide a path for the electric current to leave the armature. Brushes (which are actually carbon contacts) ride against the slip rings and complete the path for the current into the circuit to which the generator is attached. Once this electric energy is generated it must be transmitted and delivered efficiently and safely to the various customers. This is extremely important as losses in the transmission and distribution systems will make the whole system impractical (meaning customers would not get the amount of energy they need)

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and expensive. For this reason, the transmission system consists of metal wires (lines) that connect the generator to the customer (load), and substations (transformers). The latter are needed to increase the generator voltage prior to transmission and decrease it prior to delivery (transformers operate only with AC voltage/current). *Why?* At home we use a voltage of 110V (60 Hz frequency) or 220V (50 Hz frequency). If the same voltage was used to transmit the electric energy from the generator to our house over a length of several hundreds or thousands of miles the energy would be lost and transformed into heat instead of arriving at our house since larger amounts of currents would be needed on the lines (large amounts of currents produce more heat) for the same amount of power. For this reason, the generator voltage is increased to 100KV/230KV/525KV, thus, decreasing the required current. The same amount of power is transmitted however (electric power is the product of voltage with current). Before delivery, another transformer reduces the high voltage to the desired one (24 KV, 12 KV or 240V/120V). It should be emphasized here that the above system is the most efficient one to safely transmit large amounts of electric (electromagnetic) energy over large distances. The same phenomenon applies when we talk on the cell phone but at different power levels and frequencies (1 GHz instead of 60 Hz). Our cell phone receives electromagnetic energy (electricity) from the antenna of the base station, and transmits energy back when we talk. The electric energy propagates without the need of any material in between. Experiments have established the fact that electric and magnetic energy can propagate in the form of waves even in vacuum (no material is needed). Actually, this is how we know that other galaxies or star systems exist in outer space. However, for more efficient and safe energy transmission in everyday life the system shown below is used:

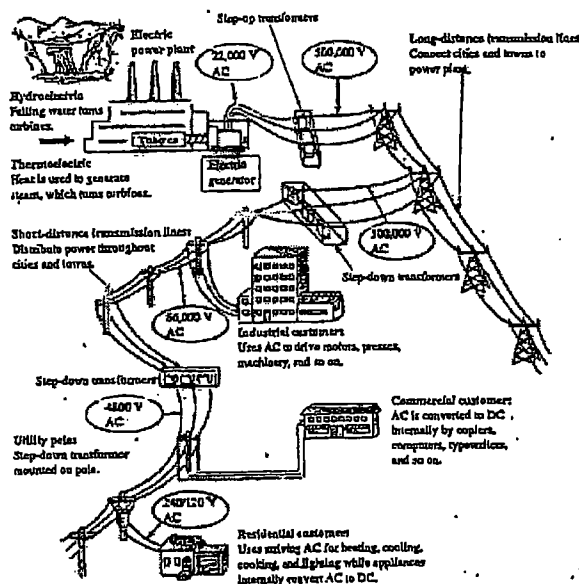
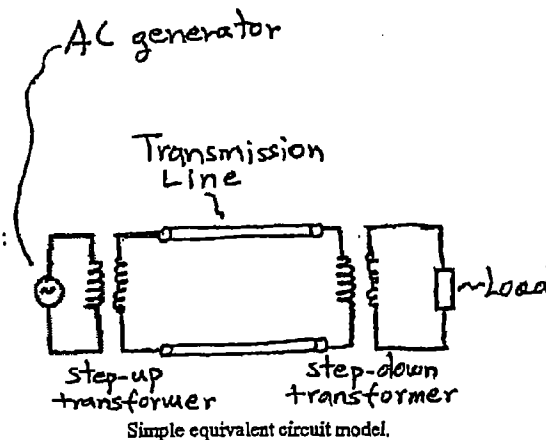


Diagram of basic electric energy supply system [1].



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The electric generator creates an alternating (AC) voltage potential (voltage) that is applied on the transmission line. The line consists of two parallel metal wires. Transformers are inserted between the generator and input of the line to step-up the voltage, and between the end of line and the load to step-it down (simplest form). The AC voltage is required in order to operate the transformers (DC voltage cannot be used). The wires are made out of conducting material (metal such as copper or aluminum). Conductors can transmit/propagate electromagnetic energy very effectively and safely. This is due to the fact that they have electrons loosely associated with the nucleus of their atoms that jump from one atom to the other in the same direction when an electric field is present, thus, creating a net electric current and propagating the electromagnetic energy. When no electric potential exists, the electrons move in random directions and with varying speeds, thus, producing a zero average current and not propagating any energy. When an AC voltage is applied between the two wires, the electrons flow forward and backward or oscillate at a rate of 60 cycles (times) per second. The direction of flow in the wires does not matter, as energy is propagated as long as there is a flow of electrons. *Again, it should be emphasized that other systems/set-ups can be used for this type of energy transmission that are not as efficient as the conducting wires* (One such system/set-up is free space used in propagation of the Sun's visible and non-visible rays that carry electromagnetic energy. Another system/set-up is the usage of free space to propagate electromagnetic waves and energy in wireless communication systems, e.g. cell phones or wireless internet or radio, between a transmitter and a receiver). At the load end, this electric field is delivered with the desired strength after step-down voltage conversion. It should be noted here that electrons are NOT delivered to the load (generally speaking the presence of electrons is not even necessary for electromagnetic energy propagation – electromagnetic energy can propagate in vacuum as in the case of the Sun's rays and wireless communication systems). Electrons are already part of the transmission line material, as well as the material used in the customer's device (e.g. motor windings in washer or filament in light bulb). Electrons facilitate the energy propagation and make it extremely efficient. The entire system delivers energy in the form of an electromagnetic field (or electromagnetic force to be consistent with the four fundamental forces in our physical universe: nuclear, electromagnetic, weak-interaction and gravitational). *One should also emphasize here that according to a fundamental law of physics and probably the most important one, energy exists in our physical universe and cannot be created or destroyed – it can only be transformed from one form to the other.* This electromagnetic field can then be used by our device for the intended purpose. The latter is best illustrated by a household that turns on the lights, or operates a TV or operates the washer/drier motor. A substantial and fundamental operation/service that *Duke Energy* performs is the voltage transformation in the various stages of the system to efficiently and safely deliver electric energy to its customers (i.e. minimize the energy losses). Without this transformation, the delivery of large amounts of energy over large areas (e.g. entire countries or even continents) would not be possible. Furthermore, another extremely important operation/service that *Duke Energy* performs is to successfully meet its customers' energy

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requirements over time. It is well known that the energy demands (i.e. loads) of the various customers (residential, industrial etc.) can significantly change over a certain period of time. An extremely important service that *Duke Energy* performs is to accommodate these energy demands by being able to always deliver the required amounts of energy.

As part of my expert report I was also asked to answer the following question: Can the sale of electricity provided by Duke Energy be considered as manufacturing and sale of tangible personal property, where manufacturing involves the creation of a new and substantially different article having a distinctive name and substantially different character or use?

In the analysis provided in the previous section, it was made clear that companies like *Duke Energy* provide to their customers energy in the form of an electromagnetic field. One of the most fundamental laws of Physics mandates that energy is conserved and it cannot be created or destroyed (it simply exists). As such, *Duke Energy* transforms kinetic/mechanical energy (from burning coal and creating high pressure steam that rotates/moves a turbine) into electromagnetic energy that it then transmits over long distances and distributes to its customers. *Duke Energy* is not delivering electrons or metal wires to its customers. It is also not delivering batteries to its customers. The purpose of the metal wires of the power lines is to efficiently and safely propagate the electromagnetic energy from the power plant to the final delivery point. As a result, transformed energy (kinetic to electromagnetic) is being delivered to the customer and not a substantially different article that has a distinctive name and a substantially different character (to compare one could think of wood abundantly found in nature and creating chairs or tables that are a substantially different article - this is not the case here). In addition, tangible personal property is something that has physical dimensions and one can possess (e.g. a chair, a table, a book, a car).

To better understand let us make a few comparisons: tangible personal property, in my opinion, is a battery which is an electric charge storage device (one can possess it and it has specific dimensions). A capacitor, another electric energy storage device, is also tangible personal property (one can possess it and it has specific dimensions). *Duke Energy* is not delivering batteries or capacitors to its customers as part of the service it provides. Tangible personal property is a personal computer or a laptop that uses electric energy to operate. *Duke Energy* is not delivering laptops or computers to its customers under the service it provides. Tangible personal property is water (I can possess it and has dimensions). To compare, if one opens a hole in the water line/pipe water will leak. Electrons or matter will not leak when a hole is poked in the conductor of a transmission line system used by *Duke Energy*.

To further clarify that the sale of electricity provided by *Duke Energy* cannot be considered as manufacturing and sale of tangible personal property let us consider the following: electric energy can be harvested with an antenna from telecommunication or radio signals that exist around us. However, energy conversion efficiency will be low, thus, the delivered energy will be low and may not be enough to cover the specific needs of the customers. These systems

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can harvest electromagnetic energy existing in free space or in the vicinity of transmission lines to power up low energy devices (e.g. a sensor that measures temperature/humidity or a sensor that measures voltage and current in smart grid power systems).

III. Conclusions

Based on the previous analysis it is my opinion that what *Duke Energy* provides is a service, and that the electric energy it sells is not something that one can possess or has physical dimensions (e.g. a table, a chair, a book, a car). The service that *Duke Energy* provides is to transform existing energy from one form to the other, and transmit and distribute that energy in a safe and efficient manner to its customers.

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- [1] *Power Transmission: Mechanical, Hydraulic, Pneumatic, and Electrical*, Thomas B. Scott, Prentice-Hall, 2000.
- [2] *Fundamentals of Applied Electromagnetics*, Fawwaz T. Ulaby, Eric Michielssen and Umberto Ravaioli, Prentice-Hall, 2010.

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ENGINEER: ELECTRICAL

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Engineering Design & Testing Corp.
Post Office Box 8027
Columbia, South Carolina 29202

EDUCATION:

1963 B.S. Electrical Engineering - University of Washington
1968 M.S. Electrical Engineering - University of Washington

PROFESSIONAL EXPERIENCE:

August, 1999 to present **Engineering Design & Testing Corp. - Columbia, South Carolina**
Consulting Electrical Engineer responsible for consultation with insurance companies, manufacturing industries, government and attorneys. Specific areas of expertise include: Evaluation of distribution and plant-wide electrical systems; review and evaluation of instrumentation and process control systems; troubleshooting and failure analysis of electric and control networks; evaluate cause of damage, scope of damage and cost of repair of electrical systems and equipment.

1995 to 1999 **Fibermark, Inc. - Warren & Hughesville Mills, New Jersey**
Electrical Superintendent responsible for electrical and instrument (E&I) engineering and boiler/generator administration. Implement modern controls for secondary fiber system and stock refiner. Major rebuild and startup of Hughesville dry end including complete rewiring and drive modifications in conjunction with equipment upgrade.

1992 to 1995 **Getchell Gold, Inc., Getchell Mine - Golconda, Nevada**
Project Engineer responsible for capital projects tracking and budgeting, project and E&I engineering, piping, E&I and facility design and major overhaul of demineralizer, boiler and deaerator piping and controls. Add 15 MVA electrical substation and 13KV mine feeder line (specification, procurement, design, installation and startup). Commission and start up underground mine distribution substation.

1991 to 1992 **Pitt County Memorial Hospital - Greenville, North Carolina**
Electrical Engineer responsible for project and electrical engineering. Specific projects included LAN repeater room and network extension installation, CT room layout (foundation, structure and electrical design) and miscellaneous electrical and lighting changes.

November 2006

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1986 to 1991	Weyerhaeuser Company, Lumber Facility - Ayden, North Carolina Engineering Manager responsible for scope, design, permitting and procurement of \$60 million green-field sawmill. Responsible for plant, processing and system engineering during and after construction, electric, water and sewer utility coordination and participation in process and process control startup. Leadership and hands-on participation in numerous process improvement projects. Develop production planning software and validated and improved log sorting control software.
1979 to 1985	Weyerhaeuser Company Wood Products R&E - Tacoma, Washington Project Manager responsible for a manufacturing control system development program, related projects and transverse bucking system from concept through start-up and acceptance (first of several implementations). Stem scanner development and field test, benefit tests, system requirements, cost estimate, capital approval, team building, cost control, key software validation, startup tuning and acceptance.
1974 to 1978	The Oregon Graduate Institute - Beaverton, Oregon Staff Engineer responsible for instrument development, implementation and technical supervision. Instrumentation developed included lighting strike monitor for Bonneville Power HV transmission lines, a non-contacting lumber thickness gauge, a control product introduction for an electronics distributor and numerous monitor and data systems for researchers. Managed instrument maintenance and computer center.
1965 to 1974	The University of Washington - Seattle, Washington Staff Engineer responsible for instrument development, implementation and technical supervision.
1963 to 1965	The Boeing Company - Seattle, Washington Staff Engineer responsible for parts of missile and radar system proposals.

REGISTRATIONS:

Registered Professional Engineer in South Carolina (#20297)
Registered Professional Engineer in North Carolina (#017548)
Registered Professional Engineer in Washington (#11097)
Registered Professional Engineer in Georgia (#028024)
Registered Professional Engineer in Ohio (#72945)
Registered Professional Engineer in Indiana (# 10809491)
National Council for Engineering and Surveying (#22912)

November 2006

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EUA OCEAN STATE CORPORATION, et al. v. COMMISSIONER OF REVENUE, C258405-406;
C258424-425; C258882-883; C259158-159; C259653; C262566-568, 04/24/2006

EUA OCEAN STATE CORPORATION, et al. v. COMMISSIONER OF REVENUE

Case Information:

Docket/Court: C258405-406; C258424-425; C258882-883; C259158-159; C259653; C262566-568, Massachusetts Appellate Tax Board

Date Issued: 04/24/2006

Tax Type(s): Corporate Income Tax

These are appeals under the formal procedure pursuant to G.L. c. 58A, § 7 and G.L. c. 62C, § 39, from the refusal of the appellee Commissioner of Revenue ("Commissioner") to abate corporate excises assessed against appellants under G.L. c. 62C, § 26 and G.L. c. 63, §§ 32 and 39, for tax years ranging from 1994 through 1998.

Commissioner Scharaffa heard these appeals and was joined in the decision for appellants by Commissioners Gorton, Egan, and Rose. Chairman Foley took no part in the deliberation or decision of these appeals.

These findings of fact and report are promulgated at the request of both appellants and the Commissioner pursuant to G.L. c. 58A, § 13 and 831 CMR 1.32.

John S. Brown, Esq., Joseph L. Koclubes, Esq., George P. Mair, Esq., Donald-Bruce Abrams, Esq., Darcy A. Ryding, Esq., and Matthew D. Schnall, Esq. for the appellants.

Daniel A. Shapiro, Esq., and Thomas W. Hammond, Esq., for the appellee.

OPINION

FINDINGS OF FACT AND REPORT

I. INTRODUCTION

On the basis of the parties' Statement of Agreed Facts, the testimony of witnesses at the two-day hearing before the Appellate Tax Board ("Board"), and documents submitted at the hearing, the Board made the following findings of fact.

Appellants EUA Ocean State Corporation ("EUA"), National Grid USA Service Company, Inc. ("National Grid"), TCPL OSP Ltd. ("TCPL OSP"), TCPL OSL Ltd. ("TCPL OSL"), and TCPL Power Ltd. ("TCPL Power")

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appeal from the refusal of the Commissioner to abate approximately \$1.3 million in corporate excises assessed against them for various tax periods between 1994 and 1998. Appellants are partners in two Rhode Island general partnerships, Ocean State Power ("OSP") and Ocean State Power II ("OSP II" and, together with OSP, the "Partnerships"), that generated and sold electricity during the periods at issue.

The principal issue raised in these appeals is whether any of the Partnerships' sales of electricity should be treated as Massachusetts sales includible in the numerator of appellants' sales factors under G.L. c. 63, § 38(f). If, as the Commissioner maintains, electricity is tangible personal property, the sales are considered to have occurred in the state where title and possession of the electricity passed and appellants' sales factors would include their Massachusetts sales in the numerator and all electricity sales in the denominator. If, however, electricity is not tangible personal property, the sales are attributed to the state in which appellants incurred the greatest proportion of the costs of performing their income-producing activity. It is not disputed that under the non-tangible property attribution rule, all of the Partnerships' sales would be attributed to Rhode Island and not Massachusetts because they incurred all of their costs of performance in Rhode Island.

On their Massachusetts corporate excise returns, appellants did not report any of the Partnerships' sales of electricity as Massachusetts sales includible in the numerator of their sales factors. On audit, however, the Commissioner treated more than seventy-five percent of those sales as Massachusetts sales.

II. IDENTIFICATION OF APPELLANTS AND JURISDICTION

A. EUA

EUA is a Rhode Island corporation that was formed as a special purpose subsidiary of Eastern Utility Associates for the purpose of being a partner in the Partnerships. EUA was a general partner in the Partnerships and held a twenty-nine percent interest in each of the Partnerships throughout the period from 1994 through 1998. EUA's sole business activity during this time was to act as a general partner in the Partnerships.

As a result of his adjustments to the Partnerships' sales factors, the Commissioner made additional assessments against EUA with respect to both the net income and the net worth components of its corporate excise for each of the tax years 1994 through 1998. EUA is contesting approximately \$355,000 of additional assessments for these periods. On the basis of the Statement of Agreed Facts and accompanying exhibits, the Board found that EUA timely filed its returns, Applications for Abatement, and petitions for the tax years at issue. Accordingly, the Board found and ruled that it had jurisdiction over EUA's appeals (Docket Numbers C258406, C259159, and C259653).

B. TCPL OSP/NERC

TCPL OSP is a Rhode Island corporation that was formed as a special purpose subsidiary of New England Electric System for the purpose of being a partner in the Partnerships. TCPL OSP was a general partner in each of the Partnerships and held a twenty percent interest in each of the Partnerships during 1994 and throughout the period from 1996 through 1998. During those periods, TCPL OSP's sole business activity was to act as a general partner of the Partnerships. TCPL OSP was formerly known as Narragansett Energy Resources Company ("NERC").

As a result of his adjustments to the Partnerships' sales factors, the Commissioner made additional assessments against TCPL/NERC with respect to the net worth component of its corporate excise for the tax years 1994, 1996, and 1997. In addition, the Commissioner made assessments against TCPL OSP with respect to both the net worth and net income components of its corporate excise for the portion of the 1998 taxable year for which TCPL OSP filed a separate return (September 2 through December 31, 1998). TCPL OSP is contesting approximately \$36,000 in additional assessments for

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these periods. On the basis of the Statement of Agreed Facts and accompanying exhibits, the Board found that TCPL OSP/NERC timely filed its returns, Applications for Abatement, and petitions for the tax years at issue. Accordingly, the Board found and ruled that it had jurisdiction over TCPL OSP/NERC's appeals (Docket Numbers C258424, C258882, and C262568).

C. NATIONAL GRID/NEPSC

During 1994 and the period from January 1, 1997 through September 1, 1998, National Grid, then known as New England Power Service Company ("NEPSC"), was the principal reporting corporation for an affiliated group that included TCPL OSP. National Grid is a party to this appeal solely as the principal reporting corporation for this affiliated group.

For tax year 1994, TCPL OSP, then known as NERC, was part of the affiliated group for which NEPSC filed a combined return. NERC's income was included in computing the tax assessed against NEPSC with respect to the group's combined net income pursuant to G.L. c. 63, § 32B. As a result of his adjustments to the Partnerships' sales factors and adjustments to the income of another member of the group, the Commissioner made an additional assessment of \$65,784 against NEPSC with respect to the combined net income for tax year 1994. The parties agree that, as a result of the Board's decision in *New England Power Service Co. v. Commissioner of Revenue*, ATB Findings of Fact and Reports 2000-56, National Grid/NEPSC is entitled to an abatement of \$65,784 for 1994, regardless of the resolution of the contested issue regarding the Partnerships' sales factors and the treatment of NERC as a business corporation rather than a utility corporation.

On the basis of the Statement of Agreed Facts and accompanying exhibits, together with the Commissioner's concession at the hearing that NEPSC had not received a Notice of Abatement Determination dated June 7, 2000 until after it had filed its petition, the Board found that NEPSC timely filed its return, Application for Abatement, and petition for tax year 1994. Accordingly, the Board found and ruled that it had jurisdiction over NEPSC's 1994 appeal (Docket Number C258405).

During the period from January 1, 1997 through September 1, 1998, NERC was also part of the affiliated group for which NEPSC filed a combined return pursuant to § 32B for tax years 1997 and 1998. As a result of his adjustments to the Partnerships' sales factors, the Commissioner reduced the amount of refund that he determined to be due to NEPSC for tax year 1997 and made an additional assessment against NEPSC with respect to NERC's income for tax year 1998.

National Grid/NEPSC is contesting approximately \$105,000 in additional assessments for tax years 1997 and 1998. On the basis of the Statement of Agreed Facts and accompanying exhibits, the Board found that National Grid/NEPSC timely filed its returns, Applications for Abatement, and petitions for the tax years 1997 and 1998. Accordingly, the Board found and ruled that it had jurisdiction over National Grid/NEPSC's 1997 and 1998 appeal (Docket Number C262566).

D. TCPL OSL

TCPL OSL is a Rhode Island corporation that was formed for the purpose of being a partner in the Partnerships. TCPL OSL was a general partner in each of the Partnerships and held a ten and one-tenth percent interest in each of the Partnerships during 1994 and throughout 1997 through 1998. During those periods, TCPL OSL's sole business activity was to act as a general partner of the Partnerships. TCPL OSL was formerly known as JMC Ocean State Corporation.

As a result of his adjustments to the Partnerships' sales factors, the Commissioner made additional assessments against TCPL OSL with respect to the net worth component of its corporate excise for tax year 1997. In addition, the Commissioner made assessments against TCPL OSL with respect to both the net worth and net income components of its corporate excise for the portion of the 1998 taxable year for which TCPL OSL filed a separate return (July 3 through December 31). TCPL OSL is contesting approximately \$14,500 in additional assessments for the tax years 1997 and 1998. On the basis of the Statement of Agreed Facts and accompanying exhibits, the Board found that TCPL OSL timely filed its

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returns, Applications for Abatement, and petitions for tax years 1997 and 1998. Accordingly, the Board found and ruled that it had jurisdiction over TCPL OSL's appeals (Docket Numbers C259158 and C262567).

E. TCPL POWER

Like EUA, TCPL OSP, and TCPL OSL, TCPL Power is a Rhode Island corporation that was formed for the purpose of being a partner in the Partnerships. TCPL Power was a general partner in each of the Partnerships and held a forty percent interest in each of the Partnerships during the tax years 1994 through 1998. During those years, TCPL Power's sole business activity was to act as a general partner of the Partnerships.

As a result of his adjustments to the Partnerships' sales factors, the Commissioner made additional assessments against TCPL Power with respect to both the net worth and net income components of its corporate excise for each of the tax years 1994 through 1998. TCPL Power is contesting approximately \$670,000 in additional assessments for these periods. On the basis of the Statement of Agreed Facts and accompanying exhibits, the Board found that TCPL Power timely filed its returns, Applications for Abatement, and petitions for the years at issue. Accordingly, the Board found and ruled that it had jurisdiction over TCPL Power's appeals (Docket Numbers C258425 and C258883).

III. THE PARTNERSHIPS' BUSINESS ACTIVITIES

At all material times, each of the Partnerships owned and operated an electric generating plant in Burrillville, Rhode Island, near the Massachusetts border (the "Plants"). OSP owned and operated an approximately 249 megawatt, natural-gas fired, combined-cycle electric generating plant that included two General Electric MS-7000 EA gas turbines and one General Electric condensing steam turbine-generator ("Unit I"). OSP II owned and operated an approximately 243 megawatt, natural-gas fired, combined-cycle generating plant that, like Unit I, also included two General Electric MS-7000 EA gas turbines and one General Electric condensing steam turbine-generator ("Unit II" and, together with Unit I, the "Units"). The Partnerships derived the bulk of their revenue, roughly \$100 million per year for each Partnership, from the sale of electricity generated by the Units and the sale of "capacity," the right to purchase a portion of the electricity that the Units could generate.

The Partnerships also sold excess natural gas during periods when the Units were not operating. Revenues from these natural-gas sales ranged from \$800,000 to nearly \$10 million per year during the periods at issue. The Partnerships sold no natural gas to Massachusetts customers.

The Partnerships owned various residential properties in Massachusetts and Rhode Island that were located within a half-mile radius of the Plants. The Partnerships purchased these properties from their prior owners under a so-called "property value stabilization program." The program was instituted as part of the process by which the Partnerships gained the necessary governmental approvals for constructing the Plants in response to objections from owners who did not want to have the Plants located near their homes. During the periods at issue, the Partnerships either sold the residential properties to new owners or leased the properties. The Partnerships did not use the properties in the operation of the Plants. As the Partnerships sold the residential properties during the periods at issue, revenues decreased from \$87,286 in 1994 to \$25,033 in 1998.

The assessments at issue concern only the Partnerships' sale of electricity. The Commissioner made no adjustments concerning receipts from the Partnerships' Massachusetts real estate or the sale of "capacity" and natural gas.

IV. COMMISSIONER'S ALLOCATION OF SALES TO MASSACHUSETTS

For the majority of the tax years at issue, the utilities purchasing electricity from the Partnerships were: Boston Edison Company ("BECO"); Montaup Electric Company ("Montaup"); and New England

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Power Company ("NEP") (together, "Purchasers"). TransCanada Power Marketing Ltd. ("TCPM") replaced both Montaup and NEP as a purchaser during the end of the periods at issue. During the tax years at issue, the Purchasers were engaged in the wholesale and/or retail sale of electricity.

One of the Purchasers, BECO, was primarily engaged in the retail sale of electricity in Massachusetts. However, over ten percent of BECO's sales were sales to other electricity distributors for resale. These distributors included utilities located in other New England states and power marketing and trading companies that operated throughout the United States.

Another purchaser, NEP, was engaged almost exclusively in the wholesale transmission and resale of electricity, including sales to affiliates based in Massachusetts (Massachusetts Electric Company), Rhode Island (The Narragansett Electric Company), and New Hampshire (Granite State Electric Company). NEP also sold power to unaffiliated customers during the years at issue, including power companies and municipal light departments in various states, and marketing and trading companies selling power throughout the United States. NEP also entered into system power contracts in which it sold specified quantities of power during specific periods to other wholesalers and unit power contracts in which it sold specified quantities of power.

NEP also transferred a portion of its right and obligation to purchase electricity from the Partnerships during the periods at issue. NEP transferred between two and eight percent of the total output of the Partnerships' Units during the period at issue to Until Power Corporation ("Until"), a New Hampshire utility.

A third purchaser, Montaup, was engaged primarily in the wholesale transmission of power. Montaup's customers included NEP, BECO, and Montaup's affiliates, Eastern Edison Company (based in Massachusetts), BE (based in Rhode Island), and Newport Electric Company (also based in Rhode Island). Its other customers included utilities based in Massachusetts, Rhode Island, Connecticut, a Rhode Island municipal light district, and trading companies doing business throughout New England.

The Commissioner audited appellants' Massachusetts corporate excise returns and determined that appellants' treatment of all electricity sales as non-Massachusetts sales was in error. The auditor initially treated all sales of electricity and capacity as sales of tangible personal property and relied on the "reverse dock sale rule" found in 830 CMR 63.38.1(9)(c) to treat these sales as Massachusetts sales because the electricity was "transshipped" from Rhode Island to Massachusetts customers via the "common carrier" of the New England electricity distribution system known as the "NEPOOL grid," which is described in Section V(8) below. Because for most of the tax years at issue, the Purchasers were all based in Massachusetts, the auditor assumed that the destination of all the Partnerships' sales of electricity during that period was Massachusetts.

Appellants appealed this determination to the Department of Revenue's Appeal and Review Bureau ("A&R"). A&R revised the auditor's determination and concluded that it was the location of the "residential, commercial, and industrial end-users" of the electricity, and not the location of the "intervening purchaser or supplier," that determined whether the sale was a Massachusetts sale. Accordingly, A&R determined that sales of electricity were includible in the numerator of appellants' sales factors "to the extent that the electricity [was] consumed and used by the Purchasers' ultimate retail customers in Massachusetts."

The auditor then prepared a revised set of workpapers based on his understanding of the A&R decision. To determine the identity of the Purchasers' customers, the auditor reviewed certain filings made by the Purchasers to the Federal Energy Regulatory Commission ("FERC"). He then made assumptions, based on the name of the customer or other information he was told, concerning the locations of the ultimate retail consumers of the electricity.

For example, the auditor treated all sales to Massachusetts Electric, but no sales to Narragansett Electric, as Massachusetts sales, solely based on their names. Similarly, he treated all sales to Eastern Edison, but no sales to Granite State Electric, as Massachusetts sales, because he was told that

"Eastern Edison was 100 percent Mass." and that Granite State "does business in New Hampshire."

He did not attempt to determine the identity or location of the retail customers of those entities that purchased electricity from the Purchasers. Rather, he used an "all-or-nothing" approach, classifying either all, or none, of the sales made by the Purchasers' customers as Massachusetts sales strictly based on the name of the Purchasers' customer or other information relayed to him. For example, all of BECO's sales were considered to be Massachusetts sales because the auditor "assumed [BECO] was 100 percent Mass.," even though the A&R determination acknowledged that BECO "did make some wholesale sales to other utilities such as EUA's parent, Eastern Utility Associates, which conducts a substantial portion of its operations in Rhode Island."

To determine the percentage of the Partnerships' total electricity sales attributable to Massachusetts, the auditor first determined the Partnerships' total electricity sales to each purchaser, and then computed a "Massachusetts Sales Percentage" that he applied to the Partnerships' electricity sales to each purchaser. The auditor arrived at the Massachusetts Sales Percentage by dividing what he determined to be each purchaser's sales to Massachusetts customers by the Purchasers' total sales.

Using 1994 as an example, the auditor first broke down the Partnerships' total electricity sales of \$30,245,388 among Montaup (\$11,009,196), NEP (\$19,069,501) and BECO (\$9,239,861). For Montaup, he derived a Massachusetts Sales Percentage of 61.9012 percent from an excerpted page from Montaup's 1994 FERC filings. He arrived at this percentage by first treating all \$41,466,446 of Montaup's sales to Eastern Edison Company as Massachusetts sales. He then added the Eastern Edison sales to \$20,423,209 of sales to Blackstone Valley Electric and \$5,109,429 of sales to Newport Electric to arrive at a total sales figure of \$66,988,084. The Massachusetts Sales Percentage of 61.9012 percent is equal to the Eastern Edison Sales divided by the sum of the Eastern Edison, Blackstone Valley Electric, and Newport Electric sales. The auditor disregarded all other Montaup sales, including all sales to non-affiliates.

The auditor used a similar approach to arrive at a Massachusetts Sales Percentage of 74.4157 percent for NEP for 1994. He treated all of NEP's sales to Massachusetts Electric, totaling \$357,642,672, as Massachusetts sales. He then treated \$16,044,384 in sales to Granite State Electric and \$106,914,299 in sales to Narragansett Electric as non-Massachusetts sales. Dividing the sales to Massachusetts Electric by all NEP sales, he arrived at the 74.4157 Massachusetts Sales Percentage for NEP.

For BECO, the auditor assumed that all of BECO's electricity sales were to Massachusetts customers. Accordingly, he used a Massachusetts Sales Percentage of one hundred percent.

The auditor then determined the Massachusetts sales for each of the Partnerships by multiplying the Partnerships' sales to each purchaser by the Massachusetts Sales Percentage that he had calculated for each of the Purchasers, adding the results together, and allocating the total between the two Partnerships. He then adjusted the apportionment formulas for each of the partners by adding the amounts he determined to be Massachusetts sales to the numerator of the sales factor.

The auditor acknowledged that there were difficulties in applying the methodology described in the A&R Determination letter. First, the Partnerships could not tell from their own records the location of "the ultimate retail customers" as required by the A&R Determination Letter. Moreover, because NEP's and Montaup's customers were also engaged in the transmission, distribution and wholesaling of electricity, and were therefore not the "ultimate consumers" of the electricity purchased, the FERC filings made by NEP and Montaup could not establish the location of the ultimate consumers because these records would not show whether a transmission or distribution purchaser located outside of Massachusetts resold electricity back into Massachusetts or vice versa.

Further, although it does not appear to be a relevant factor for applying the A&R method, the auditor also testified that the Massachusetts "headquarters" of the Purchasers also supported the assessment. The auditor testified that because the three principal Purchasers - BECO, Montaup, and NEP - were all "headquartered" in Massachusetts and headquarters is where the "retail obligation is," the actual

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"possession and control" of the electricity sold to them passes in Massachusetts.

The Commissioner's allocation of electricity sales to Massachusetts and the resulting assessments against appellants are premised on his determination that sales of electricity are "sales of tangible personal property" for purposes of G.L. c. 63, § 38(f). Accordingly, the Board found the following facts concerning the Partnerships' generation, distribution, and sale of electricity to determine whether electricity constitutes "tangible personal property."

V. PARTNERSHIPS' GENERATION AND SALE OF ELECTRICITY

A. GENERATION OF ELECTRICITY

Electricity is produced at each Unit using two 80-megawatt natural gas generators and one 90 megawatt steam generator. The generation process begins with the activation of two natural gas turbines, which are similar to aircraft jet engines. The combustion of natural gas causes the rotor in each turbine to rotate at very high speed. The heat exhaust from the gas turbines is used, in conjunction with the burning of additional fuel, to heat water to produce steam. The steam is used as the power source for the steam turbine, causing the rotor in the steam turbine to rotate.

Each generator consists of a "stator" and a "rotor." The stator is a series of stationary coils around the periphery of the generator. Inside the stator is the rotor winding, a coil connected to the turbine that produces a magnetic field. The high-speed rotation of the rotor within the stator causes a changing magnetic field. The changing magnetic field induces a flow of current, or electricity, in the stator.

No new electrons or other "particles" are created by this process. The changing magnetic field caused by the rotation of the rotor causes electrons in the stator coils to move in alternating directions, resulting in "alternating current." In the United States, the standard current used is 60-cycle current, in which there are 60 alternating cycles per second, referred to as "60 hertz" or "60 HZ." In 60 hertz current, electrons change direction 120 times per second.

The rapid oscillation of electrons caused by the rotation of the rotor within the stator results in a flow of energy within the coils of the stator. The electrons themselves do not flow in any one direction; for example, individual electrons do not flow out of the generator, onto the transmission lines and into consumers' homes and businesses. Rather, the oscillation of the electrons within the stator of the generator causes a flow of electrical energy which, as described below, is distributed to electricity consumers.

B. TRANSMISSION AND DISTRIBUTION OF ELECTRICITY

The electrical energy flows out of the stator on wires to a transmission substation where the energy generated at the Units is transferred to the transmission system servicing New England, known as the New England Power Pool ("NEPOOL") transmission grid (the "grid"). The grid is a series of interconnected transmission lines throughout New England carrying power generated by the Partnerships and by other generating facilities to delivery points for distribution to New England consumers. The grid consists of that portion of the distribution system between "transmission substations," located near generating facilities, and "power substations," located near the consumer. NEPOOL is not involved in the delivery of power from generation facilities to the transmission substation or the distribution of the power from the power substation to the consumer.

The substation at which the electricity generated by the Units is transferred to the grid is called the "Sherman Farm Road Extra High Voltage/Pool Transmission Facility" ("EHV/PTF"). The EHV/PTF is also located in Rhode Island, a few hundred feet from the Plants. It is owned by Blackstone Valley Electric Company.

Efficient distribution of electrical energy over wires requires a voltage, which is the measure of the

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energy's force, of 345 kilovolts ("KV"). The voltage of the power produced by the Units' generators is typically only 13 to 20 KV. Therefore, the power flowing from the generators is put through a series of "transformers" before it is transferred to the grid at the EHV/PTF. A transformer consists of two coils of wires, called "windings," that are wrapped around a magnetic core. Current flowing through one winding at a given voltage induces a magnetic field in the core, which in turn induces a current at a different voltage in the other winding. There is no physical connection or movement of electrons between the two windings; the only connection is through a magnetic field.

Once its voltage reaches the proper level, the electricity is "impressed" or "injected" onto the grid for distribution throughout New England. Electricity is distributed through an integrated system of transmission and distribution facilities using interconnected transmission lines, transformers, and other equipment to bring the power generated by the Partnerships and other power generators to consumers. Just as the voltage is stepped up at transmission substations such as the EHV/PTF to efficiently travel over wires, it must be stepped down to be usable by customers. Generally, the voltage is first reduced to an intermediate level suitable for bringing the electricity into various distribution areas, then reduced further at power substations to an appropriate distribution voltage level, and then, at or near the customer, the voltage is further reduced to a level suitable for customer use. The voltage reduction is achieved using transformers, which operate in the same general manner as the transformers used to increase its voltage.

C. CONTRACTS REGARDING THE SUPPLY OF ELECTRICITY

1. NEPOOL

NEPOOL is an organization of electric utilities created by the NEPOOL Agreement. NEPOOL was formed as a result of the unprecedented power blackout that occurred in New York and New England in 1965. The goals of NEPOOL are to maintain the reliability of the bulk power system for the delivery of electricity to consumers and to produce and deliver power at the lowest cost that is consistent with prudent utility practice.

The NEPOOL Agreement is a contractual agreement among electric utilities that is open to all electric utilities operating in New England. During the tax years at issue, the Purchasers were members of NEPOOL, but the Partnerships were not. The NEPOOL Agreement provides the central dispatching and primary pooling arrangement for electric utilities operating in New England.

(a) SCHEDULING OF POWER GENERATION

NEPOOL does not own any generating or transmission facilities. Rather, it or its agents schedule the operation of the generation facilities that contribute to the NEPOOL grid, including the Partnerships' Units, and account for the purchases and sales of electricity among its members.

Although NEPOOL is not directly involved in the physical operation of the generating plants, it does determine the output levels at which the plants operate. The output levels are based on a projection that takes into account the amount of power withdrawn from the grid by power purchasers and anticipated "line losses," the dissipation of electricity during the transmission process resulting from the inherent resistance of conductors. During most of the periods at issue, decisions concerning the plants' output levels were made by NEPOOL's dispatch agent, the New England Power Exchange, or NEPEX.

(b) SETTLING ACCOUNTS AMONG MEMBERS

During the tax years at issue, the Partnerships sold all of the electricity they produced at the Plants to the Purchasers, who were engaged in the transmission and/or distribution of electricity.

Each of the Purchasers entered into a Unit Power Agreement with each of the Partnerships governing the sale of electricity to that purchaser. Under the Unit Power Agreement, the Partnerships were

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obligated to sell, and the Purchasers were obligated to purchase, the following percentages of the Partnership's output: BECO, twenty-three and one-half percent; Montaup, twenty-eight percent; NEP, forty-eight and one-half percent.

NEPOOL accounted for the activity of its members in terms of "resources" and "loads." Resources are the amount of power that a NEPOOL member contributed to the grid and "loads" are the amount of power that a member withdrew from the grid. For example, power generated and transferred to the grid by the Partnerships would be credited as resources to each of the Purchasers in proportion to the percentage of power that the purchaser was entitled and obligated to purchase. Conversely, each of the Purchasers would be charged with loads when its wholesale or retail customer withdrew power from the grid. A deficit in resources in effect represented a purchase by the NEPOOL member from other members, while an excess of resources over loads in effect represented a sale into the pool.

NEPOOL and its administrative agents determined on an hourly basis the net amount of each NEPOOL member's resources and loads. The net purchases and sales were then settled on a monthly basis as a net dollar amount due to or from each member as a result of its activities during the month.

2. PARTNERSHIPS' DELIVERY OBLIGATIONS

In addition to delineating the percentage of the Partnerships' output which each of the Purchasers was entitled, and obligated, to purchase, the Unit Power Agreements also governed the Partnerships' obligations concerning the delivery of power to the Purchasers.

The Unit Power Agreements specified that the delivery point for the electricity was in Rhode Island at the "point of interconnection with the [EHV/PTF] facilities adjacent to" the Plants. The Partnerships' responsibility for delivering the electricity ended at the transmission substation. Further transmission was the responsibility of the Purchasers, including the cost of using the transmission facilities, which are owned by other NEPOOL members, and the line losses resulting from the dissipation of electricity during transmission.

VI. BOARD'S ULTIMATE FINDINGS ON DISPUTED ISSUES

On the basis of the foregoing subsidiary findings, the Board found that electricity is not "tangible personal property" for purposes of G.L. c. 63, § 38. Electricity is not an object that is manufactured; it is a flow of power that is generated by the manipulation of magnetic fields. Electricity has no physical shape, form or geographic location. It has no height, weight, volume or other dimension by which tangible property is typically measured.

Although electricity may be perceived by the senses, such as feeling a shock, it has no form or substance which can be touched. It is of a nature similar to heat, light and sound, all of which can be sensed and even measured but, given their lack of form or substance, would not be considered "tangible."

Electricity generated and injected into the grid is indistinguishable from electricity in the transmission and distribution network. Individual electrons are not created in Rhode Island and delivered to Massachusetts; rather, the Partnerships generate power in Rhode Island that, once injected into the grid, merges with power in the grid produced by other generators and is instantaneously available to consumers throughout the network. One cannot trace the energy generated in Rhode Island and determine by any meaningful standard the ultimate destination of that energy. Concepts such as title, possession and delivery, which are relevant for determining the allocation of sales of tangible personal property under § 38, make little sense in the context of the generation and sale of electric power.

Even if such concepts were applicable to electricity, the evidence of record supports a finding that title and possession of the electricity passed from the Partnerships to the Purchasers in Rhode Island. Under the Unit Power Agreements, the Partnerships completed their performance by delivering the electricity

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at the EHV/PTF substation in Rhode Island. As members of NEPOOL, it was the Purchasers, not the Partnerships, which had the right to use the transmission facilities owned by other NEPOOL members. It was the Purchasers, not the Partnerships, which were responsible for further transmission of the electricity beyond the Rhode Island substation, including the cost of using all necessary transmission facilities. Further, the Purchasers absorbed the line losses resulting from the dissipation of electricity during transmission beyond the Rhode Island substation. Accordingly, even applying tangible property rules to the sale of electricity would result in the sale taking place in Rhode Island, where title and possession of the electricity was delivered to the Purchasers.

The Commissioner's various attempts to allocate a portion of the Partnerships' electricity sales based on the "reverse dock sale rule," the location of the ultimate retail consumer, or the headquarters of the Purchasers, are flawed because they fail to recognize the nature of both electricity itself and the manner of its sale by the Partnerships to the Purchasers. Electricity is not "shipped" by a "common carrier," as required by the reverse dock sale rule. Rather, it is made available on the grid in the amounts the Purchasers were obligated to purchase and withdrawn from the grid by the Purchasers' customers. The sale of electricity is, in effect, determined by accounting adjustments based on a comparison between how much power a purchaser has made available on the grid and the level of consumption by its customers.

The Partnerships could not know the location of the "ultimate consumer" of the electricity they generated because they were not privy to the records of their Purchasers and, even if they were, the consumer location would not be revealed in the Purchasers' records of the many sales to resellers of electricity. Finally, the location of the Purchasers' headquarters is not a relevant consideration, even if electricity were tangible: it is the place where the seller's delivery obligation is completed, not the headquarters of the purchaser, which determines where a sale of tangible personal property takes place.

The Commissioner's difficulty in arriving at a reasonable apportionment approach underscores the fact that the sale of electricity does not fit the model of a sale of tangible personal property under § 38(f). Rather, because electricity lacks a physical form and a precise geographic location, making concepts such as title, possession, and delivery somewhat illusory in this context, the standard under § 38(f) that governs all sales other than sales of tangible personal property best fits the sale of electricity. That standard attributes a taxpayer's gross receipts from income-producing activity to the state in which the taxpayer incurs the greatest proportion of the costs of performing that activity.

The evidence of record in these appeals clearly establishes that the Partnerships incurred all of their costs of performance in Rhode Island; the Commissioner's own witness concedes this fact and he does not attempt to argue otherwise. Accordingly, all of their receipts from the sale of electricity are properly attributable to Rhode Island and none to Massachusetts. Because all receipts from electricity sales are attributable to Rhode Island, no receipts are includible in the numerator of appellants' Massachusetts sales factors and, therefore, appellants' sales factors are zero.

On the basis of the foregoing, the Board issued a decision for the appellants and granted an abatement in the amount of \$1,346,993.

OPINION

I. APPORTIONMENT OF NET INCOME UNDER § 38

Pursuant to G.L. c. 63, § 38, appellants are subject to a corporate excise on that part of their net income which is derived from business carried on in Massachusetts. Taxable income derived from Massachusetts business is determined by taking appellants' federal net income, applying the deductions enumerated in G.L. c. 63, § 38(a), and multiplying the result by the three-factor apportionment formula under G.L. c. 63, § 38(c). The apportionment formula is based on the ratio of the corporation's property, payroll, and sales in Massachusetts to its total property, payroll, and sales everywhere. The statutory purpose of the three-factor apportionment formula is "to obtain a fair approximation of the

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corporate income that is 'reasonably related to activities conducted within [Massachusetts].'" *Boston Professional Hockey Association, Inc. v. Commissioner of Revenue*, 443 Mass. 276, 280, n.7 ("Boston Professional Hockey Association") (quoting *Gillette Co. v. Commissioner of Revenue*, 425 Mass. 670, 681 (1997), quoting *Exxon Corp. v. Department of Revenue of Wisc.*, 447 U.S. 207, 223 (1980)).

The principal issue raised in these appeals is whether any of the Partnerships' sales of electricity should be treated as Massachusetts sales includible in the numerator of appellants' sales factors under G.L. c. 63, § 38(f) ("§ 38(f)"). Under § 38(f), the sales factor is a "fraction, the numerator of which is the total sales of the corporation in this commonwealth during the taxable year, and the denominator of which is the total sales of the corporation everywhere during the taxable year."

Appellants, whether properly taxable as business corporations or utility corporations, must include in their apportionment factors appellants' pro rata share of the Partnerships' own factors. See 830 C.M.R. 63.38.1(1)(a) and 830 C.M.R. 63.38.1(13) (formerly 830 C.M.R. 63.38.1(11) in 1995 version of the Regulation). Accordingly, resolution of these appeals requires the Board to determine which, if any, of the Partnerships' sales of electricity were "in this commonwealth."

Section 38(f) provides two different rules for determining whether a sale is "in this commonwealth," depending on the nature of what is sold. In the case of tangible personal property, the general rule is that the sale takes place where the property is delivered to the purchaser. A sale of tangible personal property is "in this commonwealth" under § 38(f) if "the property is delivered or shipped to a purchaser within this commonwealth regardless of the f.o.b. point or other conditions of sale."

The determination of whether sales other than sales of tangible personal property are "in this commonwealth" is subject to a different standard. A sale of property other than tangible property is a Massachusetts sale under § 38(f) if: (1) "the income-producing activity is performed in this commonwealth;" or (2) "the income-producing activity is performed both in and outside this commonwealth and a greater proportion of this income-producing activity is performed in this commonwealth than in any other state, based on cost of performance."

Accordingly, resolution of the principal issue of whether any of the Partnerships' sales of electricity should be treated as Massachusetts sales includible in the numerator of appellants' sales factors depends on three sub-issues: 1) whether sales of electricity are sales of "tangible personal property" or sales "other than sales of tangible personal property" for purposes of § 38(f); 2) if electricity is considered tangible personal property for purposes of § 38(f), whether the electricity was delivered in Massachusetts; and 3) if electricity is not tangible personal property for purposes of § 38(f), whether the greater proportion of the Partnerships' income-producing activity is performed in Massachusetts than in any other state. Because the Board found that all of the Partnerships' income-producing activities were performed in Rhode Island, none of the Partnerships' sales would be Massachusetts sales if electricity is not tangible personal property for purposes of § 38(f). Accordingly, the first sub-issue to be determined is whether electricity is tangible personal property for purposes of § 38(f).

II. ELECTRICITY IS NOT TANGIBLE PERSONAL PROPERTY

A. THE COMMON AND ORDINARY MEANING OF "TANGIBLE PERSONAL PROPERTY" DOES NOT ENCOMPASS ELECTRICITY

Section 38(f) does not provide a definition of "tangible personal property." Further, the regulations construing § 38(f) are silent on the issue of whether electricity is tangible personal property for purposes of the sales factor and no Massachusetts case has addressed this issue.

Where a "dominant statutory term is undefined, 'the Legislature should be supposed to have adopted the common meaning of the word, as assisted by a consideration of the historical origins of the enactment.'" *Commissioner of Revenue v. Houghton Mifflin Company*, 423 Mass. 42, 45 (1996) ("Houghton Mifflin").

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In cases dealing with the issue of whether a corporation was engaged in "manufacturing," the Supreme Judicial Court has recognized that electricity is not "tangible" property. In *Westinghouse Broadcasting Company, Inc. v. Commissioner of Revenue*, 382 Mass. 354 (1981) ("Westinghouse"), the taxpayer, which owned and operated a television and radio station, claimed that it should be classified as a manufacturing corporation in order to qualify for an investment tax credit under G.L. c. 63, § 31A and a property tax exemption under G.L. c. 59, § 5, cl. Sixteen th (3). The court upheld the Board's denial of manufacturing classification, but noted that:

The Board in the present case did indeed allow a request for a ruling that "Westinghouse may not be denied manufacturing status merely because its end product is intangible." That proposition conformed to our view that the production of electricity may entail manufacture (see *Boston Gas Co. v. Assessors of Boston*, 334 Mass. 549, 565 (1956); *Boston & Me. R.R. v. Billerica*, 262 Mass. 439, 449 (1928)).

Westinghouse, 382 Mass. at 358.

In this same context of determining whether a corporation was engaged in manufacture, the court again used electricity as an example of an intangible product of manufacturing activity:

If it be argued that the definition [of manufacturing] contemplates corporeal or tangible input or output, the taxpayer can cite cases that may read to the contrary - those which consider the production of electricity to involve manufacture.

Houghton Mifflin, 423 Mass. at 48-9, quoting *First Data Corporation v. State Tax Commission*, 371 Mass. 444, 446 (1976) ("*First Data Corporation*").

Courts in other jurisdictions have also recognized in a number of contexts that electricity does not constitute tangible personal property within the ordinary meaning of that term. See, e.g., *Omaha Pub. Power Dist. v. Nebraska Department of Rev.*, 248 Neb. 518, 524-25 (1995) ("*Omaha Pub. Power Dist.*") ("[E]lectricity is a physical phenomenon; it is energy, not matter, and has no mass. Electricity can hardly be called 'tangible,' which means 'capable of being touched'"); *Farrand Coal Co. v. Halpin*, 10 Ill.2d 507, 512 (1957) (while recognizing electricity as personal property, Illinois Supreme Court "has at no time held electricity to be 'tangible' personal property"); *People v. Menegas*, 367 Ill. 330, 338 (1937) ("While [electricity] is intangible, it is no less personal property and is within the larceny statute"); *Elgin Airport Inn v. Commonwealth Edison Co.*, 88 Ill. App. 3d 477, 480 (noting that strict liability issue arises "[b]ecause electricity is intangible"); *Miller v. City of Los Angeles*, 185 Cal. 440, 443 (1921) ("Electricity is rather an intangible asset and the word 'property' is perhaps not the most apt word by which to describe the supply of electrical energy thus sought to be acquired for the use of the city").

The recognition by Massachusetts and other state courts that electricity is intangible is consistent with common definitions and understanding of the phrase "tangible personal property." For example, *Black's Law Dictionary* (8th Ed. 2004) ("*Black's*") defines "tangible personal property" as

Corporeal personal property of any kind; personal property that can be seen, weighed, measured, felt, or touched or is any other way perceptible to the senses, such as furniture, cooking utensils, and books.

See also *Houghton Mifflin*, 423 Mass. at 48-9 and *First Data Corporation* 371 Mass. at 446 (equating "corporeal" with "tangible"). In turn, *Black's* defines "corporeal" to be "[a] term descriptive of such things as have an objective, material existence; perceptible by the senses of sight and touch; possessing a real body." It cannot be reasonably argued that electricity has anything resembling a "body" or that electricity itself is perceptible to the senses of sight and touch, as one might see or touch a piece of furniture, a cooking utensil, or a book.

For example, wind, sunlight, sound, heat, and pain are all perceptible to the senses, but cannot be

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touched—The effects of electricity can be seen, as in a lightning strike, and felt, as in a shock, but electricity itself cannot be seen or touched because, like wind, sunlight, sound, heat, and pain, it has no physical form or body. See Black's (using "light and electricity" as examples of "movable intangible property," defined as "a physical thing that can be moved but that cannot be touched in the usual sense."); Omaha Pub. Power Dist., 248 Neb. at 531 (Caporale, J. concurring) (electricity "has no such physical substance in the sense those two words are commonly understood ... It has no readily discernible physical form in the sense that do items such as axes, books, cloth, desks, elevators, fiddles, gavel, and the like").

Accordingly, electricity is not "tangible" as that word is commonly used and understood and therefore is not "tangible personal property" for purposes of § 38(f).

B. THE ONE CASE THAT HAS ADDRESSED THIS ISSUE IN THE CONTEXT OF A STATE APPORTIONMENT FORMULA HELD THAT ELECTRICITY IS NOT TANGIBLE PROPERTY

The California State Board of Equalization ("SBE"), in construing statutory provisions substantially identical to § 38(f), held that sales of electricity constitute the performance of services, not sales of tangible personal property, and that the treatment of such sales for sales factor purposes is properly determined under the cost-of-performance rule. In *Re Appeal of PacifiCorp*, 2002-SBE-005 (Cal. S.B.E. Sept. 12, 2002) ("PacifiCorp").

The taxpayer in *PacifiCorp*, like the Partnerships in these appeals, owned and operated a power plant in a neighboring state. As here, the taxpayer sold electricity under contracts providing for delivery at a substation located in the same state as the generating plant. In rejecting an argument that the taxpayer's sales of electricity should be treated as sales of tangible personal property and that its sales should be taxed on a "destination basis," so that sales to customers located in California would be treated as California sales for apportionment purposes, the SBE held:

Like the court in *Otte* [v. Dayton Power & Co., 37 Ohio St. 3d 33 (1988)], we conclude that the sales of electricity here are sales of services that essentially consisted of appellant's setting and keeping in motion, through its generation and transmission facilities, electrically charged particles. Also as in *Otte*, we further conclude that the basic reason the generation and transmission process employed by appellant is appropriately characterized as a service is that the process does not result in either (1) the "creation" in its generation facilities of any such arguably tangible particles or (2) the "injection" of those particles into its transmission facilities.

PacifiCorp, supra.

The *PacifiCorp* analysis and holding are persuasive authority on the issue raised in these appeals. Because electricity lacks physical form and a precise geographic location, concepts such as title, possession, and delivery, which are the lynchpins of apportionment for sales of tangible personal property, are ill-suited to the context of electricity sales. Even the Commissioner, in the context of a sale of electricity for sales tax purposes, recognizes that "as a matter of physics, electricity is not transported in a manner similar to other tangible personal property." See Technical Information Release 98-16. It is only through abstractions, approximations, and assumptions that the Commissioner's auditors could fit the sale of electricity into the tangible personal property model under § 38(f). Given the nature of electricity and the accounting function by which it is considered to be bought and sold, the use of the tangible personal property model does not effectuate the statutory purpose of the § 38(c) apportionment formula of approximating that part of corporate income which is related to Massachusetts activities. See *Boston Professional Hockey Association*, 443 Mass. at 280.

Rather, the standard under § 38(f) that applies to all sales other than sales of tangible personal property is best suited to attributing income from sales of electricity to the state in which appellant performed its income-producing activities. That standard attributes a taxpayer's gross receipts from

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income-producing activity to the state in which the taxpayer incurs the greatest proportion of the costs of performing that activity. In the present case, the Partnerships incurred all of their costs of performance in Rhode Island. Accordingly, all of their receipts from the sale of electricity are properly attributable to Rhode Island and none to Massachusetts.

C. THE LEGISLATIVE HISTORY OF THE SALES TAX EXEMPTION FOR ELECTRICITY AND CASES IN OTHER CONTEXTS DO NOT ESTABLISH THAT ELECTRICITY IS TANGIBLE PERSONAL PROPERTY

The Commissioner cites legislative and judicial treatment of electricity in contexts other than the corporate excise to support his argument that electricity should be considered tangible personal property for purposes of the sales factor. As described below, these authorities are neither persuasive nor determinative.

1. SALES TAX TREATMENT OF ELECTRICITY

G.L. c. 64H, § 1 provides that "for purposes of this chapter," the phrase "tangible personal property" shall also include gas, electricity and steam." The Commissioner initially asserted, in his A&R determination letter and abatement denials, that this sales tax definition supported his treatment of electricity as tangible property for purposes of the corporate excise apportionment factor. However, the sales tax definition is of little aid in analyzing the corporate excise apportionment statute at issue here.

First, § 1 explicitly provides that the definition applies "for purposes of this chapter," that is, the sales tax under Chapter 64H. Limited just to the sales tax context, the provision represents nothing more than a legislative determination that retail sales of electricity should be subject to the sales tax.

Further, § 1 also provides that the definition of tangible personal property for sales tax purposes "also" includes electricity. The clear implication of the use of the word "also" is that what follows is not simply a clarification of the general definition, but rather an addition to that definition. The need for such an addition suggests that the Legislature understood that electricity would not fall within the general definition of tangible personal property.

In his post-trial brief, the Commissioner refined his argument by suggesting that an exemption from sales tax for sales of electricity that was enacted as part of the original sales tax statute in 1966 evidenced a legislative recognition that electricity would otherwise be considered tangible personal property. The Commissioner essentially argued that the Legislature, by initially providing that electricity should not be treated as tangible personal property under the 1966 version of G.L. c. 64H, § 6(l), revealed that it considered electricity to be tangible personal property.

The fundamental flaw in the Commissioner's initial argument is also present here. The Legislature's 1966 sales tax exemption for electricity under § 6(l), like the current definition of tangible personal property under § 1, is applicable for sales tax purposes. Accordingly, the 1966 exemption, like the current sales tax definition, represents a legislative determination of how sales of electricity should be treated under the sales tax, and sheds no light on whether the Legislature considered electricity to be "tangible personal property" for any other purpose.

Moreover, the Legislature's 1990 amendments to Chapter 64H that eliminated the exemption for sales of electricity belie the notion that the Legislature understood that the meaning of tangible personal property included electricity. If, as the Commissioner argued, electricity was so clearly understood to be tangible personal property, the Legislature could simply have repealed or limited § 6(l), leaving electricity to be taxed as other tangible personal property. Initially, the Legislature did just that, in emergency legislation that was enacted on July 18, 1990. See St. 1990, c. 121, § 47.

The July 18, 1990 amendment to § 6(l) was to take effect on September 1, 1990. St. 1990, c. 121, § 110. However, prior to that effective date, on August 1, 1990, and only weeks after the amendment to

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§ 6(l) was enacted, the Legislature made a further change. Despite the already broad definition of tangible personal property, which included personal property of "any nature" including any "commodities whatsoever," the Legislature amended the definition to specifically include electricity. See St. 1990, c. 150, § 359. The specific inclusion of electricity would be superfluous if, as the Commissioner maintained, the Legislature understood the general meaning of tangible personal property to include electricity. See, e.g., *State Tax Commission v. LaTouraine Coffee Co., Inc.*, 361 Mass. 773, 778 (1972) (recognizing that "[n]one of the words of ... [the] statute is to be regarded as superfluous" in determining legislative intent).

For the foregoing reasons, the Commissioner's reliance on sales tax definitions is not persuasive on the issue of whether electricity is tangible property for purposes of the corporate excise.

2. PROPERTY TAX TREATMENT OF ELECTRICITY GENERATION

The Commissioner also argued that the generation of electricity has historically been treated as a "manufacturing" operation for purposes of the local property tax exemption under G.L. c. 59, § 5, cl. Sixteen th (3) and the investment tax credit for manufacturing corporations under G.L. c. 63, § 31A. See, e.g., *Assessors of Holyoke v. State Tax Comm'n*, 355 Mass. 223, 227 (1969); *Boston Gas Co. v. Assessors of Boston*, 334 Mass. 549, 565 (1956); *Boston & Maine R.R. v. Billerica*, 262 Mass. 439, 447-49 (1928). The Commissioner therefore asserts that the fact that electricity is manufactured indicates that it is tangible personal property.

That electricity is considered to be manufactured for purposes of a local property exemption and qualification for investment tax credits does not answer the question of whether it is tangible personal property. The issue addressed in these cases is whether "manufacturing" was taking place. "Manufacturing" has been defined as "the process of transforming raw or finished materials by hand or machinery, and through human skill and knowledge, into something possessing a new nature and name and adapted to a new use." *Commissioner of Corps. & Tax'n v. Assessors of Boston*, 321 Mass. 90, 94 (1947). There is nothing in the definition which supports the notion that only tangible products result from manufacturing.

In fact, as discussed above, Massachusetts courts have recognized that the generation of electricity is an example of a manufacturing process that results in the production of an intangible product. See *Westinghouse*, 382 Mass. at 358 (holding that Board's ruling that manufacturing status cannot be denied because end product is intangible "conformed to [court's] view that the production of electricity may entail manufacturing"); *Houghton Mifflin*, 423 Mass. at 48-9, and *First Data Corporation*, 371 Mass. at 446 (recognizing that cases that consider the production of electricity to involve manufacture counter the argument that the definition of manufacturing "contemplates corporeal or tangible input or output").

Accordingly, Massachusetts manufacturing cases not only fail to advance the Commissioner's position but in fact support the Board's ruling that electricity is commonly understood to be intangible.

3. CASES HOLDING THAT ELECTRICITY IS A "COMMODITY" OR A "PRODUCT" ARE INAPPOSITE

The Commissioner cites a handful of cases in non-tax contexts to support his proposition that the general meaning of "tangible personal property" includes electricity. These cases fail to establish such a proposition and instead serve to underscore the unique nature of electricity as something quite different from tangible property.

G.E. Lothrop Theatres Co. v. Edison Elec. Illuminating Co., of Boston, 290 Mass. 189 (1935) ("*Lothrop Theatres*"), involved a dispute between an electric company and a building owner over the recovery of certain electric charges billed to both the owner and its tenants. The court noted that there "may be" cases where electricity would be considered "a commodity subject to sale and delivery rather than a

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service furnished by the generating company." *Lothrop Theatres*, 290 Mass. at 193. At a minimum, this observation indicates that the determination of whether electricity is a commodity or a service depends on the context in which the question is asked; it also can be read to suggest that the court's general understanding of electricity is that it is a service.

The court also said that when electricity is sold, it "may be conceded" that there is "something corresponding to delivery in the sale of a tangible chattel." *Id.* The need for analogy contradicts the Commissioner's claim that electricity is itself tangible personal property. There is nothing in *Lothrop Theatres* that supports the notion that electricity is so commonly understood to be tangible that it must be so characterized generally or for corporate excise purposes.

In *Town of Concord, Mass. v. Boston Edison Co.*, 676 F.Supp. 396 (D.Mass. 1988) ("Town of Concord"), the court addressed whether electricity was a "commodity" for purposes of the price restrictions under the Robinson-Patman Act, 15 U.S.C.A. § 13(a). A "commodity" is not necessarily tangible personal property; in fact, it is considerably broader in scope. See *Opinion of the Justices*, 408 Mass. 1201, 1206-11 (1990) (concluding that inclusion of the term "commodities" in Article 4 of the Massachusetts Constitution authorizes taxation of services). In fact, the court in *Town of Concord* pointed out that "electricity is not an obviously tangible" item or product and acknowledged that "the average consumer of electricity" might well believe that "she is paying for a service rather than purchasing a product." *Id.* at 398.

The court's decision is based on considerations specifically relating to price restrictions under the Robinson-Patman Act, particularly whether electricity, like other items subject to those restrictions, "is a thing bought and sold in the marketplace." *Id.* The fact that the court determined that, except for not being "an obviously tangible item," "electricity is not significantly different from other items deemed commodities subject to the price discrimination prohibitions of antitrust laws" (*Id.*) does not mean that electricity should be treated as tangible personal property for purposes of the corporate excise apportionment formula.

The Commissioner's citation of a case holding that electricity is a "product" within the meaning of the strict liability rule in Restatement (Second), Torts, § 402A (1965) is also not helpful. The Wisconsin court in *Ransome v. Wisconsin Elec. Power Co.*, 87 Wis.2d 605 (1979), while never using the term "tangible personal property," relied on public policy grounds to support its decision in favor of the consumer-plaintiff. The public policy grounds supporting a ruling of strict liability have no relevance to the issue in the present appeals.

The remaining cases cited by the Commissioner, holding that electricity can be measured, add nothing to the analysis. The fact that electricity can be measured is not contested and does not answer the question of whether it is tangible personal property. If there is anything significant about the subject of measurability, it is that electricity is measured in a manner - the passage or use of current over time - that does not remotely resemble the measurements - height, weight, volume, number of items, etc. - that apply to items of tangible personal property.

II. EVEN IF ELECTRICITY IS PROPERLY CONSIDERED TANGIBLE PERSONAL PROPERTY FOR PURPOSES OF § 38(f), THE PARTNERSHIPS' SALES TOOK PLACE IN RHODE ISLAND, NOT MASSACHUSETTS

The tangible property rule under § 38(f) attributes sales to the state in which the taxpayer completes its delivery to the purchaser. Under the Unit Power Agreements with the Purchasers, the Partnerships effected delivery of the electricity they generated and sold at a specific interconnection point with the NEPOOL grid, the EHV/PTF substation in Rhode Island. At that point, the Purchasers took responsibility for further transmitting the electricity, including the cost of using all NEPOOL transmission facilities and the line losses from dissipation of power during transmission beyond the Rhode Island substation. Accordingly, the Partnerships completed their delivery obligations, and the Purchasers took possession of the electricity, in Rhode Island.

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The Commissioner argues that NEPOOL acted as a "common carrier" that "picked up electricity" from the Partnerships in Rhode Island and delivered it to customers in Massachusetts. If a seller hires a "common carrier" to ship goods to a buyer, the sale occurs at the buyer's location, where the property is delivered to the buyer. See 830 C.M.R. 63.38.1(9)(c) 1. However, if a buyer "uses its own truck and driver or hires its own carrier to pick up" the property, the sale occurs at the seller's location, when the buyer or the carrier it hires picks up the property. *Id.*

Apart from the awkwardness of fitting the sale of electricity into a model that uses concepts such as "pick up," "truck," "driver," and "carrier," the common carrier analogy fails on a number of fronts. First, the Purchasers, not the Partnerships, were members of NEPOOL that had both the right to use other NEPOOL members' transmission facilities and the contractual responsibility to transmit the electricity beyond the Rhode Island substation. To the extent that the NEPOOL grid could be considered a "truck" or "carrier," it was a carrier hired by the Purchasers that delivered the electricity.

Further, neither NEPOOL nor the NEPOOL transmission grid fit the definition of a "common carrier" which, according to Black's, is one who is:

required by law to convey passengers or freight without refusal if the approved fee or charge is paid ... One who holds himself out to the public as engaged in business of transportation of persons or property from place to place for compensation.

See also *National Private Truck Council, Inc. v. Commissioner of Revenue*, 426 Mass. 324, 325, n. 1 (1997) ("common carrier" is a "for-hire" transporter of goods). There is nothing in the record to suggest that NEPOOL is required by law to make its facilities available to the general public or any non-member, such as the Partnerships, that is willing to pay the cost of transmission. Only members, such as the Purchasers, that have accepted the terms of the NEPOOL Agreement may use the transmission grid. Accordingly, to the extent that NEPOOL can be viewed as a "carrier" that "shipped" the electricity, it was the Purchasers, as members of NEPOOL that were also contractually responsible for transmitting the electricity beyond the Rhode Island substation, that "hired" the carrier.

Further, the Partnerships cannot be considered as having a responsibility to deliver the electricity to retail customers because, unlike a seller that arranges for the shipment of goods to a purchaser, the Partnerships have no idea of the identity or location of the ultimate purchaser. The ultimate destination of the electricity generated by the Partnerships is the location of the Purchasers' customers, if not the customers of the Purchaser's customers. The identity and location of the Purchasers' wholesale and retail customers is not reasonably ascertainable by the Partnerships. Accordingly, the Partnerships cannot be viewed as having "delivered" the electricity to these entities.

Accordingly, even if, contrary to the Board's finding and ruling, electricity is properly considered "tangible personal property" for purposes of § 38(f), the Partnerships' sales of electricity would still be attributable to Rhode Island, where their delivery obligation to the Purchasers was satisfied.

III. CONCLUSION

On the basis of the foregoing, the Board ruled that electricity is not "tangible personal property" for purposes of the sales factor of the corporate excise apportionment formula under § 38(f). Accordingly, the Partnerships' sales of electricity are attributed to the state in which the Partnerships incur the greatest proportion of their cost of performing their income-producing activity. Because, on the basis of the record, the Partnerships incurred all of their costs of performance in Rhode Island, their receipts from electricity sales are properly treated as Rhode Island, not Massachusetts, sales. Accordingly, no receipts are includible in the numerator of appellants' Massachusetts sales factors and, therefore, appellants' sales factors are zero. The Board, therefore, issued a decision for appellants in these appeals.

THE APPELLATE TAX BOARD

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By: _____

Frank J. Scharaffa, Commissioner

Donald E. Gorton, III, Commissioner

Nancy T. Egan, Commissioner

James D. Rose, Commissioner

A true copy,

Attest: _____

Assistant Clerk of the Board

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**California State Tax Reporter, In the Matter of the Appeal of PacifiCorp--
Corporation franchise (Income)-- Allocation and apportionment-- Sales
factor-- Income-producing activities, California, ¶403-326, (Sep. 12,
2002)**

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¶403-326. In the Matter of the Appeal of PacifiCorp, California State Board of Equalization, 2002-SBE-005,
September 12, 2002.

Corporation franchise (Income): Allocation and apportionment: Sales factor: Income-producing activities.— Electricity is intangible and a taxpayer's sales of the generation and transmission of electricity were sales of services that, because they were performed for the most part outside of California, must be excluded from the numerator of the taxpayer's sales factor for California corporation franchise (income) tax purposes, the California State Board of Equalization (SBE) held in a matter of first impression. The SBE reversed the Franchise Tax Board, which had held that the sales were sales of tangible personal property that had to be included in the numerator.

The taxpayer, an Oregon power company, sold electricity generated at facilities outside California to California entities and treated these sales as occurring in Oregon, the contractual point of delivery. The FTB ruled that these sales were California sales because the ultimate destination of the electricity was California. Under California law, sales of tangible personal property are generally sourced to California if the property is delivered there, while sales other than sales of tangible personal property are sourced to California if a greater proportion of the income-producing activity is performed in California than in any other state. Citing *Otte v. Dayton Power & Co.*, 523 N.E.2d 835 (Ohio 1988), the SBE held that the sales of electricity were sales of services that essentially consisted of the taxpayer setting and keeping in motion, through its generation and transmission facilities, electrically charged particles. Furthermore, this process was a service because it did not result in the creation of any tangible particles or the injection of such particles into its transmission facilities. A majority of the income-producing activities related to the sales of these services were performed in states other than California and, therefore, were properly excluded from the numerator of the taxpayer's California sales factor.

The SBE rejected the FTB's argument that these transactions were not services because they did not relate to activities conducted by individuals for the benefit of others. Income-producing activity is not limited to personal services by employees but includes the use of tangible and intangible personal property in performing a service. The SBE also rejected the FTB's argument that electricity is not a service because it is purchased for its physical characteristics. The generation and transmission of electricity is separate from and not incidental to its physical characteristics, which are the electrons already in the power lines, for the use of which the taxpayer paid in separate transactions.

See ¶11-525.

Representing the Parties:

For Appellant: Eric J. Coffill, Attorney at Law Carley A. Roberts, Attorney at Law

For Respondent: Craig Swieso, Tax Counsel

Counsel for Board of Equalization: Charles D. Daly, Tax Counsel III

OPINION

This appeal is made pursuant to section 19045¹ of the Revenue and Taxation Code from the action of the Franchise Tax Board on the protest of PacifiCorp against proposed assessments of additional franchise tax in the amounts of \$498,412, \$517,835, \$58,523, \$151,313, \$359,742, and \$461,972 for the years ended December 31, 1984, 1985, 1986, 1987, 1988, and 1989, respectively.

The main issue in this appeal is whether sales of electricity to California entities during the appeal years were sales of tangible personal property for purposes of section 25135. That issue is a matter of first impression in

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California. An alternative issue is, if the sales of electricity were sales of tangible personal property, whether the sales occurred in Oregon rather than California.

Appellant is an Oregon power company that, through its predecessor corporation Pacific Power and Light ("PPL"), has been providing electricity to the Pacific Northwest since the beginning of the previous century. Over time, PPL expanded, through the acquisition of other corporations, both the geographic areas that it served and the kinds of businesses in which it was engaged. In 1982-1985, after acquiring a large number of companies, PPL underwent a reorganization that apparently resulted in PPL becoming a division of appellant and appellant having primary responsibility for the management of the entire group of corporations affiliated with PPL.

The sales of the electricity at issue were made through the Pacific Northwest-Pacific Southwest Intertie ("Intertie"). The Intertie, which began operation in 1968, permits the transmission of excess power available in one region served by the Intertie to another region with power needs. Appellant states that, during the appeal years, the Intertie was owned by appellant, Portland General Electric,² and the Bonneville Power Administration ("BPA").³ During most of the appeal years, the Intertie consisted of two alternating current ("AC") power lines and a direct current ("DC") power line. One AC power line ran from the Malin substation in Oregon south into California. Appellant alleges that the Western Area Power Authority⁴ owned this line. Appellant also alleges that appellant owned the other AC power line, which ran from the Malin substation south to Round Mountain, California. In addition, appellant alleges that appellant leased that AC line to Pacific Gas and Electric ("PG&E"), Southern California Edison ("SCE"), and San Diego Gas and Electric ("SDG&E").⁵ Finally, appellant alleges that the BPA owned the DC power line from Celilo near The Dalles, Oregon, to the Nevada-Oregon border and that the Los Angeles Department of Water and Power ("LADWP") owned that line from the Nevada-Oregon border through Nevada and into California until the line terminated in Los Angeles.⁶

Appellant filed a California combined report with its affiliates for the appeal years.⁷ On its Oregon corporate income tax returns for the appeal years, appellant had treated the sales of electricity to California entities as sales occurring in Oregon. Respondent's auditor in his final narrative report stated that appellant treated those sales as Oregon sales because the electricity was delivered at either the Malin substation in Oregon⁸ or the Oregon-Nevada border and ownership of electricity sold over the Intertie changed at the contractual points of delivery. Respondent's auditor also concluded that the electricity sold to its California customers was generated by appellant and that appellant had its own generation facilities in Oregon, Washington, Montana, Wyoming, and Utah. Respondent determined upon completion of its audit that sales of electricity by appellant, doing business as PPL, to a number of power companies, municipalities, and government agencies located in California were California sales that should be included in the numerator of appellant's sales factor.⁹

At protest, respondent again concluded that the sales at issue were sales of tangible personal property for purposes of section 25135 and that those sales must be included in the numerator of appellant's sales factor under the then recently decided case of *McDonnell Douglas Corp. v. Franchise Tax Board* (1994) 28 Cal.App.4th 1789 ("McDonnell Douglas"). In *McDonnell Douglas*, the taxpayer delivered aircraft to purchasers owned by the taxpayer in California, and the purchasers then arranged for the transportation of the aircraft out of California. The court in *McDonnell Douglas* rejected the "delivery" rule adopted by respondent in its Legal Ruling 348 (Feb. 21, 1973) in favor of the "destination" rule adopted by courts in a number of jurisdictions outside of California. (*McDonnell Douglas Corp. v. Franchise Tax Board*, *supra*, 26 Cal.App.4th at pp. 1793-1796.) In respondent's view, the electricity that appellant sold was analogous to the aircraft in *McDonnell Douglas* and had an ultimate destination in California.

Subsequently, appellant petitioned respondent under section 25137 to assign appellant's sales of electricity to the locations at which the title to the electricity was contractually transferred. After respondent denied appellant's petition, this timely appeal followed.

Appellant's primary contention on appeal is that the sales of electricity at issue here are sales "other than sales of tangible personal property" for purposes of section 25136. Alternatively, appellant contends that, if the sales of electricity were sales of tangible personal property, the sales should be treated as having

occurred in Oregon because a "contractual point of delivery" rule should be adopted for electricity rather than the "destination" rule announced in *McDonnell Douglas*. Appellant argues that a "contractual point of delivery" rule should be adopted for electricity because of alleged difficulties in tracing electricity from one point to another.

In support of its primary contention that electricity is an "intangible,"¹⁰ appellant relies heavily upon the California Supreme Court case of *Miller v. The City of Los Angeles* (1921) 185 Cal. 440 ("Miller") and the California Court of Appeal case of *Pierce v. Pacific Gas & Electric Co.* (1986) 166 Cal.App.3d 68 ("Pierce"). In *Miller*, the issue before the Court was whether electricity was "property" for purposes of a provision of the Los Angeles City charter that permitted the purchase of "property" by the city. (*Miller v. The City of Los Angeles*, *supra*, 185 Cal. at pp. 443-444.) After holding that electricity was "property" for purposes of the Los Angeles city charter, the Court stated that "[e]lectricity is rather an intangible asset, and the word 'property' is perhaps not the most apt word by which to describe the supply of electrical energy thus sought to be acquired for the use of the city." (*Miller v. The City of Los Angeles*, *supra*.)

In *Pierce*, the appellate court considered whether electricity that injured a consumer as the result of a transformer malfunction was a "product" rather than a service for purposes of strict liability in tort. (*Pierce v. Pacific Gas & Electric Co.*, *supra*, 166 Cal.App.3d at p. 81.) Holding that the seller of electricity was strictly liable in tort to the consumer, the appellate court in *Pierce* stated that policy justifications for imposing strict liability in tort was more significant in reaching its holding than merely whether electricity should be labeled a "product." (*Pierce v. Pacific Gas & Electric Co.*, *supra*, 166 Cal.App.3d at p. 82.) However, after observing that California and other courts "have not dwelled unduly on electricity's physical properties" in the "product" context, the appellate court quoted in a footnote the following statement suggesting that its observation might not be entirely correct: "[b]ecause electricity is intangible, it has been consistently argued by strict liability defendants in cases involving injury by electricity that the intangible force of electric current is not a 'product' within the meaning of [the Restatement of Torts]...." (*Elgin Airport Inn v. Commonwealth* (1980) 88 Ill.App.3d 477 [410 N.E.2d 620, 623].") (*Pierce v. Pacific Gas & Electric Co.*, *supra*, 166 Cal.App.3d at p. 82, note 6.) Appellant also cites a number of cases from other state courts that, like *Miller* and *Pierce*, do not address the tangibility or intangibility of electricity in the context of a corporate franchise or income tax.

In further support of its position that electricity is an "intangible," appellant points out that respondent itself treated electricity as "intangible property" in its Multistate Audit Technique Manual until 1986. In addition, appellant points out that respondent has characterized electricity as an "intangible" for purposes of Public Law 86-272.¹¹ In its "UDITFA Manual" (FTB Publication 1050 (Revised 10-83)) and in a letter to a commercial publisher, Appellant also notes that the Multistate Tax Commission ("MTC") considers electricity to be "intangible property" in its MTC Corporate Income Audit Procedure Guideline Manual. In addition, appellant notes that, in a 1999 report, the Federation of Tax Administrators stated that electricity should be considered a service, rather than tangible personal property, for purposes of establishing "nexus."¹²

Appellant also cites the *Appeal of Retail Marketing Services, Inc.* (91-SBE-003), decided by the Board on August 1, 1991, for the proposition that electricity can be distinguished from "tangible personal property." In *Retail Marketing Services*, we observed that there was no statutory definition of "tangible personal property" but that the taxpayer had correctly advanced the view that "the ordinary and necessary meaning of 'tangible' is that which can be felt by touch, having actual form and substance." However, we also observed that such a definition of "tangible" is much too broad to be used in determining whether the property at issue in that matter was "tangible personal property" for purposes of the property factor under section 25129. In the matter under consideration here, appellant has provided a declaration under penalty of perjury by Richard C. Dorf, Professor of Electrical Engineering at the University of California at Davis, in which he concludes that "intangible personal property," under a definition allegedly consistent with *Retail Marketing Services*, encompasses electricity.¹³ Appellant has also provided a list of cases from other states, including *Otte v. Dayton Power & Co.* (1988) 37 Ohio St. 3d 33 [523 N.E.2d 835] ("Otte"), to support the proposition that electricity is an "intangible" under *Retail Marketing Services*.

Finally, appellant characterizes respondent's change in position regarding the taxation of electricity as an invalid "underground regulation" whose purpose is merely to increase the collection of revenue. Appellant also expresses concern that treating electricity as tangible personal property might provide unanticipated nexus with California for companies engaged in electronic commerce.

Respondent continues to contend that electricity is tangible personal property whose sales occurred in California under the controlling authority of *McDonnell Douglas*. In support of that contention, respondent proposes a definition of "tangible personal property" as "the collective rights that are associated with things that exhibit physical attributes, which are not related to land." Respondent's proposed definition is distilled from a broad collection of sources that include dictionary definitions of "tangible personal property," a portion of a law review article¹⁴ that discusses the distinction between the property law concepts of "choses in possession" and "choses in action," and respondent's apparent view that the rationale underlying the holding of *Retail Marketing Services* is that the property at issue in that matter was a "chose in action" and, therefore, was "intangible personal property." Respondent also takes the position that electricity is "tangible personal property" even under the definition of "tangible" that appellant advanced in *Retail Marketing Services*. Like appellant, respondent cites a number of cases from other jurisdictions in support of its position. However, like the cases cited by appellant, respondent's cases fail to address the tangibility or intangibility of electricity in the context of a corporate franchise or income tax.

In a report submitted to us by respondent and that respondent characterizes as providing a necessary conceptual framework for discussing the scientific and technical aspects of electricity, Professor Joel Fajans, Professor of Physics at the University of California at Berkeley, states:

"Electricity is actually a catchall word encompassing many related concepts, each with a very specific definition. These concepts include *charge*, *current* (measured in amps), *voltage* (measured in volts) *power* (measured in watts) and *energy* [T]he flow of charge constitutes a *current*. Charge is usually made up of electrons, so current is typically the flow of electrons.... The ability of each charge to do something useful ... is related to voltage. Thus, the rate at which electricity performs useful services equals the product of the current (the number of charges) and the voltage (the work done by each electron.) This rate is called the *power* [¶] ... The total amount of power consumed over time is called the *energy*, which is measured in kilowatt-hours. [Fn. Omitted.] ... The power company bills users for the amount of energy that they consume....

The electric power distribution system is quite complicated. In essence, however, it can be reduced to a circuit consisting of a power source, a transmission line and a load.... The power source must be capable of supplying a current at a reasonable voltage, and can be, among other things, a battery, a hydroelectric plant, or a gas fired turbine generator. The transmission line can be as simple as a pair of wires like those in a household power cord. [Fn. Omitted.].... A load is the generic name for devices that use the electricity to perform a useful service."

(Resp. Br., exhibit B, p. 2.)

Later in his report, Professor Fajans further states:

"Electricity is physical and material because, microscopically, it consists of the flow and "pressure" of a material entity, namely electrons, and macroscopically, it can be sensed (felt, tasted, seen, and heard), measured, weighed, and stored, and is subject to the universal laws of nature. The following sections discuss each of these properties in rough order of importance.... [¶] ... Without electrons, electricity cannot be transmitted. Though electrons themselves are very small and lightweight, they are one of the basic constituents of matter; common matter like hydrogen and iron consists of electrons, protons, and neutrons in roughly equal number. Thus, there is nothing more physical and material than an electron. Since electricity itself consists of the flow of a material object, electricity is physical and material."

(Resp. Br., exhibit B, p. 5.)

Respondent acknowledges that the term "other than tangible personal property" in section 25136 encompasses not only intangible personal property but also services. However, respondent argues that sales of electricity are not sales of services because electricity (1) does not essentially relate to activities conducted by individuals for the benefit of others and (2) is purchased for its "physical characteristics." From a comment in Professor Fajans' report regarding the capital required to generate and transmit electricity, respondent also argues that services performed by individuals are only incidental in comparison to generators and power lines. Other than a definition of "services" from a legal dictionary, respondent cites no authority directly in support of its arguments.

With respect to the alternative issue here, respondent argues that appellant's position that the "destination" rule stated in *McDonnell Douglas* may not be applied to electricity because electricity cannot be traced from one point to another is wrong. In support of its argument, respondent points out that electricity is "fungible" and that it is irrelevant whether each electron sold by appellant can be traced to a destination in California as long as purchasers in California receive electricity equal to the amount of electricity sold by appellant. Respondent also argues that applying a "delivery" rule to electricity is inconsistent with the language in section 25135 that the f.o.b. point¹⁵ or other conditions of the sale must be disregarded.

Respondent concedes that if the sales of electricity at issue are sales of "other than tangible personal property" for purposes of section 25136, the sales were not in California under that section because a majority of the "income-producing activities" related to those sales were performed in other states, based on cost of performance.

Section 25128 provides that all business income shall be apportioned to California by multiplying such income by a fraction, the numerator of which is the property factor plus the payroll factor plus the sales factor, and the denominator of which is three. Section 25134 defines the sales factor as a fraction, the numerator of which is the total number of sales of the taxpayer in California during the income year, and the denominator of which is the total sales of the taxpayer everywhere during the income year.

Section 25135 provides that sales of tangible personal property are in California if: (a) the property is delivered or shipped to a purchaser, other than the United States Government, within California regardless of the f.o.b. point or other conditions of the sale; or (b) the property is shipped from an office, store, warehouse, factory, or other place of storage in California and (1) the purchaser is the United States government or (2) the taxpayer is not taxable in the state of the purchaser. Section 25136 provides that sales, other than sales of tangible personal property, are in California if: (a) the income-producing activity is performed in California; or (b) the income-producing activity is performed both in and outside California and a greater proportion of the income-producing activities is performed in California than in any other state, based on costs of performance.

California Code of Regulations, title 18, section 25136, subdivision (b), ("Regulation section 25136, subdivision (b)") provides as follows:

"The term 'income producing activity' applies to each separate item of income and means the transactions and activity directly engaged in by the taxpayer in the regular course of its trade or business for the ultimate purpose of obtaining gains or profit. Such activity does not include transactions and activities performed on behalf of a taxpayer, such as those conducted on its behalf by an independent contractor. Accordingly, income producing activity includes but is not limited to the following:

1. The rendering of personal services by employees or the utilization of tangible and intangible property by the taxpayer in performing a service.
2. The sale, rental, leasing, licensing, or other use of real property.
3. The rental, leasing, licensing or other use of tangible personal property.
4. The sale, licensing or other use of intangible personal property.

"The mere holding of intangible personal property is not, of itself, an income producing activity."

We agree with appellant's primary contention that the sales of electricity here are "other than sales of tangible personal property" for purposes of section 25136. Because their discussions of the tangibility or intangibility of electricity are not in the context of a corporate franchise or income tax and are sometimes, as in *Miller* and *Pierce*, mere dictum, the cases and other authority upon which appellant relies are not controlling here. However, discussions of electricity in some of those cases are nonetheless helpful in resolving the main issue in the instant matter. For example, in the *Otte* case cited by appellant, the Ohio Supreme Court distinguished electricity from a "product" in the context of strict liability in tort by stating as follows:

"A 'product' is anything made by human industry or art. electricity appears to fall outside this definition. This is so because electricity is the flow of electrically charged particles along a conductor. [The power company] does not manufacture electrically charged particles, but rather, sets in motion the necessary

elements that allow the flow of electricity. What we have here is a purported defect in the distribution system. Such a system is, in our view, a service."

(*Otte v. Dayton Power & Co.*, *supra*, 37 Ohio St. 3d at p. 37.)

Like the court in *Otte*, we conclude that the sales of electricity here are sales of services that essentially consisted of appellant's setting and keeping in motion, through its generation and transmission facilities, electrically charged particles. Also as in *Otte*, we further conclude that the basic reason the generation and transmission process employed by appellant is appropriately characterized as a service is that the process does not result in either (1) the "creation" in its generation facilities of any such arguably tangible particles or (2) the "injection" of those particles into its transmission facilities.

At this juncture in our analysis, it is necessary to point out that exactly what constitutes the "sales of electricity" at issue here is not well specified in the record. For example, appellant has not presented us with financial or other records that segregate its "sales of electricity" to California entities into such components as sales resulting from the generation of electricity and sales resulting from the transmission of electricity. However, the final narrative report of respondent's auditor notes that when a California entity purchases "power" from appellant, appellant "turns up" its generator to put more power into the intertie. In addition, the auditor's report notes that there were "wheeling" charges for transmitting electricity over power lines. In view of the auditor's notations, we infer that the generation and transmission of electricity by appellant are the components of the "sales of electricity" that we need to consider here. The auditor's report also states that a California entity would pay a "use of facilities" charge to use power lines owned by another entity. However, as indicated in footnote 5, it appears that rental payments for the California portion of those lines are not at issue here because appellant has already included them in the numerator of its sales factor under Regulation section 25136, subdivision (b)(2).

Even though respondent seems to argue that the generation and transmission of electricity are not properly treated as services under section 25136 because they are not personal services, Regulation section 25136, subdivision (b)(1), explicitly states that "income producing activity" is not limited to personal services by employees but includes the use of tangible and intangible property in performing a service. In addition, we concluded in the *Appeal of Mark IV Metal Products, Inc.* (82-SBE-181), decided by the Board on August 17, 1982, that the fabrication in California of metal owned by a Texas customer into seat parts for that customer, through the use of the taxpayer's "own labor and machinery," was a service that was includable in the numerator of a taxpayer's sales factor under section 25136. For those reasons, we reject respondent's argument that the generation and transmission of electricity are not properly treated as services under section 25136 because they are not personal services.

Respondent appears to predicate its argument that electricity is not a service because it is purchased for its "physical characteristics" on the assumption that the generation and transmission of electricity are inseparable from, and incidental to, its "physical characteristics." However, as suggested by *Otte*, the "physical characteristics" of electricity in the instant matter are essentially the electrons already in the power lines that have been set and kept in motion by appellant's generation and transmission system.¹⁸ Because appellant has apparently already paid for the use of the electrons in the power lines by payment of the "use of facilities" charge in transactions that are separate from, and independent of, those regarding the generation and transmission of electricity, we conclude that the generation and transmission of electricity here are neither inseparable from, nor incidental to, its "physical characteristics." Because we disagree with respondent's underlying assumption, we also disagree with its argument that electricity is not a service because it is purchased for its "physical characteristics."

With regard to respondent's argument that the services performed by appellant in the generation and transmission of electricity were merely incidental in comparison to generators, *Mark IV Metal Products* clearly supports the view that the use of equipment, such as a generator, by a taxpayer as part of the process by which a service is performed does not detract from the conclusion that the taxpayer is performing a service for purposes of section 25136. As discussed above, respondent's argument that the generation and transmission of electricity were merely incidental in comparison to power lines also fails because the rentals of the power lines are transactions that are separate from, and independent of, those relating to the generation and transmission of the electricity.

Although Professor Fajan's discussion of electricity in his report seems intended to support respondent's position that electricity is "tangible personal property" by emphasizing the "physical and material" nature of electrons, his discussion is also consistent with the definition of electricity in *Offe* as a "flow of electrically charged particles along a conductor." In addition, Professor Fajan's discussion of electricity is also consistent with the conclusion of the court in *Offe* that the "distribution system" with respect to electricity there was a service. In our view, just as the "distribution system" by which the flow of electrically charged particles occurred in *Offe* was a service, appellant's generation and transmission of electricity were also services under section 25136.

Because we conclude that sales of the generation and transmission of electricity here were sales of services performed for the most part outside of California, we further conclude that those sales were sales of "other than tangible personal property" and were properly excluded from the numerator of appellant's sales factor. Therefore, based upon the foregoing discussion, we conclude that, for purposes of California tax law, electricity is intangible. In view of our conclusions, we need not address the alternative issue in this matter. Accordingly, respondent's action is hereby reversed.

ORDER

Pursuant to the views expressed in the opinion of the Board on file in this proceeding, and good cause appearing therefor,

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED, pursuant to section 19047 of the Revenue and Taxation Code, that the action of the Franchise Tax Board on the protest of PacifiCorp against proposed assessments of additional franchise tax in the amounts of \$498,412, \$517,835, \$58,523, \$151,313, \$359,742, and \$461,972 for the years ended December 31, 1984, 1985, 1986, 1987, 1988, and 1989, respectively, be and the same is hereby reversed.

Dean Andal, Member

Claude Parrish, Member

* Marcy Jo Mandel, Member

Footnotes

- 1 Unless otherwise specified, all section references are to sections of the Revenue and Taxation Code as in effect for the years in issue.
- 2 Portland General Electric is an Oregon subsidiary of Enron Corporation.
- 3 The BPA is an agency of the United States government. Apparently, a major purpose of Congress in authorizing the construction of the Intertie was to provide an additional market for surplus power provided by the BPA so that the BPA would have greater financial resources to repay the United States Treasury for its investment in the Pacific Northwest power system.
- 4 We assume that the "Western Area Power Authority" is the same entity as the entity designated as WAPA in footnote 9.
- 5 Apparently, appellant included rental income from the portion of the line that ran from the Oregon-California border to Round Mountain, California, in the numerator of its sales factor. Appellant's treatment of that rental income does not seem to be in dispute.
- 6 We note that appellant does not attempt to reconcile seeming inconsistencies between its statement that appellant, Portland General Electric, and the BPA were co-owners of the Intertie with its allegations regarding the ownership of the AC and DC power lines that comprised the Intertie. However, we also note that respondent does not seem to object to such inconsistencies. Therefore, we conclude that they are of little significance here.
- 7 At protest, respondent determined that appellant was unitary, and therefore should be combined, with only some of the affiliates that were included in its California combined report.

- 8 The audit report also stated that some of appellant's contracts with its California purchasers provided that the sales of electricity would occur at the Oregon-California border because of the possibility that an additional AC power line would be constructed that would not pass through the Malin substation.
- 9 Of appellant's sales of electricity to the California entities during the appeal years, approximately 47 percent (\$224,919,960) were made to SCE, 20 percent (\$92,765,217) to PG&E, 18 percent (\$85,684,193) to LADWP, Sacramento Municipal Utility District, and various California municipalities, and 14 percent (\$66,209,039) to the California Department of Water Resources. Appellant also made sales of electricity of \$4,237,171 to SDG&E during the appeal years and of \$16,036,408 to the Western Area Power Administration ("WAPA") during the 1984-1986 appeal years. Because respondent apparently has concluded that the sales to WAPA may have been, in effect, sales to purchasers that were not located in California, respondent concedes that those sales should not be included in the numerator of appellant's sales factor. The record contains no additional information regarding the functions of WAPA or its constituent parts.
- 10 Like respondent, appellant sometimes uses the term "an intangible" or other similar designation as synonymous with the term "other than sales of tangible personal property" under section 25136.
- 11 Public Law 86-272 provides, in pertinent part, that no state shall have the power to impose a net income tax on income derived within the state if the only business activity within the state is the solicitation of orders for sale of tangible personal property, which orders are sent outside the state for approval or rejection and, if approved, are filled by shipment or delivery from a point outside the state. (15 U.S.C.A., §381(a)(1).)
- 12 "Nexus," in this context, is another way of saying that a corporate taxpayer has sufficient connections with a state to justify, for constitutional purposes, taxation of the taxpayer by that state.
- 13 Professor Dorf's testimony at the hearing in this matter was to the same effect.
- 14 Cowdrey, *Software and Sales Taxes: The Illusory Intangible* (1983) 63 B.U. L.Review 181, 197-209.
- 15 With regard to the term "f.o.b. point," California Commercial Code section 2319 (1) provides, in pertinent part, that "(a) [w]hen the [delivery] term is F.O.B. [an abbreviation for "free on board"] the place of shipment, the seller must at that place ship the goods in the manner provided in this division (Section 2504) and bear the expense and risk of putting them in the possession of the carrier; or (b) [w]hen the term is F.O.B. the place of destination, the seller must at his own expense and risk transport the goods to that place and there tender delivery of them in the manner provided in this division Section 2503."
- 16 For a more complete discussion of the generation of electricity in modern power plants, see Serway, *Physics for Scientists and Engineers with Modern Physics* (1990), pp. 886-888.
- * For Kathleen Connell per Government Code section 7.

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Selected Publications, Patents

- M. J. Hill, J. Papapolymerou, and R. W. Ziolkowski, "High-Q Micromachined Resonant Cavities in a K-band Diplexer Configuration," to be published in IEE Proceedings, H. Microwaves, Antennas, and Propagation.
- M. Hill, R. Ziolkowski and J. Papapolymerou, "A high-Q Reconfigurable Planar EBG Cavity Resonator," IEEE Microwave and Wireless Components Letters, vol. 11, No. 6, pp. 255-257, June 2001
- M.J. Hill, R.W. Ziolkowski, and J. Papapolymerou, "Electronically Controlled Microwave Bandgap Filter Structures," Applied Physics Letters, Vol. 78, No. 7, pp. 1008-1011, 12 February 2001.
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- G. Ponchak, E. Tentzeris and J. Papapolymerou, "Isolation and Cross-Coupling Effects In Multilayer Polyimide Circuits," 2001 IEEE International Microwave Symposium Workshop on "High Density/Multilayer RF Interconnects", Phoenix, AZ, May 2001
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STATE OF SOUTH CAROLINA
ADMINISTRATIVE LAW COURT

DUKE ENERGY CORPORATION,
Petitioner,

vs. DOCKET NO. 10-ALJ-17-0270-CC

SOUTH CAROLINA DEPARTMENT OF REVENUE,
Respondent.

D E P O S I T I O N

WITNESS: DHIAA M. JAMIL
DATE: January 17, 2012
TIME: 10:37 a.m.
LOCATION: Law Offices of
Nexsen Pruet
227 West Trade Street
Charlotte, North Carolina
TAKEN BY: Attorneys for the Defendants
REPORTED BY: Carolyn M. Beam
Court Reporter

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21
22 ALSO PRESENT:

23 T. Cooper Monroe, III
24 Patricia Caycedo Smith

25 (INDEX AT REAR OF TRANSCRIPT)

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1 STIPULATION: It is stipulated by
2 counsel that this deposition is being taken in
3 accordance with the South Carolina Rules of Civil
4 Procedure, and that the deponent does not waive the
5 right to read and sign the deposition transcript.

6 DHIAA M. JAMIL, being first duly
7 sworn, testified as follows:

8 EXAMINATION

9 BY MR. GREEN:

10 Q. Would you state your name for the
11 record, please?

12 A. It's Dhiala Jamil.

13 Q. Mr. Jamil, I'm going to go through a
14 few background things, nothing earth shattering, I
15 think. You've been sworn here today. If -- I'll
16 try to ask my questions today as clearly as I can.
17 If you don't understand, please ask me. Your
18 attorney's not supposed to speak with you, other
19 than raising objections and things like that. And
20 he may object to the form of questions I pose to
21 you from time to time. Unless he objects on the
22 basis of privilege or something, you should still
23 answer the question.

24 I don't make these endurance contests.
25 If you need a break or something, please let me

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1 know and we'll take one. And I think with that,
2 we'll go ahead and get started. Do you have any
3 questions for me before we get started?

4 A. No, I don't.

5 (DFT. EXH. 1, Duke Energy document
6 relating to Dhiaa M. Jamil, Group Executive Chief
7 Generation Officer and Chief Nuclear Officer,
8 marked for identification.)

9 BY MR. GREEN:

10 Q. All right. I'm going to hand -- I'm
11 going to mark this as Exhibit 1. I thought this
12 would save a bit of time, frankly. That is marked
13 as Exhibit 1. That is your bio off, I think, of
14 Duke's website. If you'd look at that and see if
15 that is accurate, if you have any changes or
16 corrections you want to make.

17 A. No.

18 Q. Okay. We'll introduce that in the
19 record as your background. That will save me going
20 through that just a little bit.

21 A. Okay.

22 Q. And you presently are the chief
23 generation officer and chief nuclear officer --

24 A. That's right.

25 Q. -- for Duke Energy? And you've held

1 that position for how long?

2 A. The chief nuclear officer part for
3 four years. The chief generation officer part for
4 two-and-a-half years.

5 Q. And you've spent a lot of time with
6 Duke Energy?

7 A. My entire career, basically.

8 Q. Said you joined in 1981 as a design
9 engineer and then have moved steadily up the ranks?

10 A. Yes.

11 Q. Good for you. Okay. And you are a
12 professional engineer?

13 A. Yes I am, in North Carolina and South
14 Carolina.

15 Q. And that is -- professionally, are you
16 electrical engineering?

17 A. Electrical.

18 Q. Electrical. Do you have any
19 certifications, besides your professional engineer?

20 A. I have the technical nuclear
21 certification, which is a required certification in
22 order to lead a nuclear organization.

23 Q. And who issues that certification?

24 A. It was issued by Duke, but it is done
25 under the ANSI standards, American Nuclear Society

1 or -- I -- I'm not clear.

2 Q. I've seen ANSI in other context. But
3 I'm -- I don't know what it stands for either.

4 A. American Nuclear -- the I is institute,
5 but the S can't be -- standards institute? I'm not
6 sure.

7 Q. Okay. All right. Have you ever
8 testified before?

9 A. In hearings, but not in a case like
10 this.

11 Q. What kind of hearings?

12 A. Public commission hearings.

13 Q. I noticed some discovery that was
14 provided to us, you've at least given prefiled,
15 written direct testimony with the South Carolina
16 Public Service Commission.

17 A. Yes.

18 Q. Have you ever actually testified in
19 a --

20 A. Oh, yes. That particular one, I did
21 testify.

22 Q. Okay. And that was in South Carolina.
23 Have you testified in North Carolina --

24 A. No.

25 Q. -- proceedings as well? Have you

1 testified in the proceedings in any other state?

2 A. No, no other state.

3 Q. No other state. Have you -- I --
4 strike that.

5 I assume, given the nature of utility
6 hearings, you have not given a deposition before?

7 A. I don't think so.

8 Q. And you've prefiled testimony in these
9 public service commission hearings on several
10 occasions?

11 A. Many occasions.

12 Q. Okay. Your bio, Exhibit 1, provides --
13 says that Duke Energy supplies and delivers
14 electricity to approximately four million customers
15 in the Carolinas and the Midwest.

16 MR. TRESH: Objection as to form.

17 BY MR. GREEN:

18 Q. Is that correct?

19 A. That's correct.

20 Q. Okay. And what general process does
21 Duke use to generate electricity to deliver to
22 these customers?

23 A. What basic process?

24 Q. And what basic process. And what I'm
25 focusing on, really, you have plants that have

1 generators that generate electricity that you then
2 transmit through a series of transmission lines and
3 distribution lines and you deliver that to
4 customers; is that correct?

5 MR. TRESH: Objection.

6 THE WITNESS: That is correct. We also
7 have sites that generates electricity on the basis
8 of solar and wind as well.

9 BY MR. GREEN:

10 Q. Okay. And so you have -- they generate
11 on the basis of solar and wind. And then you
12 have -- tell me if I'm correct in this: You have
13 plants that generate based on nuclear, coal, gas
14 and is that all?

15 A. Hydro.

16 Q. And hydro. That's right. I know I was
17 omitting one. So what is -- is there anything
18 different --

19 A. I'm sorry. And solar --

20 Q. Solar.

21 A. -- and wind.

22 Q. Yes, sir. And I was going to ask you
23 about that. Is there anything different about the
24 process of generating electricity from solar and
25 wind versus the process of generating electricity

1 for the other four that we just discussed?

2 A. At a macro level, the answer is no.

3 It's -- they're all converting one form of energy
4 into another.

5 Q. Okay. And you say at macro -- macro
6 level. What about a micro level?

7 A. Micro level is, naturally, depending on
8 the initial fuel, what you need to do to accomplish
9 the conversion would be different. The properties
10 of the fuel itself would be different mandating
11 different methods of converting.

12 Q. Okay. Well, let me ask you this: With
13 -- let's take hydro, for instance. The water turns
14 a generator --

15 A. Exactly.

16 Q. -- which produces electricity. Does --

17 A. The water actually turns a turbine --

18 Q. A turbine.

19 A. -- which turns a generator.

20 Q. Okay. And correct me then because I --
21 I'm -- I want to make sure I understand the
22 process. And solar, I guess -- do you have a
23 turbine and a generator?

24 A. No, you do not need a turbine. You
25 need cells.

1 Q. Solar cells that --

2 A. Cells that extract the energy from the
3 sun and converts it into electromagnetic energy.

4 Q. Okay. And how is that -- how is --
5 does the cell do the conversion process?

6 A. Yes.

7 Q. So the cell will absorb the energy,
8 convert it to -- you say electromagnetic energy and
9 then that will be transmitted to customers?

10 A. Yes.

11 MR. TRESH: Objection as to form.

12 BY MR. GREEN:

13 Q. And what about for wind? I guess wind
14 blows -- tell me if I'm correct in this: Wind
15 blows what looks like a giant propeller in most of
16 the pictures that I see. And then that, in turn,
17 turns --

18 A. A generator.

19 Q. -- a generator.

20 A. Yeah.

21 Q. And then that electricity is
22 transmitted to customers?

23 A. Uh-huh.

24 Q. Solar and wind, are they -- are those
25 methods as efficient as the hydro, nuclear -- the

1 other four -- the other four methods that we
2 discussed?

3 A. Well, that's difficult to answer. They
4 do not have the same capacity factor as the other
5 forms that you mentioned.

6 Q. And explain to me what you mean by
7 capacity factor.

8 A. So, you know, with a solar, for
9 example, the sun is out only for a limited period
10 of time. So your ability to extract energy is
11 limited by the availability of --

12 Q. I see.

13 A. -- solar rays. So does wind, falls in
14 that category as well.

15 Q. Because the wind's not blowing all the
16 time?

17 A. Correct. And, you know, that's one
18 thing about energy, it's hard to store. So you
19 tend to harness it and convert it whenever it's
20 available.

21 Q. Tell me about that storage. Is -- for
22 instance, in the solar, is -- is the solar energy
23 stored at any point when it's absorbed by the
24 cells?

25 A. No.

1 Q. And what about for the wind? Is the
2 wind, when it generates, is that ever stored?

3 A. No.

4 Q. Is it possible to store electricity?

5 A. I am -- to store what?

6 Q. Electricity.

7 A. It's possible to store charge. But
8 electricity implies the flow of electromagnetic
9 field. And that cannot be stored.

10 Q. And when you use the term electricity,
11 is that what you mean, the flow of an
12 electromagnetic field?

13 A. Yes.

14 Q. And so that can't be stored. Correct
15 me if I say -- restate this wrongly. But the
16 electricity can't be stored, but a charge can be
17 stored.

18 A. The charge can --

19 MR. TRESH: Objection as to form.

20 THE WITNESS: Yes.

21 BY MR. GREEN:

22 Q. And the charge, is it stored in a
23 battery or how do you store the charge?

24 A. The two forms that I am familiar with
25 are batteries and capacitors can store charge as

1 well.

2 Q. Explain to me what a capacitor is.

3 A. A capacitor is a device that has
4 insulators and metal parts and, in a way similar to
5 a battery, can hold a charge. However, it has uses
6 that are not typically associated with storage. It
7 has the ability to interact with the transmission
8 system, basically, to introduce an impedance or
9 remove an impedance from the line, and plays a role
10 in regulating voltage of the system.

11 Q. Okay. And so a capacitor is a pretty
12 -- correct me if I'm wrong on this. The capacitor
13 is a fairly significant part of Duke's transmission
14 and distribution --

15 MR. TRESH: Objection as to form.

16 THE WITNESS: It is a significant part
17 only because it regulates -- helps us regulate
18 voltage.

19 BY MR. GREEN:

20 Q. How is -- as I understand it, a
21 transformer is use to either step up or step down
22 the voltage of the electricity being -- flowing
23 through the transmission and distribution lines; is
24 that correct?

25 A. Yes.

1 Q. How is a capacitor different from a
2 transformer?

3 A. Completely different.

4 Q. And I'm -- I'm asking these questions,
5 so tell me how it's different. Because what -- and
6 the reason I ask that question is you said to me it
7 sort of regulates the voltage. But as I understood
8 it, a transformer kind of regulates the voltage.
9 And they will step it up to a much higher voltage
10 or step it back down to a much lower voltage.

11 A. Okay.

12 Q. And so how does a capacitor differ from
13 that function?

14 A. No, I can see how you -- you know. So
15 a transformer deliberately raises voltage or lowers
16 voltage, typically significantly higher or lower.
17 While a capacitor is used for normal fluctuation of
18 system voltage on a daily, hourly, by minute,
19 depending on the load that's demanded.

20 Q. Uh-huh.

21 A. The capacitor -- well, electricity is
22 -- the science of electricity has broken
23 electricity into there's power and there's
24 imaginary power that's called vars. The capacitor
25 can produce vars that help in uplifting the

1 voltage. But these are small fluctuations of
2 voltage, as opposed to what you're thinking about
3 in the transformer, where transformation happens
4 from a few hundred volts to thousands -- hundreds
5 of thousands of volts.

6 Q. Okay. All right. So --

7 A. For a completely different purpose.

8 Q. And I -- I think I understand. Okay.

9 Now, where -- where are capacitors located on the
10 -- the basic system that I've described as the
11 generator, transmission lines, transformers, to
12 step it up and then step it back down,
13 distribution, and then it goes to the customer?
14 Where are capacitors located in that simple system
15 I've described?

16 A. Typically the larger capacitors are in
17 the -- they're in the transmission and the
18 distribution part of the system.

19 Q. Okay.

20 A. And again, they -- they are there to
21 interact with the system, to ensure stability of
22 voltage.

23 Q. Okay.

24 A. Not to produce power.

25 Q. Okay.

1 A. But to stabilize the system, from a
2 voltage point of view.

3 Q. To keep level the power that's being
4 generated in the --

5 A. Not the power, the voltage.

6 Q. The voltage.

7 A. The voltage component.

8 Q. Okay. Now, did I -- did I understand
9 you correctly? You were talking about capacity and
10 you said vars and imaginary power?

11 A. Uh-huh.

12 Q. Explain that concept to me.

13 A. It's -- it's really going to be very
14 difficult to explain, you know, the science of
15 electricity is -- there is a lot of -- well, first
16 of all, being that electric field is not visible,
17 science has interpreted how it manifests itself.
18 We know that energy can perform work. The work
19 portion of it is defined as power. There is
20 another component to electricity that has been
21 observed that is independent of power. It is the
22 ability to manipulate voltage by raising and
23 lowering a different component. And that component
24 allows an imaginary field to move in one direction
25 or the other.

1 And that field is called vars. You
2 know, the scientific name for it is vars. And it
3 has a tendency to raise, slightly raise voltage or
4 lower voltage, as it moves in one direction to the
5 other.

6 Q. Why do you refer to it -- it sounds
7 like the effects are determined. Why do you refer
8 to it as an imaginary field?

9 A. The scientific notation of it is
10 negative numbers. So, you know, in math, it's hard
11 to kind of put your finger on what a negative
12 number is, you know, try to explain a negative
13 number. The -- the var portion of electricity has
14 a notation of negative numbers and it's referred to
15 as imaginary power. It does not perform work.

16 Q. Is --

17 A. But it performs a function.

18 Q. It performs a -- well, let me ask you
19 this: Is -- if I understand it correctly, much of
20 the effects of electricity are -- can be quantified
21 mathematically?

22 MR. TRESH: Objection.

23 BY MR. GREEN:

24 Q. Is that correct?

25 A. Yes.

1 Q. Is the -- the imaginary portion that
2 you refer to, can that be mathematically predicted
3 as well?

4 A. Yes.

5 Q. It's just the difference is you're
6 working with negative numbers instead of positive
7 numbers, I guess, that routinely go with
8 electricity; is that correct?

9 A. That's correct.

10 Q. Okay. Okay. I think you said a little
11 bit ago turbine spins, turns the generator and then
12 the generator generates electricity. How does the
13 generator operate?

14 A. The generator operates on the principle
15 that a varying magnetic field, when it comes in
16 contact with metal, it produces another field. And
17 that field is -- another electromagnetic field will
18 be induced on the -- on the metal. Whenever you
19 have an varying -- and the key portion is a varying
20 -- magnetic field.

21 Q. Uh-huh.

22 A. So, applying that principle, then
23 science determined that, if you have a fixed
24 magnetic field, in order to vary it, you need for
25 -- introduce motion, and the motion will ensure the

1 varying nature of the -- the field. The metal will
2 basically cut -- would cut that magnetic field.
3 And that cutting will induce electromagnetic field
4 on the metal piece.

5 So as a turban spins, it is connected
6 through the shaft to what is referred to as the
7 rotor of the generator, and that creates the
8 motion. And that motion would basically -- that is
9 the process of converting one form of energy into
10 another form of energy. It's converting mechanical
11 energy into electromagnetic energy. And that's
12 then, through a variety of pieces of equipment, you
13 know, brushes, wires, you conduct the -- the
14 electricity or the electromagnetic --
15 electromagnetic field for useful uses.

16 Q. And that -- that process you just
17 described is the same for nuclear, coal, hydro and
18 gas production?

19 MR. TRESH: Objection as to form.

20 THE WITNESS: That portion of it is the
21 same.

22 BY MR. GREEN:

23 Q. And that basic generation process that
24 you have described, to the best of your knowledge,
25 is that the same basic generation process that all

1 electric utilities follow?

2 MR. TRESH: Objection as to form.

3 THE WITNESS: Not necessarily.

4 BY MR. GREEN:

5 Q. Could you explain that answer?

6 A. Yeah. A solar generator would not
7 operate that way.

8 Q. Okay.

9 A. That's one example.

10 Q. Okay. And I wasn't -- and I -- I was
11 working on your -- your -- your explanation a
12 little bit earlier, that solar and wind are a
13 little bit different than the coal, hydro. I was
14 -- I was asking -- I was not clear in my question.
15 I apologize for that.

16 Utilities that are using coal, hydro,
17 nuclear and gas, it's the same basic generation
18 process followed by those entities, to the best of
19 your knowledge?

20 A. Yes.

21 Q. I'll give you a definition that -- and
22 I'll just represent to you that it is from Duke's
23 website glossary, definition of a power plant. And
24 it is an industrial facility that has the
25 production of kilowatt hours of power as its

1 primary product. The power is produced from a raw
2 material, such as oil, coal or nuclear. A plant
3 that converts mechanical energy to electric energy.
4 Do you agree with that definition?

5 MR. TRESH: Do you have that definition
6 in writing, that he can look at? Because it's --

7 MR. GREEN: I actually do not. Do you
8 have it written? No, I do not have it in writing.

9 MR. TRESH: Okay.

10 MR. GREEN: I can break it down quickly
11 or however, if you -- if you need that. Or if you
12 need me to reread it, too.

13 THE WITNESS: You're reading it from?

14 MR. GREEN: It's just my outline. I'd
15 really rather not hand you my outline. Let me see
16 here. If I can fold it over a little bit.

17 MR. TRESH: And we're not trying to get
18 your outline.

19 MR. GREEN: No, no, no, no. I know
20 you're not. I know you're not. I probably would
21 have had it, but I was out of the office, as you
22 know.

23 THE WITNESS: That's good enough.

24 BY MR. GREEN:

25 Q. It's at the bottom.

1 A. That portion?

2 Q. Let me fold that under for you, too.

3 I've never had to do this in a deposition before.

4 That one right there.

5 A. Industrial facility. It misspells

6 kilowatt.

7 Q. That was my typing. I don't think that

8 is Duke's definition.

9 A. I was going to say, I'll have to go
10 back and look.

11 Q. It might have been, but I think that
12 was my typing.

13 A. Generally that is representative of
14 what takes place there.

15 Q. You say generally. Is there some --
16 how do you take issue with it?

17 A. Well, I would need to relook at it.

18 Q. Okay.

19 A. It talks about -- it does not emphasize
20 enough of the conversion portion of the operation.

21 Q. And when --

22 A. Basically. I would say that industrial
23 facility that has a production of kilowatt hours of
24 power as its primary product, that power is
25 produced by converting energy contained in such

1 material as oil, coal or nuclear. A plant that
2 converts mechanical energy to electrical energy.

3 Q. Okay. So you say it doesn't emphasize
4 the conversion part of --

5 A. Yeah.

6 Q. And the conversion part that you're
7 referring to is the mechanical energy that's
8 converted to electricity?

9 A. Actually, it's --

10 MR. TRESH: Objection as to form.
11 Answer.

12 THE WITNESS: It's -- it's -- what I'm
13 referring to is the potential energy that is
14 inherent in the material that's described there,
15 the oil, the coal, the nuclear, that is converted
16 into heat and then converted into dynamic, kinetic
17 energy and then converted into mechanical and
18 subsequently to electromagnetic energy. That is
19 the conversion that takes place.

20 BY MR. GREEN:

21 Q. Okay. So if -- okay. So the -- the
22 fuel that is used to turn the turbine and run the
23 generator has potential energy?

24 A. Has potential energy, that's right.

25 Q. And then that is consumed to run the

1 turbine?

2 A. The -- the potential energy is -- is
3 actually not consumed. The potential energy is
4 extracted in the form of heat.

5 Q. Uh-huh, okay.

6 A. Okay. The material is still there.

7 Q. Right. And then it turns into heat
8 energy?

9 A. Into heat, the heat boils water, turns
10 it into something that moves and which, in turn,
11 turns a turbine. And that is what I'm after; I'm
12 after mechanical energy. Because of the principle
13 that I need a magnetic field and I need a way to
14 change -- vary the magnetic field, like the cutting
15 process of the conductor on the magnetic field. So
16 it's converting one form of energy into finally one
17 that can be transmitted and delivered to customers.

18 Q. So the -- so the process is a series of
19 steps of converting energy from the fuel --

20 A. Yes.

21 Q. -- through the turbine, then through
22 running the generator and then generating
23 electricity; is that correct?

24 A. That's correct.

25 Q. Okay. And then is there a line

1 connected to the generator?

2 A. Yes.

3 Q. And then it is connected to the -- or
4 is it part of the transmission system?

5 A. The line is connected to a transformer.

6 Q. Okay.

7 A. And typically, in -- in the business,
8 the high side of the transformer is considered part
9 of the transmission system. So the divider between
10 -- the transformer is really the divider between
11 the generator and the transmission system.

12 Q. And is the transformer that you're
13 describing there, is it located in the same
14 physical structure as the generator?

15 A. Not in the same structure, no.

16 Q. It would be outside the generator?

17 A. It would be outside the generator.

18 Q. Is it in the same building as the
19 generator?

20 A. It's typically just outside of the
21 building.

22 Q. Okay. It may be hard for you to
23 describe. How large are the generators that we're
24 discussing here? I mean, you know, I can buy a
25 generator for my house that's not much bigger -- I

1 mean, it is --it's a lawnmower engine, essentially.
2 Obviously, we're talking about a generator that's
3 much larger than that.

4 MR. TRESH: Object as to form.

5 THE WITNESS: How large? Well,
6 naturally, it depends on how much power is being
7 generated. We have small plants and we have large
8 plants. And the size of the generator varies in
9 proportion to the size of the outlet. So, you
10 know, just to kind of elaborate, I will tell you
11 that a small size generator, would be the size of
12 this room.

13 BY MR. GREEN:

14 Q. Okay.

15 A. A middle size generator would be twice
16 this room. Our largest generator on the system,
17 which happens to be a nuclear plant, just the
18 generator portion, would be probably two, three
19 times -- three times the size of this room.

20 Q. Is it possible for you to represent
21 that in sort of a square footage, like how many
22 square feet the generator is?

23 A. Sure. I mean, this room is what --
24 let's measure it.

25 MR. TRESH: And I'm going to object as

1 to the form of that.

2 THE WITNESS: Fourteen by -- by ten.

3 About 150 -- a small generator would be about
4 150 square feet. And then you can do the math on
5 the others.

6 BY MR. GREEN:

7 Q. Sure. Okay. Now, why, if the
8 transformers step up the voltage, why do you need a
9 generator of differing sizes? In other words, if a
10 small generator -- if whatever size the generator
11 is and it produces electricity, if the transformer
12 can then step that up, why do you need different
13 size generators?

14 A. So we need generators with different
15 sizes because of the -- our need to supply the
16 demands of the load. The more load there is, the
17 more generators we need. And the measure of that
18 is power. The ability to do work, the more load
19 you have, you need a motive that can drive more
20 load. So that's why you need bigger generators,
21 more generators.

22 I think what you're confusing -- I
23 assume -- I'm presuming what you're confusing is
24 voltage with power. Higher voltage, you step it
25 up, does not mean more power.

1 Q. Okay.

2 A. In fact, it's the same amount of power
3 as before you stepped it up. So think of power as
4 a product of current and voltage; it's nothing more
5 than that. It has two components, current and
6 voltage. For the same amount of power, you can
7 vary the current and the voltage and you end up
8 with the same amount. You can have half as much
9 current and twice as much voltage, that's a fixed
10 amount of power, or you can have twice as much
11 current and half as much voltage, that's the same
12 amount of power.

13 Q. Okay. Yes. Okay. I -- okay. Okay.

14 A. So the purpose of a transformer is not
15 to generate power or increase power, it's to
16 manipulate a component of that electric field for
17 our purposes. And that is so I can get it to you
18 with the least amount of losses. Otherwise, if I
19 don't do that, we're going to lose most of that
20 power in heat. It converts.

21 Again, there's a process of energy
22 conversion into heat. And it's -- when it gets to
23 you, there's not enough motive left to drive
24 whatever you need.

25 Q. Okay. Yes. No, that makes -- okay,

1 okay. So the bigger generators generate a lot more
2 power?

3 A. Yes, generate a lot more power.

4 Q. It's not a matter of the same power
5 coming out of a small and a large generator?

6 A. Correct.

7 Q. Okay. And you mentioned the loss of
8 energy through heat, if the voltage is not stepped
9 up?

10 A. Uh-huh.

11 Q. Is that the concept of line loss that I
12 see in rate making proceedings and the like?

13 A. That is the concept of line loss. I
14 don't know if it's in what proceedings or not. But
15 that is the concept of line loss.

16 Q. Okay. And why does stepping up the
17 voltage, why does that reduce the line loss?

18 A. Okay. So remember we talked about you
19 represent power through two components, current and
20 voltage. We happen to know that high current means
21 -- what is current? Current is the flow of
22 electromagnetic field. The higher the current, the
23 more intense the electromagnetic field that's being
24 propagated on the wires. That electromagnetic
25 field interacts with the electrons that happens to

1 be in the wire. Those electrons are oscillated.
2 And when they oscillate, they collide with atoms
3 and that generates heat. So the higher the
4 intensity of the field, the higher the current, the
5 more line losses you have.

6 So, in order to deliver the same amount
7 of power to the other end of the line, what we do
8 is manipulate those two components. We choose to
9 raise the voltage to a significantly higher number,
10 which will, in turn, laws of physics, will force
11 the other component, current, to go significantly
12 lower. And therefore what's propagated through
13 that line has a very high potential, but does not
14 induce as much heat on the conductor.

15 So, on the other end of that line, we
16 need to reverse the -- that process. Because your
17 device does not operate at that high voltage. And
18 therefore we do the opposite, and then we have an
19 ample amount of current at a much reduced voltage
20 for you to use and excite your devices in order to
21 do work.

22 Q. And explain to me a little bit about
23 current. Current is the flow of the electricity;
24 is that correct?

25 A. Yeah.

1 Q. And to me, when I hear the word flow, I
2 think of something moving along like -- like the
3 waterfall at Great Wolf Lodge, with the water just
4 going down a -- a slide and it's moving from point
5 A to point B, does current flow in that same
6 context?

7 MR. TRESH: Objection as to form.

8 THE WITNESS: Electric field, the
9 field, propagates that way, that imaginary field --
10 BY MR. GREEN:

11 Q. Uh-huh.

12 A. -- propagates that way. But the
13 electron itself -- I am not creating an electron at
14 McGuire Nuclear Station and sending it to your
15 house. The electrons are already there. The
16 electrons are in your devices, on my wires. All
17 I'm doing is creating the ability to move them,
18 oscillate them; that is all --

19 Q. Uh-huh.

20 A. -- that electricity is, is the
21 oscillation of charge. It creates a field, and
22 that field has energy that you choose to convert
23 into some other way. You choose to run a motor,
24 run a fan, used for a variety of products that you
25 buy to use that energy.

1 Q. Do -- and you said you're not creating
2 electrons at McGuire Nuclear Station. Do those
3 electrons stay in the same -- do they stay in the
4 same place? I mean, do they move? I mean, I
5 understand they move. But do they move, like, from
6 McGuire to my home in --

7 A. No. They don't move from McGuire to
8 your home. But electrons do move and that's what
9 creates the field, the electric field.

10 Q. And then, if I understood you
11 correctly, that field then flows from McGuire down
12 the lines --

13 A. As long as there is --

14 Q. -- to my house?

15 A. -- connection to it. If there's no
16 connection, it's not going to flow.

17 Q. And by connection, you mean the
18 transmission and distribution system that --

19 A. I mean that and also --

20 MR. TRESH: Objection as to form.

21 THE WITNESS: I mean that and also mean
22 when you throw your light switch in the house.
23 Okay. You have connected the circuit. And now,
24 the mode of power that is available to you, that --
25 that my company is responsible for delivering,

1 becomes available to you and you do work with it.

2 BY MR. GREEN:

3 Q. Okay. Okay. I think -- I think I read
4 somewhere -- and I don't know if it was your
5 materials or not, it probably was not, that the
6 flow of current is measured -- is it the concept
7 amperes, amp?

8 A. Amp.

9 Q. Amp.

10 A. Amperes.

11 Q. And I -- most people say amps, and they
12 just shorten it. What -- explain amps to me. What
13 does that mean?

14 A. It's a unit of property -- a unit of
15 measurement I should say. It is, you know, if you
16 define what is a meter, someone set a standard that
17 says the length, this length, defines a meter and
18 we measure everything either by feet or meter. The
19 same thing applies with amps. A standard was set
20 that is what is the equivalent electric field that
21 is equivalent to a predetermined charge. And that
22 designation was given and that became the standard
23 used from there on.

24 Q. Okay. So -- but it -- and that -- if I
25 understand you correctly then, that is just the

1 term that has been set to standardize measuring how
2 fast a current is flowing; is that correct?

3 A. Not quite. Not how fast, the
4 intensity.

5 Q. The intensity.

6 A. Yeah, of a -- a current, of the
7 current, the electric current.

8 Q. Okay. So it measures intensity?

9 A. Yeah, this is all in the same speed.

10 Q. Okay. Now, the -- the electricity
11 that, again, just for -- the electricity that my
12 kids use when they cut on the Wii and play video
13 games, and the TV, the electricity that is consumed
14 by those devices is measured in watts; is that
15 correct?

16 MR. TRESH: Objection as to form.

17 THE WITNESS: Is measured -- what was
18 the question?

19 Q. In watts.

20 A. In watts?

21 Q. Watts, yeah, W-A-T-T-S.

22 A. Yes, that is correct.

23 Q. Okay. And then, I'm charged for
24 electricity using a meter attached to my house that
25 measures kilowatt hours; is that correct?

1 A. That is correct.

2 Q. So the meter measures the amount of
3 watts I'm using in my house per hour; is that
4 correct?

5 A. Yes.

6 Q. Would it be possible to measure the
7 electricity I use just by the total number of watts
8 that I use?

9 A. Total number of watt hours rather than
10 just watts.

11 Q. Okay.

12 A. So a watt is, again, a standard. When
13 you multiply an amp, one amp, which someone set a
14 standard of what an amp is, times one volt, and
15 somebody set a potential of this much is a volt,
16 the electrical engineer science determined that --
17 to name that watt.

18 Q. Okay.

19 A. Now, how much of that you are using is
20 a component of time. So I need to say, of this
21 much watts you have used it times so many hours.

22 Q. Explain to me why it requires the
23 concept of time. And the reason -- the reason I
24 ask that question is: It seems that my stereo --
25 excuse me, my kids' TV and my -- the Wii game, it

1 would consume, let's -- I don't know what the
2 wattage is, I have no idea, but it would consume
3 power at a different rate than, say, my washing
4 machine.

5 MR. TRESH: Objection as to form.

6 BY MR. GREEN:

7 Q. And so, if I ran a washing machine for
8 an hour, it would consume more electricity than the
9 Wii game would consume in that same period of time.

10 MR. TRESH: Objection as to form.

11 BY MR. GREEN:

12 Q. Is that -- and I'm just -- I'm saying
13 it seems that to me. So it -- and it would -- and
14 it would -- and it would seem that the washing
15 machine would require a larger set of energy,
16 without regard to the time that it runs --

17 MR. TRESH: Objection.

18 BY MR. GREEN:

19 Q. -- is that correct?

20 MR. TRESH: Objection as to form. Can
21 we go off the record for one second?

22 MR. GREEN: Sure.

23 (Off-the-record conference.)

24 BY MR. GREEN:

25 THE WITNESS: But in reality, it's a

1 standard. It could have been set in a different
2 way.

3 MR. TRESH: Are we back on the record?

4 MR. GREEN: Yeah, let's go back on the
5 record.

6 BY MR. GREEN:

7 Q. Okay. And so the standard -- and when
8 you say the standard, do you mean the watts
9 standard?

10 A. Well, the watt hour --

11 Q. The watt hour?

12 A. -- standard is a standard.

13 Q. Okay. And so what you're telling me,
14 it could have been set to use the amount of watts
15 that you consume?

16 A. I have difficulty with that because,
17 when I think of watts, I think of how big is this
18 generator. And that is a measure of the capability
19 of the generator, not -- not a measure of your
20 consumption of the -- whatever product you're
21 driving.

22 Q. Uh-huh.

23 A. The measure of that is associated with
24 the amount of time you have that turned on. I
25 shouldn't charge you for light if it's not on.

1 Q. Uh-huh.

2 A. The amount of time that you are
3 illuminating your room, is the amount of time that
4 I'm providing you that service. So I need to be
5 able to measure how long am I providing you that
6 service.

7 Q. So in your view -- so in your view, you
8 have to measure the amount of electricity that I
9 use in my home by reference to time?

10 MR. TRESH: Objection as to form.

11 THE WITNESS: Yes.

12 BY MR. GREEN:

13 Q. Okay. In -- did I -- did I understand
14 you earlier to say that you cannot see electricity?

15 A. You cannot see electricity.

16 Q. If an electric line, say an electric
17 distribution line, is severed, is there sometimes
18 an arc of electricity between the two lines?

19 A. Yes.

20 Q. Can you not see that arc of
21 electricity?

22 A. You can see the arc, but that's not
23 electricity.

24 Q. What is that you're seeing in that
25 context?

1 A. You're seeing the breakdown of the
2 medium in between the two conductors. And -- so a
3 good example of that is, if that line happens to
4 hit a tree and the tree catches on fire, is that
5 electricity, what you're seeing? No, you're seeing
6 fire. You're seeing the impact of the electricity
7 that went through that tree. But no one can argue
8 that is electricity.

9 So think about it in the same terms and
10 that is, just like the tree, there's a medium,
11 there are -- there are molecules and atoms in
12 between the line when it's severed -- when it
13 severs, and it happens to be filled by air
14 particles. The way air particles break down is a
15 very similar process; it heats and it basically
16 burns. And what we're seeing is the photons that
17 are emitted from that interaction. So that is not
18 electricity; that is air breaking down, just like
19 the tree burning down.

20 Q. And what about if that arc -- if I walk
21 up to that arc and reach my hand through there?

22 A. Uh-huh.

23 Q. Am I touching electricity?

24 A. Absolutely not. You're -- well, you're
25 touching electricity, yes, but you -- you cannot

1 feel electricity.

2 Q. How can I touch electricity but not
3 feel it?

4 A. A good example of that would be, have
5 you ever seen a bird standing on a power line?

6 Q. Yes.

7 A. So that bird is touching the wire where
8 the electric field is taking place, it's
9 propagating, yet the bird is not feeling anything.
10 In fact, if you suspend yourself or, you know, if I
11 suspend myself from that same wire, I'd be holding
12 on to the wire where electricity is flowing in the
13 form of electric field, but I would not be feeling
14 anything. So electricity, you cannot see it and
15 you cannot feel it.

16 Q. Okay. Then explain to me how someone
17 gets shocked from electricity?

18 A. So just like when you throw your switch
19 in the house, you have connected the circuit to
20 drive a device, to do work with a device, a fan, a
21 heater, whatever it is. When you touch electricity
22 and you connect the circuit, not just touch it, you
23 connect the circuit.

24 You, yourself, is a device. And
25 electricity, the energy contained in electricity,

1 will act on your body, and you will feel the impact
2 of that interaction. It's not electricity that
3 you're feeling; you're feeling the energy that has
4 an impact on you when you connect the circuit, just
5 like a device does.

6 That is what you're feeling. Had you
7 not connected the circuit, you would not be feeling
8 anything. You know, case in point, the bird or you
9 hanging from the pole itself.

10 Q. Okay. So I feel -- so do I understand
11 you correctly then, that no one ever feels
12 electricity?

13 A. No one ever feels electricity.

14 Q. They just feel the impact of that
15 electricity?

16 A. Yeah. So an example of that would be,
17 you plug a radio into a wall, you know electricity
18 is flowing through it, but you hear music. The
19 question would be: Are you hearing electricity? I
20 don't think anybody would argue that. You are
21 hearing the impact of electricity on that device.
22 And the same thing applies to when you connect a
23 circuit; you will feel the impact of electricity on
24 your body.

25 Q. Well, if -- if I complete the circuit,

1 let's say, as an example, what is electricity
2 impacting, that's making me feel the effects of
3 electricity?

4 A. Well, I'm not a doctor, so it would be
5 difficult for me to answer why your body feels the
6 way it does. I know that there are electric
7 circuits in your body. You know, that's how we
8 think, that's how we create motion. But I cannot
9 tell you why you feel it in the manner that you do,
10 as opposed to some other manner.

11 Q. Uh-huh. Well, I -- I -- I guess what
12 I'm trying to ask -- well, strike that. Strike
13 that.

14 Okay. All right. In your generating
15 facilities that you operate, that Duke operates,
16 you have safety requirements; is that correct?

17 A. Yes.

18 Q. I'm presuming you have fairly extensive
19 safety requirements in these facilities?

20 A. Yes.

21 Q. How do you -- how -- are there signs
22 up, warning employees about the dangers of
23 electricity?

24 A. Yes.

25 Q. Are those signs -- how are those signs

1 phrased? Are they phrased in the context, do not
2 touch electricity, beware of electricity? How is
3 that communicated to the employees?

4 A. I would tell you that electricity is
5 not the only safety concern that we have. In fact,
6 there are many other safety concerns that we are
7 probably more concerned about than electricity.
8 But in the -- in the -- in the case of electricity,
9 you know, you seem to be just asking about --

10 Q. That is correct, yes, sir.

11 A. The sign would say caution, energized
12 component.

13 Q. Okay. And in the generating
14 facilities, the, I guess, wires that come from the
15 generator and go to the transformer, they have an
16 insulation coating around them?

17 MR. TRESH: Objection as to form.

18 THE WITNESS: No.

19 BY MR. GREEN:

20 Q. Okay. Explain to me how -- explain to
21 me the structure of the wires that are coming from
22 the generator to the -- go from the -- to the
23 transformer?

24 A. You've probably heard of the term bus
25 bar. Maybe -- maybe not. It's -- it's not what

1 you think about as a wire. It's actually a piece
2 of metal, rigid piece of metal, that is -- that
3 connects the generator to very near the
4 transformer. And that is routed through what looks
5 like a pipe. And that pipe is to keep that
6 conductor from contacting and completing the
7 circuit inappropriately. So it has insulators
8 located at different places to keep the outer metal
9 of that -- what looks like to be a pipe, from
10 contacting the bus bar itself. And that's routed
11 all the way to a location that is very close to the
12 transformer.

13 Q. Uh-huh.

14 A. And then, there will be -- from there,
15 there will be a more traditional looking wire that
16 connects that to the transformer.

17 Q. We talked a little earlier about
18 storage electricity and you said it's not possible
19 to store electricity. Is the electric grid, does
20 it store electricity?

21 A. No.

22 Q. It is -- correct me if -- rephrase this
23 if I'm incorrect in this: Is it just an extended
24 system for the transmission, providing of the
25 transmission and distribution of energy?

1 A. Basically, that is it. It does perform
2 other functions. And that is, you know, we talked
3 about the grid also is where we ensure that the
4 voltage remains at an acceptable level, because
5 that's critical in managing line losses. It's
6 critical in making sure the system does not
7 overload itself. So there are other things that we
8 do in the, what you are calling the grid.

9 Q. Okay.

10 A. But the primary -- the primary core
11 function that it provides is to connect the
12 generating stations to the load.

13 Q. I've heard used, the concept, I think,
14 broadband by power line. Are you familiar with
15 that concept? And what I understand that to be is
16 running communications through power lines.

17 MR. TRESH: Objection as to form.

18 THE WITNESS: It's really not my area
19 of expertise.

20 BY MR. GREEN:

21 Q. Does Duke Energy use broadband by power
22 line?

23 A. You know, at one time, we did. I
24 really am not certain whether --

25 Q. Okay.

1 A. -- we do right now or not.

2 Q. And so you don't know right now whether
3 you do --

4 A. I do not know.

5 Q. And that was not really an area
6 committed to your --

7 A. No.

8 Q. Okay. This process that we've talked
9 about today, the process of generating electricity,
10 transmitting it and distributing it to the
11 customers, do you consider that manufacturing?

12 A. No.

13 Q. And why not?

14 A. Simply because manufacturer implies
15 you're making something. We don't make anything;
16 we convert. We're in the business of energy,
17 converting one form of energy to another and
18 delivering it to the end user.

19 Q. And so, if I understand you correctly,
20 the reason that you believe it is manufacturing is
21 that, in your view, Duke is not creating anything;
22 is that correct?

23 MR. TRESH: Objection --

24 THE WITNESS: Correct.

25 MR. TRESH: Objection as to the form of

1 the question.

2 THE WITNESS: Correct.

3 BY MR. GREEN:

4 Q. Okay. Why, from -- from your
5 standpoint of your responsibilities for Duke's
6 generation process, why does it make a difference
7 to your responsibilities and to Duke's operations
8 whether or not the process is manufacturing?

9 A. Why? Does it make a difference?

10 Q. Yes, sir.

11 MR. TRESH: Objection as to the form.

12 THE WITNESS: You know, the label you
13 put on it does not make a difference to how I
14 conduct my business. Maybe I misunderstood.

15 BY MR. GREEN:

16 Q. No, I think you understand it
17 correctly. That's what I -- that is exactly what I
18 was asking. How -- how does -- how does the
19 process being labeled make any difference to what
20 you do on a day-to-day basis?

21 A. It doesn't.

22 Q. Okay. And there wouldn't be any
23 changes in safety codes to what you do if it were
24 labeled one way versus -- labeled manufacturing or
25 not labeled manufacturing?

1 MR. TRESH: Objection as to the form.

2 THE WITNESS: Tell you the truth, I
3 have not thought about it, so I wouldn't think so.
4 But I would probably need to look into it.

5 BY MR. GREEN:

6 Q. Okay. And do you think it would make a
7 difference whether the process is called
8 manufacturing to the Public Service Commission of
9 South Carolina?

10 MR. TRESH: Objection as to form.

11 THE WITNESS: You know, actually, as I
12 think about it, there are a few provisions that I
13 am aware of where it may -- it might make a
14 difference, in fact. And I have always known that
15 we can do engineering -- certain engineering types
16 of work at a power plant without the need to be
17 designated as professional engineers. That's an
18 exception that power plants have that normal
19 industrial manufacturing facilities would not have.

20 There is likely other such provisions.
21 So without looking into it, I would really hesitate
22 to say that it would not make a difference. I
23 know, in that case, it would make a difference.

24 BY MR. GREEN:

25 Q. Okay.. Okay. And do you think it would

1 make a difference -- I think you were still
2 thinking about that earlier question. Do you think
3 it would make a difference to, say, the Public
4 Service Commission of South Carolina?

5 MR. TRESH: Objection as to form. I --
6 in terms -- can we go off the record for a second?

7 (Off-the-record conference.)

8 BY MR. GREEN:

9 Q. I think I asked you, in your view,
10 would it make a difference to the Public Service
11 Commission whether or not Duke is classified as a
12 manufacturing --

13 A. I really don't know.

14 Q. Okay. Have you -- through your
15 training and years of service, have you always been
16 of the view that the process by which Duke
17 generates and produces electricity is not
18 manufacturing?

19 A. Yes.

20 Q. And you've held that view -- I think
21 you started with Duke in 1981. You've held that
22 view since then?

23 A. Even before then.

24 Q. And could you explain -- could you
25 explain to me why -- strike that.

1 Can you explain to me the origin of
2 that view?

3 A. Well, the origin of that view comes
4 from my understanding of what energy is. Energy is
5 the ability to do work. And it cannot be created;
6 it cannot be destroyed. And on that basis, we
7 provide electric energy. We do not create
8 anything, we just change one form of energy into
9 another that is useful to the end user.

10 You know, a good example that I have,
11 that I -- you know, the image that I have in my
12 mind it's a -- you know, a conversion of energy is
13 a -- a farmer plowing his field chooses to use an
14 ox to pull a plow. That -- I don't think anybody
15 would argue that that ox is providing a service
16 rather than providing a product. Would you agree?
17 I would assume everyone would agree that this is a
18 -- a service.

19 Q. I'm going to let you answer the
20 questions today.

21 A. Sure. So what happens with the ox is
22 one form of energy is transformed into a different
23 form of energy. Each -- it eats the -- the food,
24 which is energy, one form of energy, it converts,
25 internally, that form of energy into mechanical

1 energy that can get work done.

2 That is as close as to the service that
3 we provide. We take a form of energy that is
4 potentially imbedded in oil, gas, coal or nuclear,
5 wind or sun and we convert it into a form of energy
6 that can perform work. And we charge you on the
7 basis of your enjoyment of that, just like a farmer
8 would charge on the basis of how much was plowed.
9 So that's where the time element comes in. It's a
10 service on the basis of the amount of time that you
11 enjoyed it.

12 Q. Okay. Was -- was the concept of
13 producing electricity as manufacturing, was that
14 ever a topic or a service? Was that ever a topic
15 of discussion at any of your classes in school?

16 A. No, I don't think so.

17 Q. Not that you recall?

18 A. Not that I recall.

19 Q. How do you talk about electricity on a
20 day-to-day basis, when you're talking to
21 subcontractors or contractors or employees, how do
22 you refer to electricity?

23 MR. TRESH: Objection as to form.

24 THE WITNESS: I refer to it as energy.

25 BY MR. GREEN:

1 Q. Have you always referred to it as
2 energy?

3 MR. TRESH: Objection as to form.

4 THE WITNESS: As far as I can remember.

5 BY MR. GREEN:

6 Q. What did you do to prepare for today's
7 deposition?

8 A. I -- I read the -- the expert testimony
9 of the professor this morning.

10 Q. Professor? Professor Polibar?

11 A. Yes, this morning. And when I was
12 asked if I would do this, I -- I guess I recall
13 referring to one of my earlier books from college
14 days, actually from my teaching days. I taught for
15 a brief period of time.

16 Q. Okay. What book was that?

17 A. You know, I -- you know, it's basics of
18 electric theories or theorems or something like
19 that.

20 Q. Do you recall who wrote the book?

21 A. Oh, no.

22 Q. But it was just a basic college --

23 A. Yeah.

24 Q. -- engineer textbook?

25 A. Yeah, it's an engineering textbook. I .

1 -- you know, I'm not going to tell you that I
2 studied -- I sat down and studied. I did refer to
3 it, but --

4 Q. No, I -- that's just what I'm trying to
5 understand. Okay.

6 A. I spoke to counsel, of course,
7 yesterday.

8 MR. GREEN: Okay. Okay. I think those
9 are all the questions I have for you today. Do you
10 have any questions there?

11 MR. TRESH: No questions. I think
12 we're done.

13 (The deposition was concluded at
14 11:57 a.m.)

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Dhiala M Jamil 1/17/2012

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1 SIGNATURE OF DEPONENT

2

3 I, the undersigned, DHIAA M. JAMIL, do
4 hereby certify that I have read the foregoing
5 deposition and find it to be a true and accurate
6 transcription of my testimony, with the following
7 corrections, if any:

8 PAGE LINE CHANGE REASON

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DHIAA M. JAMIL

Date

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CERTIFICATE OF REPORTER

I, Carolyn M. Beam, Notary Public
for the State of North Carolina at Large, do hereby
certify:

That the foregoing deposition was
taken before me on the date and at the time and
location stated on page 1 of this transcript; that
the deponent was duly sworn to testify to the
truth, the whole truth and nothing but the truth;
that the testimony of the deponent and all
objections made at the time of the examination were
recorded stenographically by me and were thereafter
transcribed; that the foregoing deposition as typed
is a true, accurate and complete record of the
testimony of the deponent and of all objections
made at the time of the examination to the best of
my ability.

I further certify that I am
neither related to nor counsel for any party to the
cause pending or interested in the events thereof.

Witness my hand, I have hereunto
affixed my official seal this 24th day of January,
2012, at Charlotte, Mecklenburg County, North
Carolina.

Carolyn M. Beam
Notary Public
My Commission expires
August 26, 2012

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Investors

Dhiaa M. Jamil

Group Executive, Chief Generation Officer and Chief Nuclear Officer



Dhiaa Jamil is a group executive, chief generation officer and chief nuclear officer for Duke Energy. He is responsible for the safe and efficient operation of all regulated generation across the company's nuclear, fossil and hydro fleets. He assumed the expanded role of chief generation officer in July 2009.

Previously, Jamil served as group executive and chief nuclear officer, with responsibility for the company's three nuclear stations – Catawba, McGuire and Oconee.

Jamil has 30 years of experience in the energy industry. He joined Duke Power in 1981 as a design engineer in the design engineering department. After a series of promotions, he was named electrical systems engineering supervisor of Oconee Nuclear Station in 1989 and electrical systems engineering manager in 1994. He was named maintenance superintendent of McGuire Nuclear Station in 1997; station manager in 1999; and site vice president of McGuire Nuclear Station in 2002. In that role, Jamil was responsible for all aspects of the safe and efficient operation of the nuclear site. In 2003, he was named site vice president of Catawba Nuclear Station. In 2006, Jamil was named senior vice president of nuclear support. He led the organization responsible for plant support, major projects and fuel management for Duke Energy's nuclear fleet.

<http://www.duke-energy.com/about-us/leaders/dhiaa-jamil.asp>



1/12/2012

In addition, he was responsible for regulatory support, nuclear oversight and safety analysis functions.

Jamil received a bachelor of science degree in electrical engineering from the University of North Carolina at Charlotte.

He is a registered professional engineer in North Carolina and South Carolina. He has completed the Institute of Nuclear Power Operations' (INPO) senior nuclear plant management course and received Duke Energy's technical nuclear certification. He has served as a senior member of the Institute of Electrical & Electronics Engineers (IEEE) and has completed a three-year assignment as a member of the Council of the National Academy for Nuclear Training. He is a former member of Dominion Energy Management Safety Review Advisory Committee, TVA Nuclear Safety Review Board and Pacific Gas & Electric Nuclear Safety Oversight Committee. He also served on the board of directors of the York County, S.C., Chamber of Commerce.

Jamil currently serves as chair of the Energy Production and Infrastructure Center at the University of North Carolina at Charlotte and is a board member of the UNC Charlotte Foundation. He serves as a trustee of The Duke Energy Foundation. He is also a member of the INPO Executive Advisory Group and the Nuclear Energy Institute's Nuclear Strategic Issues Advisory Committee Steering Group.

Jamil and his wife, Hope, have a daughter and two sons.

Duke Energy, one of the largest power companies in the United States, supplies and delivers electricity to approximately 4 million customers in the Carolinas and the Midwest. The company also distributes natural gas in Ohio and Kentucky. Its commercial power and international businesses operate diverse power generation assets in North America and Latin America, including a growing renewable energy portfolio. Headquartered in Charlotte, N.C., Duke

Energy is a Fortune 500 company traded on the New York Stock Exchange under the symbol DUK.

June 24, 2010

Our Perspective (/about-us/executive-viewpoints.asp)

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1 STATE OF SOUTH CAROLINA
2 ADMINISTRATIVE LAW COURT
3

4 DUKE ENERGY CORPORATION,
5 Petitioner(s),

6 vs. Case No: 10-ALJ-17-0270-CC

7 SOUTH CAROLINA DEPARTMENT OF REVENUE,
8 Respondent(s).
9

10 D E P O S I T I O N . (

11 WITNESS: RONALD W. URBAN

12 DATE: Wednesday, March 14, 2012

13 TIME: 10:30 a.m.

14 LOCATION: Willoughby & Hoefer, P.A.
15 930 Richland Street
Columbia, South Carolina

16 TAKEN BY: Attorneys for the Petitioner

17 REPORTED BY: SHERI L. BYERS
18 Registered Professional Reporter

19 - - - - -

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18
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20 HARRY A. HANCOCK, ESQ.
T. COOPER MONROE
21 J. ABRAHAM GUTTING, ESQ. (VIA TELEPHONE)

22
23
24 (INDEX AT REAR OF TRANSCRIPT)

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STIPULATION: It is stipulated among counsel that this deposition is being taken in accordance with the Rules of the Administrative Law Court, and that the deponent reserves the right to read and sign the deposition transcript.

- - - - -

RONALD W. URBAN, being first duly affirmed, testified as follows:

EXAMINATION

BY MR. TRESH:

Q. Good morning, Mr. Urban. My name is Eric Tresh. I'm a lawyer for Duke Energy with Sutherland, Asbill & Brennan.

Can you please state your name for the record.

A. It's Ronald Wayne Urban.

Q. Okay. Thank you.

Go through a couple of ground rules, if you don't mind. I'm going to ask you some questions. If at any time you don't understand those questions, please let me know. Ask me to rephrase the question, and I'll repeat it. Otherwise, I'm going to assume that you understood the question, and I'm going to expect you to answer.

1 time, let me know. I'll only ask that if there is a
2 question pending, that you answer the question before
3 we take a break.

4 Do you understand that?

5 A. Yes.

6 Q. Is there any reason that you are unable to
7 respond completely and truthfully to the questions I
8 ask you today?

9 A. None that I know of, no.

10 Q. Thank you. Okay.

11 Mr. Urban, did you do anything to prepare for
12 your deposition today?

13 A. Yes.

14 Q. Can you tell me what that is.

15 A. I reviewed some Department of Revenue
16 documents, particularly 95-6. That's a rev procedure.
17 And similar-type documents I looked at. I think I
18 looked at other documents that the attorneys gave me.

19 Q. Do you have those documents with you today?

20 A. I do not have those documents with me, but my
21 attorney probably has copies of them.

22 Q. Okay. And did you discuss the deposition --
23 today's deposition with anyone?

24 A. Yes.

25 Q. Who did you discuss it with?

1 A. The attorneys.

2 Q. Anybody else?

3 A. I did not discuss the deposition with anyone.

4 Q. Okay. Did you discuss any other depositions
5 that took place in this case with anybody?

6 A. I did not discuss any other depositions with
7 anybody. I'm aware that other depositions were taken,
8 though.

9 Q. Have you discussed this case with anybody
10 other than your attorneys?

11 A. Yes.

12 Q. Who?

13 A. I talked to three people. I called Ray
14 Stevens.

15 Q. Who is Ray Stevens?

16 A. Ray Stevens was for the years 1980 through
17 1995, he was with the Attorney General's Office
18 representing the Tax Commission. Then he left that and
19 became administrative law judge for ten years. Then he
20 came back as Department of Revenue director, and now
21 he's in private practice.

22 Q. What did you and Mr. Stevens talk about?

23 A. It's going to be the same as to the other
24 two, too. If you would like me just go through and say
25 who they are, then I can tell you the question I asked

1 all three of them. If you want to do it that way.

2 Q. That would be fine.

3 A. The second one I talked to is Harry Cooper.
4 Harry Cooper was also with the Attorney General's
5 Office during those tax years, '80 through '95. Not
6 the whole time. He left the Attorney General's Office
7 actually to work for the Tax Commission during that
8 time. He is still with what is now the Department of
9 Revenue. He's the deputy director.

10 And I talked to Sally Major. At that time,
11 Sally had also spent time with the Attorney General's
12 Office representing the Tax Commission between the time
13 period '84 -- or excuse me, '85 -- excuse me, '80
14 through '95. She was there for a while, not the whole
15 time.

16 And I asked those people if they
17 recollected -- or if they could verify, I guess is the
18 better word, that my memory of what the Department or
19 the Tax Commission's application of 12-47-440 was.

20 Q. That was the only question you asked those
21 three people?

22 A. That's the only question I asked them.

23 Q. Okay. Can you please describe your
24 educational background, please.

25 A. Yes. I graduated from a small school called

1 Mankato State College in 1971. After that I went into
2 the military, the Army. Got out of the military in
3 1976. When I got out of the military in '76, I went to
4 law school here at University of South Carolina..

5 Q. Okay. Do you hold any professional licenses?

6 A. Just a J.D.

7 Q. Okay. After you got out of law school, can
8 you summarize your employment history for me, please?

9 A. Yes, I can. After I graduated from law
10 school, I spent one year in Anderson, South Carolina,
11 and practiced with a person named George Duckworth.
12 Then at that time after one year, I had an opportunity
13 to come back to Columbia and join the Attorney
14 General's Office representing what was then the South
15 Carolina Tax Commission. I represented the Tax
16 Commission until 1995.

17 In 1995, the Tax Commission became the
18 Department of Revenue and became a cabinet agency. And
19 at that time, the attorneys that were with the Attorney
20 General's Office representing the Tax Commission became
21 Department of Revenue employees. And the Department of
22 Revenue created a general counsel's office, and I
23 worked in the general counsel's office then until I
24 retired in April of -- April 1st of 2010.

25 Q. So you were an employee of the South Carolina

1 Department of Revenue from when until when?

2 A. From '95 until 2010.

3 Q. And prior to that, you were representing the
4 South Carolina Department of Revenue as a lawyer for
5 the Attorney General's Office?

6 A. Representing South Carolina Tax Commission.

7 Q. Which was a predecessor to the South Carolina
8 Department of Revenue?

9 A. Correct.

10 Q. Okay. In your role from 1995 forward as a
11 lawyer for the South Carolina Department of Revenue,
12 did you oversee employees?

13 A. Yes, I did.

14 Q. Approximately how many?

15 A. It varied. In 1995, I became what's called
16 the chief counsel for revenue litigation. And I had
17 three lawyers, to the best of my recollection, working
18 for me at that time. And staff support people, which
19 is basically legal secretaries, probably another four
20 people. By the time I left, I was general counsel for
21 litigation, and I probably had 12 attorneys, one CPA,
22 and probably six staff support people.

23 Q. Okay. And who did you report to while you
24 were at the South Carolina Department of Revenue?

25 A. Initially, I reported to Harry Cooper because

1 Harry Cooper was the general counsel, and I was chief
2 counsel.

3 Q. Okay.

4 A. And that stayed that way for I don't know how
5 many years, but several years. And then I reported to
6 Rick Handel for about six, seven months. Maybe longer
7 than that, maybe 12 months. And then I reported to
8 Nick Sykes, who was the general counsel for litigation.
9 And then when Nick retired six months before I did, I
10 was the -- I reported to Harry Cooper at that time, who
11 was then the deputy director.

12 Q. Once again.

13 A. He was the deputy director then.

14 Q. When did you retire?

15 A. I retired April 1st, 2010.

16 Q. Okay. So are you aware that during the years
17 1978 through 2001, Duke Energy -- 1978 -- in the years
18 leading up to this case, that Duke Energy was under
19 audit by the South Carolina Department of Revenue for
20 state income taxes?

21 A. I'm aware of that.

22 Q. Okay. And were you involved in that audit?

23 A. No.

24 Q. At any time after the audit was completed,
25 did you become involved in the discussions with respect

1 to Duke Energy or any of its South Carolina tax
2 liability?

3 A. Are you talking with regard to the issue
4 that's before -- that's being litigated now?

5 Q. Yes.

6 A. Only one meeting, and that took place about a
7 week before I retired. And I was there because
8 whoever -- I can't recall who it was, whoever at DOR
9 was handling Duke's refund claim was having a meeting
10 with the Duke lawyers, and they asked that some of the
11 lawyers from the litigation section just sit in on the
12 meeting. So I sat in on that meeting.

13 Like I said, I can't give you the exact date,
14 but I retired very shortly thereafter. And it's the
15 first time I became really aware of the issue that's
16 now the subject of this litigation.

17 Q. Okay. And so prior to this meeting in 2010,
18 you really weren't aware and did not have any
19 involvement in the issue that is -- in the case that's
20 at issue in this litigation, Duke Energy?

21 A. That's correct. I was not aware of Duke's
22 claim for a refund.

23 Q. Okay. Was anybody who you supervised
24 directly involved in Duke's claim for a refund that is
25 the basis of this case?

1 A. They were, but I did not know it at the time,
2 and who that person was a temporary. And that would
3 have been Jan Urban, who you interviewed -- or I think
4 you took her deposition.

5 Q. Your wife?

6 A. Yeah, that's correct. She -- before she
7 retired and came back as a temp, she was the manager of
8 the appeal section, so she would have been involved in
9 Duke, I'm sure. I was not aware she was involved in
10 Duke until that week -- until it came to my attention
11 the week before -- you know, at that meeting I found
12 out, well, this is something that's been at the
13 Department for a while. So Jan was probably involved
14 in it.

15 Q. How long did Jan report to you for?

16 A. Probably -- I can't give exact, but maybe
17 four years. I'm not sure. Probably four years.

18 Q. Do you remember approximately the dates?

19 A. No, I don't. Because it was around -- around
20 2005, 2006 they merged all the litigation sections
21 because you had a regulatory litigation section that
22 ADL matters -- I'll call it beverage licensing -- that
23 I wasn't involved in. But they took that section,
24 merged it with my section. And that was probably in
25 2006, I think.

1 And I think Jan retired about that time. And
2 she wanted to work as a temp, not a whole lot of hours
3 a week, so they had her work for me. And basically
4 what I would do, if we had a complicated tax issue, if
5 I assigned to one of my attorneys, I'd assign Jan as
6 kind of the technical assistant to that attorney to
7 help, you know, understand some of the technical stuff
8 with regard to accounting.

9 Q. With what you understand about this case,
10 would you consider this case a complicated tax matter?

11 A. I would think so. I do not know the
12 merits -- or not the merits, but the substantive issue
13 because I haven't been involved in it. I really
14 haven't looked at anything regarding the substantive
15 issue, but I would imagine it's complicated.

16 Q. And so given that you were senior lawyer,
17 chief counsel for litigation, et cetera, so would you
18 have -- had you assigned an attorney to this case?

19 A. No, because the case -- we did not have the
20 case yet in my section. It was still with the -- when
21 I left, we still did not have the case. It was still
22 with whoever was handling the claim for refund at the
23 DOR level. It had not yet made it to my --

24 Q. But you were a lawyer at the DOR?

25 A. I am, but we did not get involved in cases

1 until they came -- we did not get involved in a case
2 until the file was handed off to us. The file had not
3 been handed off to us. Once when they had an issue on
4 occasion, they wanted us to sit in on a meeting, we did
5 not always do it, but we did sit in on the Duke meeting
6 that occurred.

7 Q. So is it correct to say that counsel's
8 office, which you supervised in the South Carolina
9 Department of Revenue, did not get involved in this
10 case until 2010, around the time you retired?

11 A. It would have been shortly after I retired, I
12 imagine. We did not yet have the file when I retired.
13 So it would have been sometime after I retired that the
14 file was handed off to the litigation section, and so
15 it would have been after that. You're correct.

16 Q. Except for Jan Urban's involvement, who
17 reported to you, you had directed her to go ahead and
18 get involved in the case?

19 A. No, I didn't.

20 Q. No?

21 A. No.

22 Q. Okay.

23 A. When she was working for me, she didn't do
24 any work on Duke. The only reason I assume that she
25 knew something about the Duke case, because she was

1 involved with Duke, I'm sure, back, you know, prior to
2 coming to work for me. I don't know that for a fact,
3 but she was in appeals. And if Duke had an appeal out
4 there wanting a claim for refund, it would have been in
5 her section or somewhere floating around the Department
6 of Revenue. I think she would have been aware of it.

7 Q. Okay.

8 A. But she never talked to me about it.

9 (PETITIONER'S EXH. 1, South Carolina Code
10 Ann. Section 12-54-85, was marked for identification.)
11 BY MR. TRESH:

12 Q. What I've handed you, we're going to mark
13 Exhibit A. It's a copy of south Carolina Code Section
14 12-54-85(A) and South Carolina Code annotated
15 12-54-85(F).

16 Have you seen these statutes before?

17 A. This is a 2011 -- if there's been an
18 amendment since I retired, I would not have seen this
19 particular statute. I just don't know if there's been
20 an amendment, but I have seen 12-54-85 before.

21 Q. To the best of your recollection starting
22 with 12-54-85(A) --

23 A. Okay.

24 Q. -- can you tell me what this statute does,
25 what's the effect of this statute?

1 A. This states when the Department of Revenue
2 can assess the tax and then it is what subsection A
3 says, and then B gives the exceptions to that.

4 Q. Okay. And for the purposes of assessing the
5 tax, is the statute of limitations in Section A three
6 years from the date the return or document was filed or
7 due to be filed, whichever is later?

8 A. Yes.

9 Q. Okay. And now turn to, if you don't mind,
10 please turn to Section F. And if you take a look at
11 Section (F)(1), what is the effect of Section (F)(1)?

12 A. That sets forth the time limitations under
13 which a claim for refund can be submitted.

14 Q. And it provides with the extension for
15 assessing taxes must be consented to in writing; is
16 that correct? Section F?

17 A. Assessment must be --

18 Q. Extension of time for assessing taxes must be
19 consented to in writing.

20 MR. GREEN: Can you point to where you're
21 talking about?

22 THE WITNESS: Yeah.

23 BY MR. TRESH:

24 Q. Section F, that would be -- I need to find it
25 myself.

1 Would you need something in writing to assess
2 taxes? In other words, an agreement in writing to
3 assess any taxes after the expiration of the statute of
4 limitations?

5 A. I think what the statute says is before the
6 time period expires in which to assess for 36 months,
7 you can get an extension in writing for the taxpayer
8 for additional time.

9 Q. Is it required that it be in writing?

10 A. It used to be. I don't know if it still is.

11 Q. It used to be?

12 A. Yeah.

13 Q. Okay. So during the time frame that you were
14 there, it was required that there have to be a written
15 agreement between the tax --

16 A. Wait, no.

17 Q. Okay.

18 A. It's not a written agreement. We're talking
19 about with the taxpayer.

20 Q. Right.

21 A. The taxpayer can agree to extend the time,
22 but he must -- or she must do it in writing before the
23 expiration of the 36 months.

24 Q. The taxpayer can agree to an extension of
25 time. Agree with whom?

1 A. The Department of Revenue. It's not an
2 agreement with it, it's agreeing to extend it.

3 Q. But who is that agreement with?

4 A. It's with the Department of Revenue.

5 Q. So the taxpayer and the Department of Revenue
6 would have an agreement, and that agreement would
7 permit the Department of Revenue to assess taxes beyond
8 the three-year statute of limitations?

9 A. Uh-huh.

10 Q. Okay. And --

11 A. You're referring to 4 down there. C4 is
12 where you're referring to.

13 Q. Well, the statute and the policy that the
14 Department followed during the time that you were
15 there?

16 A. No.

17 Q. No?

18 A. I was there a long time. I was there from
19 '80 to -- I didn't mean to interrupt you. Go ahead,
20 I'm sorry.

21 Q. So I think you were saying that there would
22 be two different policies in effect that the Department
23 followed with respect to assessing taxes?

24 A. No. There would be a -- it's not a policy,
25 it's based on statute.

1 Q. Okay.

2 A. And they would assess the tax according to
3 the statute, not according to policy.

4 Q. Okay. And so a moment ago you said that they
5 could assess taxes -- the Department of Revenue could
6 assess taxes beyond the three-year statute of
7 limitations provided there was an agreement between the
8 taxpayer and the Department of Revenue; is that
9 correct?

10 A. Let me just read what the statute says
11 because that's what I agreed to.

12 Q. Sure.

13 A. And this is for 2011. I'm assume it was for
14 tax years before then, maybe it wasn't. It simply
15 says, "The person liable for tax consents in writing
16 before the expiration of the time prescribed in this
17 section for assessing taxes due to the assessment of
18 the taxes after the time period prescribed by this
19 section."

20 And I do agree that that's how they did it in
21 2011 going forward. And if the statute said the same
22 thing for prior years, that's how it would have been
23 for those prior years.

24 Q. To effectuate the statute, what would a
25 taxpayer typically do? Would the taxpayer sign

1 something? Sign something in writing?

2 A. It wouldn't have to be any particular thing,
3 but it would have to be in writing and it would have to
4 be before the time period expired.

5 Q. So taxpayer -- and would the Department of
6 Revenue typically sign that same document?

7 A. There would be no reason for the Department
8 to sign that same document. They may, but that's not
9 necessary according to the statute.

10 Q. Okay. And if -- would it be possible under
11 any circumstances for a taxpayer to file the refund
12 claim beyond the statute of limitations, beyond the
13 three-year statute of limitations set forth in that?

14 MR. GREEN: Objection as to form.

15 THE WITNESS: The statute talks in there I
16 think somewhere where they can if there's an IRS audit,
17 and they're entitled to a refund based on the IRS
18 audit.

19 BY MR. TRESH:

20 Q. Would there be any other way that the
21 taxpayer could file a refund claim beyond the
22 three-year statute of limitations?

23 A. Not under this statute.

24 Q. Under any statute that you're aware of?

25 A. 12-60-40 for certain tax years after that

1 statute was enacted allowed the Department to extend
2 the time period for refund claims. And I don't have
3 that in front of me.

4 Q. I understand.

5 A. That language is something to that effect.

6 MR. TRESH: Let's look at look at 12-60-40.

7 (PETITIONER'S EXH. 2, South Carolina Code
8 Ann. Section 12-60-40, was marked for identification.)
9 BY MR. TRESH:

10 Q. Okay. Let's 12-60-40. So under 12-60-40,
11 this section deals with a extension of time for the
12 statute of limitations. Can you describe your
13 understanding of what 12-60 -- the effect of 12-60-40?

14 A. It seems pretty clear what it does. It gives
15 the Department of Revenue the authority to extend the
16 time limits provided for refunds as long as they're
17 done timely because it uses the word "extensions." And
18 they would have been in effect for the years that
19 12-60-40 was applicable.

20 And this is for 2011, I know that statute has
21 changed over the years, the language. But the language
22 is somewhat the same, I think, for each year that it
23 was enacted.

24 Q. Okay. And you worked for the Department of
25 Revenue, you said earlier, prior to 1995, correct?

1 A. That's correct. Well, no, that's not
2 correct. I worked for the Attorney General. I
3 represented the Tax Commission prior to '95.

4 Q. Okay. And to the best of your knowledge,
5 did -- prior to 1995, did what was then -- I guess it
6 was the South Carolina Tax Commission or was it the
7 Department of Revenue at that point?

8 A. Tax Commission.

9 Q. Would the South Carolina Tax Commission have
10 entered into waivers that would have permitted a
11 taxpayer to file a refund claim beyond -- or beyond the
12 three-year statute of limitations?

13 A. Entered into agreements for the taxpayer to
14 do --

15 Q. Allowing the taxpayer to file the refund
16 claim?

17 A. No.

18 Q. Never?

19 A. The Tax Commission would not allow it.

20 Q. To your knowledge, never?

21 A. Never.

22 MR. TRESH: Okay.

23 (PETITIONER'S EXH. 3, Consent to Extend the
24 Time to Assess Tax, was marked for identification.)

25 THE WITNESS: Okay.

1 BY MR. TRESH:

2 Q. I've handed you a copy of what is marked
3 Exhibit 3.

4 A. Can I interrupt something here? This isn't a
5 full copy. There's parts of this cut off.

6 Q. Which parts?

7 A. Could I see?

8 Q. Sure.

9 A. It's not this one. I think -- do you have
10 the originals here?

11 MS. TODOROVA: We don't have originals, no.

12 BY MR. TRESH:

13 Q. What part is cut off?

14 A. It probably doesn't matter because you've got
15 some of the stuff on the bottom here. It would be the
16 same thing at the top.

17 Q. Okay.

18 A. Yes.

19 Q. You've got the same thing I've got here.

20 A. Yeah, I know.

21 Q. Okay. Well, so let's start with what we've
22 got here, and we'll talk about what may be missing in
23 your opinion.

24 A. Okay.

25 Q. So what I've handed you, this exhibit, it's

1 form FS-43. It's from November of 1985. Would you
2 agree with that? On the bottom right-hand corner.

3 A. Mine says '93.

4 Q. Bottom right-hand corner.

5 A. Oh, down here.

6 Q. It's a notation that says 11/85?

7 A. Correct.

8 Q. Okay. And this was executed by both Duke
9 Power Company and somebody on behalf of the
10 South Carolina Tax Commission; is that correct?

11 A. Somebody on behalf of Field Service Division,
12 that's correct.

13 Q. Well, up above does it say South Carolina --
14 it says, "South Carolina Tax Commission by," and then
15 it has a name, correct, or a signature?

16 A. Yes.

17 Q. And the title is Field Services Division, but
18 it would have been -- does this not denote that
19 somebody was signing on behalf of the South Carolina
20 Tax Commission?

21 A. Randy Wilson allegedly signed on behalf of
22 the Tax Commission.

23 Q. Okay. So it's not somebody signed on behalf
24 of Field Services Division, it's somebody signed on
25 behalf of the South Carolina Tax Commission?

1 A. Allegedly. I'm not agreeing and I won't
2 agree that he is signing on behalf and representing
3 that's the Tax Commission's position.

4 Q. Do you have any reason to believe that Marvin
5 Davant, who signed this underneath where it says
6 South Carolina Tax Commission, was not signing on
7 behalf of the South Carolina Tax Commission?

8 A. Yes, because I don't have any -- I don't have
9 any belief that he was acting on behalf of the Tax
10 Commission when he did this.

11 Q. Fair enough. Okay.

12 I guess you would say the same thing for Duke
13 Power Company; is that correct?

14 A. No. I don't know anything about Duke Power
15 Company.

16 Q. Okay.

17 A. If that individual had the authority or not.

18 Q. Okay. And would you agree that both of those
19 signatures are dated -- the first one for Duke Power
20 Company is dated 11-16-93?

21 A. Correct.

22 Q. And the signature for the South Carolina Tax
23 Commission is dated 10-19-93?

24 A. Correct.

25 Q. Okay. And this form, FS-43, this deals with

1 tax periods ended December 31st, 1983/'84;
2 December 31st, 1984/'85; December 31st, '85/'86;
3 December 31st, '86/'87; December 31st, '87/'88;
4 December 31st, '88/'89; and December 31st, '89/'90; is
5 that correct?

6 A. That's correct.

7 Q. And it says that, May be assessed any time on
8 or before. Tax may be assessed. Corporate income tax
9 or license fee may be assessed any time on or before
10 December 31st, 1994.

11 Is that correct?

12 A. That's correct.

13 Q. And then underneath that, this form continues
14 to say, "This agreement extends the time for mailing
15 the notice of assessment or refund of the above tax
16 pursuant to the provisions of 12-54-80 of the 1976
17 South Carolina Code of Laws as amended; is that
18 correct?

19 A. That's what the language states.

20 Q. And a moment ago you had said that there were
21 no circumstances prior to 1995 that the Tax Commission
22 could give a refund beyond the three-year statute of
23 limitations.

24 What does the word "refund" in this waiver
25 mean then?

1 A. This refund means the Division is of the
2 opinion that they can extend or waive the time for a
3 refund.

4 Q. So the --

5 A. The Field Service Division. Marvin Davant's
6 division.

7 Q. Well, let's take a step back. Let's assume
8 that this -- that Marvin Davant never signed, that this
9 FS-43 was just a blank form.

10 A. It's a field service form. That's what the
11 FS stands for.

12 Q. Is that -- okay. What is Field Services?

13 A. That's Marvin Davant's department. They are
14 the entity that audits, does field audits. But it is
15 not a Tax Commission form. It says Tax Commission at
16 the top, but that's not what it is.

17 Q. If you can answer the questions that I ask.

18 A. I'm sorry.

19 Q. Okay. So the Field Services Division, is
20 that a division -- what is that within the -- what was
21 that within the South Carolina Tax Commission?

22 MR. GREEN: Objection as to form.

23 THE WITNESS: It's an operating division
24 within the Tax Commission.

25 BY MR. TRESH:

1 Q. Operating division. What is an operating
2 division?

3 A. It's an operating division, you would have
4 had field service, office service, probably property
5 tax division. They're the ones that are actually
6 operating doing things, probably with the public. And
7 then you maybe had some support divisions such as your
8 Human Resources Division.

9 Q. And if the Field Services Division wanted to
10 go ahead and make policy or create a form, would that
11 have to be approved by anybody?

12 A. It would supposedly have to be approved.
13 Whether this form was approved, I do not know.

14 Q. That's not what I asked.

15 Would the Field Services Division, as a
16 matter of policy, while you were general counsel there,
17 would it have had to have -- would it have been able to
18 put a form, issue a form or put together a form without
19 approval by somebody?

20 MR. GREEN: Objection as to form.

21 THE WITNESS: When I -- prior to 19 -- prior
22 to 1995, I don't know. After 1995, they would have
23 been required probably. But not before.

24 BY MR. TRESH:

25 Q. So they would have been required to get

1 approval on any sort of form?

2 A. Probably after 1995. But that's not saying
3 they always did. I'm saying what they should have
4 done.

5 Q. I understand. But as a matter of policy,
6 while you were there after 1995, they would have had to
7 get approval?

8 A. They should have gotten approval, yes.

9 Q. Who would they have --

10 A. They would have to go through probably the
11 policy division. It would be circulated through them,
12 I would think. There was actually a form division that
13 created the Department of Revenue forms. And form
14 would have been probably issued through the form
15 division, the form folks.

16 Q. To your knowledge, did that process, the
17 going through the policy division or going through the
18 form division that you say was in place in 1995 when
19 you were there, would you have any reason to believe
20 that that policy was different prior to 1995?

21 A. Don't know.

22 MR. GREEN: Objection as to form.

23 THE WITNESS: I don't know.

24 BY MR. TRESH:

25 Q. Okay. Well, if we can go back a few moments

1 ago, you said that this form that we're looking at was
2 issued by the Field Services Division. This was
3 issued, we have all agreed, prior to 1995.

4 MR. GREEN: Objection as to form.

5 BY MR. TRESH:

6 Q. How would you know that this form was issued
7 by Field Services and not the South Carolina Tax
8 Commission?

9 A. Because it stands for FS there, and FS stands
10 for Field Servicing.

11 Q. Do you have any reason to believe that this
12 form was not approved by the South Carolina Tax
13 Commission?

14 A. It would not say Field Services there
15 probably if it was approved, is what I speculate.

16 Q. So if a form uses "FS," that means that it
17 wasn't approved?

18 A. That's correct.

19 Q. Okay. Why would the Field Services
20 Division -- so you testified that prior to 1995, there
21 was no way that you could -- that a taxpayer could have
22 gotten a refund beyond the three-year statute of
23 limitations, correct?

24 A. That's correct.

25 Q. Why would the Field Services Division issue a

1 form saying the taxpayer could have gotten a refund?

2 A. The Field Service Division sometimes probably
3 did things that they weren't supposed to do. And the
4 operating divisions on occasion did do things
5 unbeknownst to the policymakers.

6 Q. So it would have been common for somebody in
7 the Field Services Division to sign on behalf of the
8 South Carolina Tax Commission when they did not have
9 authority?

10 A. I didn't say it was common. I said it
11 happened.

12 Q. All right. Okay. If you could turn to the
13 next page. You see a form SF-43. Okay. Field
14 Services form. But this one is dated and signed by
15 both the taxpayer, Duke Power Company, 6-3-96, and by
16 Marvin Davant on behalf of the South Carolina Tax
17 Commission, dated May 30th, 1996; is that correct?

18 A. That's correct.

19 Q. Okay. And this form has that same language
20 that we looked at on the prior form about taxpayer
21 being entitled to refunds; is that correct?

22 A. That's correct.

23 Q. And so this form was issued after 1995,
24 right? Or excuse me, this form was signed after 1995?

25 A. That's correct.

1 Q. Okay. And so is it -- and this form would
2 allow a refund, correct, by the taxpayer?

3 A. Allegedly it would allow a refund according
4 to Marvin Davant.

5 Q. Okay. Again, who signed on behalf of the
6 South Carolina Tax Commission?

7 A. That way he signed it, I don't know if he had
8 it. There was no Tax Commission in existence, first of
9 all, in 1996. And so I don't know why they were using
10 this form to begin with since there was no Tax
11 Commission. So Marvin signed it. You would have to
12 ask Marvin who he was signing it for.

13 Q. Okay. Is it your position that Marvin
14 Davant, who signed both of these forms, signed them
15 without the knowledge of his superiors within the
16 South Carolina Tax Commission?

17 A. Yes.

18 Q. Okay. And that this form -- is it your
19 testimony that this form FS-43 was issued to taxpayers
20 without the knowledge of others within the
21 South Carolina Tax Commission, that Marvin Davant was
22 acting in a rogue manner, and nobody knew this was
23 going on?

24 A. When you say "others," who do you mean?

25 Q. His bosses.

1 A. The commissioners, yes. I'm not saying he
2 operated in a rogue manner, but I'm saying he signed
3 this without the knowledge of the commissioners.

4 Q. Harry Cooper had no idea --

5 A. Correct.

6 Q. -- that these forms were being issued?

7 A. Correct.

8 Q. Did Marvin Davant ever go through any
9 disciplinary procedures about issuing these forms, to
10 your knowledge?

11 A. Not to my knowledge.

12 Q. Okay. Did anybody in South Carolina
13 Department of Revenue or the South Carolina Tax
14 Commission, to your knowledge, ever tell Marvin Davant
15 that he did not have authority to sign these forms?

16 A. I don't know.

17 Q. While you were at the South Carolina
18 Department of Revenue through 2010, you said you were
19 called in to a meeting about this case, correct?

20 A. That's correct.

21 Q. And was the issue of these waivers discussed
22 in that meeting?

23 A. Yes.

24 Q. Why wasn't Marvin Davant disciplined?

25 A. Marvin was gone. He's retired.

1 Q. Okay.

2 A. I think your statement says he left in 2000.

3 Q. I'm not sure when he left.

4 A. I don't know. It's whatever your statement
5 said.

6 Q. All right. I didn't make a statement
7 regarding when Marvin Davant left.

8 Do you know Randy Wilson?

9 A. I know Randy Wilson.

10 Q. What year was Randy employed by the
11 Department up until?

12 A. I don't know when Randy Wilson was employed.
13 I don't even know -- I don't think Randy is still
14 working. Randy was sick a lot, and so he was on
15 extended leave of absences. And so I don't know
16 Randy's work years.

17 Q. Okay. And so let's turn over to the next
18 page now, if you don't mind. And so here we've got
19 another waiver form and this says, "State of
20 South Carolina Department of Revenue and Taxation Field
21 Services Division Consent to Extend the Time to Assess
22 Tax," correct?

23 A. Correct.

24 Q. And this is signed by somebody on behalf of
25 Duke Energy on June 19, 1998?

1 A. That's correct.

2 Q. And this is signed by Marvin Davant on behalf
3 of the South Carolina Department of Revenue and
4 Taxation, and it's dated June 15, 1998, correct?

5 A. Correct.

6 Q. Okay. And did Marvin Davant have the
7 authority to sign this form on behalf of the
8 South Carolina Department of Revenue?

9 A. He had the authority to sign it. I can't
10 tell you if the form is correct, and if it's timely
11 executed as to those tax years. You know, I can look
12 at it and tell you that, but that's not what you're
13 asking. Because they had authority at that time
14 because 12-60-40 had been passed in '95, and that at
15 that time you could grant an extension. Even though
16 the -- once again, this form has the wrong statute
17 cited on it, 12-54-80. That statute didn't exist at
18 that time.

19 Q. So it gave -- in your view, what gave Marvin
20 Davant the authority to sign on behalf of the
21 South Carolina Department of Revenue and Taxation was
22 that this was executed after 1995?

23 A. That's correct.

24 Q. Okay. Let's turn back to the prior form for
25 a moment. And this is the form that was executed by

1 Marvin Davant and Duke Energy, and these forms are
2 dated June 3rd, 1996, and May 30, 1996.

3 A. Yes.

4 Q. Would Marvin Davant have had the authority to
5 sign it?

6 A. He would have had the authority in '96. I
7 can't tell you if it would be applicable to those tax
8 years.

9 Q. That's not what I --

10 A. Okay. But I just want to make sure you're
11 not trying to say I'm agreeing to something I'm not.
12 He had the authority in '96.

13 Q. My question is --

14 A. Okay.

15 Q. That's not what you testified to a moment
16 ago.

17 A. I know, and I was incorrect because I didn't
18 look at the date careful enough. He would have had --

19 Q. Marvin Davant would have had the authority to
20 execute this form that we're looking at right now on
21 May 30, 1996; is that correct?

22 A. Correct.

23 Q. Okay. And a moment ago -- so Marvin could
24 have executed these second two forms we're talking
25 about, correct?

1 A. Correct.

2 Q. The ones dated '96 and '98. Let's two back
3 to the first form that was dated 1993.

4 A. Okay.

5 Q. And I thought you said a moment ago that
6 Marvin couldn't have signed on behalf of the
7 South Carolina Tax Commission; is that correct?

8 A. I'm saying he could not have signed on behalf
9 of the Tax Commission because he didn't have the
10 authority to bind the Tax Commission to something the
11 Tax Commission itself could not do statutorily. The
12 Tax Commission had no authority to, you know, extend
13 refund statute prior to enactment of 12-60-40.

14 Q. So Marvin Davant was not acting as a --
15 Marvin Davant was not acting beyond his authority in
16 1996 and 1998?

17 A. That's correct.

18 Q. Okay. So he had the power in '96 and '98 to
19 bind the South Carolina Tax Commission, correct?

20 A. Well, yes, the Department of Revenue, you're
21 correct.

22 Q. And he would have had the power -- his
23 signature would have had the power the bind the
24 South Carolina Tax Commission in 1993. There's a
25 question of what the operation --

1 MR. GREEN: Object to the form.

2 BY MR. TRESH:

3 Q. He could have signed the document on behalf
4 of them, correct?

5 MR. GREEN: Objection as to form.

6 THE WITNESS: I think I understand what
7 you're saying. He had the authority to sign documents
8 as the director of Field Service Division. Now,
9 whether or not there was any validity to the -- you
10 know, whether he could do what he could do, that's
11 something separate and apart. So I don't want to
12 start -- I think we may be arguing about something we
13 don't need to argue about here.

14 BY MR. TRESH:

15 Q. But it's an important point --

16 A. Yeah.

17 Q. -- in that Marvin Davant had the authority to
18 sign on behalf of the South Carolina Tax Commission; is
19 that correct?

20 A. No, it's not. Because I think what -- he
21 doesn't because by doing that -- I'll say this, but I
22 want to qualify it. He could sign on behalf of then
23 the Tax Commission, but that did not set the Tax
24 Commission's policy or the position of the Tax
25 Commission. The Tax Commission's policy was set by the

1 three commissioners, and they did that through the use
2 of policy documents or longstanding administrative
3 interpretation done by they themselves. Not by what a
4 director would have done, a field service director.

5 Q. I understand with respect to policy that
6 Mr. Davant did not make policy.

7 A. Okay.

8 Q. But I want to be incredibly clear about this
9 because it's important. Your testimony is that in
10 1998, on the third waiver form in front of you, when
11 Marvin Davant signed, it says, "South Carolina
12 Department of Revenue and Taxation by Marvin Davant,"
13 Marvin Davant would have had the authority to sign this
14 document on behalf of the South Carolina Department of
15 Revenue, correct?

16 A. In 1998?

17 Q. Yes.

18 A. Correct.

19 Q. And in 1996 Marvin Davant would have had the
20 power to bind the South Carolina Department of Revenue,
21 correct, 1996?

22 A. Tax -- yeah, Department of Revenue, you're
23 correct.

24 Q. Okay. And in 1993, it's not that Marvin
25 Davant did not have the power to bind the Department of

1 Revenue, you don't think he could have bound the
2 Department of Revenue to this form?

3 MR. GREEN: Objection as to form.

4 BY MR. TRESH:

5 Q. But he could have bound the Department of
6 Revenue had this form, in your view, been consistent
7 with the policies of the Department of Revenue --

8 MR. GREEN: Objection as to form.

9 BY MR. TRESH:

10 Q. -- is that correct?

11 A. I don't know if I understand your question.
12 Say it again.

13 Q. Sure. In 1993, Marvin Davant had the power
14 to bind the South Carolina Tax Commission, in your
15 view, provided that he was acting or binding them to an
16 approved policy of the South Carolina Tax Commission?

17 MR. GREEN: Objection as to form.

18 THE WITNESS: I'd say yes, but I have to
19 qualify it saying it's provided that policy is based on
20 valid statutory law.

21 BY MR. TRESH:

22 Q. Okay. That's fair.

23 Let's turn to the '96 and the '98 documents.
24 I think the wording is the same.

25 What was the effect -- let's look at the '96

1 document.

2 What was the effect of this paragraph that
3 says, "This agreement extends the time for the mailing
4 --" "-- for mailing the notice of assessment or refund
5 of the above tax pursuant to the provisions of 12-54-80
6 of the 1976 South Carolina Code of Laws as amended."

7 Would it have been your understanding that in
8 1996 the taxpayer would have been able to -- that this
9 extended the time for the taxpayer to file a refund?

10 A. Not for the years -- probably in -- well,
11 let's see. Let me tell you how I think it would work.
12 And first of all, obviously, they're still using a -- I
13 don't know where they got the form, but, again, it's
14 referring to the wrong statutes and has the wrong
15 heading there.

16 But this is what they could do back in 1996.
17 Marvin could have granted an extension under 12-60-40
18 that would allow for refunds for any of the -- any of
19 the tax years who had not yet expired. So even though
20 it was enacted in '95, I don't think '94 had expired
21 yet and probably 1993 hadn't expired. And I don't know
22 about '92. So he could have extended the time in which
23 to put a claim for refund in for those years, '92, '93,
24 '94. I think.

25 Q. Okay.

1 A. I mean, you can run the numbers and see that.

2 Q. Okay.

3 A. But it looks backwards, you know, to those
4 statutes that had not yet expired.

5 Q. Okay. So your view is Marvin could have
6 extended the time for Duke to file a refund claim from
7 years that were open?

8 A. That's correct.

9 Q. '92, '93, what have you, through the current
10 period?

11 A. I think so. I mean, I know that's what the
12 law is. I just don't know if those things that had
13 expired at the time Marvin -- and those years expired
14 at the time Marvin executed this.

15 Q. That's why I'm saying those years that were
16 open.

17 A. Yeah.

18 Q. Okay. That would be your view.

19 Let's turn back, then, to the prior document
20 that was executed in 1993. It uses the exact same
21 language in the middle of the page there. "This
22 agreement extends the time for mailing Notice of
23 Assessment."

24 Why would this form have used that language,
25 the same exact language that's in the form that you

1 agreed is valid?

2 A. Sloppy. Sloppy work by Field Service
3 Division. I mean, it's their form, and it appears
4 sloppy. It appears that they never took the time to
5 correct it during some of these years to update it.

6 Q. And nobody within the -- and Field Services,
7 which is a group, I mean, it's a group within the
8 South Carolina Tax Commission at that time, nobody
9 would have looked at this and nobody would have
10 approved it? Marvin would have been out there on his
11 own making up these forms and sending them out?

12 MR. GREEN: Objection as to the form.

13 THE WITNESS: I don't know if Marvin was
14 making up the forms on his own or if maybe Marvin's
15 predecessor. I just don't know. I just know what I
16 see in this form here.

17 BY MR. TRESH:

18 Q. Okay. Let's turn over to the third form.
19 The one that was executed in 1998.

20 A. Yeah.

21 Q. Up at the top right-hand corner where it says
22 "Copy," but I think you can see through there, that
23 form is still labeled FS-43; is that correct?

24 A. That's correct.

25 Q. And if you go to the middle of the page, that

1 same language that we were talking about that
2 appeared --

3 A. Yeah.

4 Q. -- in the form from 1993, it still appears in
5 the form in 1998, right?

6 A. Correct.

7 Q. And language that was never changed, right?

8 A. Correct.

9 Q. And this was still an FS-43 being issued by
10 Field Services. And you would have been at the time
11 that this form was issued and signed, 1998, you would
12 have been general counsel at that time, correct?

13 A. I would not have been a general -- the
14 general counsel. I would have been in the general
15 counsel's office. I would have been chief counsel of
16 revenue litigation.

17 Q. Chief counsel of revenue litigation.

18 And were you aware this form was being
19 issued?

20 A. No, not at all.

21 Q. Not at all.

22 So as chief counsel for revenue litigation,
23 you testified you had several people reporting to you,
24 correct?

25 A. That's correct.

1 Q. And would any of those folks have been aware
2 that this form was being issued?

3 A. Not that I'm aware of.

4 Q. Okay. So none of the lawyers within the
5 Department of Revenue that reported to you in -- excuse
6 me, in 1998 that you're aware of would have had any
7 idea that Field Services was using this form to extend
8 the period of time to assess tax?

9 A. Not that I --

10 MR. GREEN: Objection as to form.

11 THE WITNESS: Not that I know of.

12 BY MR. TRESH:

13 Q. Okay. If Marvin Davant in 1993 had told the
14 taxpayer that they had additional time to file a refund
15 claim, would a taxpayer have had any reason to believe
16 that Marvin Davant did not have the authority to bind
17 the South Carolina Department of Revenue or the Tax
18 Commission at that time?

19 MR. GREEN: Objection as to form.

20 THE WITNESS: I don't know. It depends on
21 the sophistication of the taxpayer. I think most
22 taxpayers would have probably believed Marvin.

23 BY MR. TRESH:

24 Q. Earlier we were discussing whether these
25 waiver agreements, extensions of time to extend the

1 statute of limitations, refer to them generically as
2 waiver agreements if that's okay?

3 A. I --

4 Q. How would you refer to them?

5 A. I would describe them as extensions because
6 that's what the statute that allows these folks to do
7 things calls them extensions. And I think extension is
8 a more accurate description.

9 Q. I'll refer to them as extensions.

10 You had indicated earlier that the Tax
11 Commission didn't have to sign them, just the taxpayer
12 did; is that correct?

13 A. That's correct.

14 Q. And why did each of these forms, including
15 those that were being sent to taxpayers while you were
16 chief counsel for litigation, why do all of them have a
17 signature spot for the South Carolina Tax Commission?

18 A. Well, if you're going back for when I was
19 chief counsel for litigation, remember that they had
20 the authority to grant extensions to the taxpayer for
21 refunds at that time. So that, you know -- and if it's
22 going to be a quid pro quo, which they could do after
23 '95, it would make sense they would do it that way.

24 For tax years prior to it, again, that's --
25 why Field Service put that in there and what they were

1 doing, I don't know.

2 Q. So Field Services -- it would be your view
3 that Field Services not only advised taxpayers that
4 they were entitled to a refund when they shouldn't but
5 executed on behalf of the South Carolina Department of
6 Revenue when they -- South Carolina Tax Commission when
7 they should not have?

8 A. At least as to the ones I saw. I don't know
9 if they did all the time, but they did it with Duke.

10 Q. Do you have any reason to believe that Field
11 Services was issuing any sort of different form to
12 other taxpayers?

13 A. No. I don't know one way or the other.

14 Q. Okay. You stated a moment ago that Marvin
15 Davant would not have had the authority, in your view,
16 to execute that form on behalf of the Department. Did
17 the Department have any formal policy or informal
18 policy regarding extensions of time to file refunds?

19 A. You're talking about Tax Commission?

20 Q. Excuse me.

21 A. Tax Commission did this.

22 Q. Prior to 1995?

23 A. They had stated -- yeah, TAM 89-3.

24 Q. What would TAM 89-3 say?

25 A. That was a technical question, asked whether

1 the Department of Revenue could grant a refund, extend
2 or waive the time for the refund. And it said, no,
3 they did not.

4 Q. Okay. Were you at the Department when --
5 what was -- were you a lawyer at the Attorney General's
6 Office defending the Department in 1989 when that would
7 have been issued? What was your position in 1989?

8 MR. GREEN: Objection as to form.

9 THE WITNESS: I would have been with the
10 Attorney General's Office and representing Tax
11 Commission in '89, correct.

12 BY MR. TRESH:

13 Q. Okay. Were you involved in issuance of the
14 1989 TAM?

15 A. No.

16 MR. TRESH: Okay. Let's go to South Carolina
17 Rev Procedure 95-5.

18 (PETITIONER'S EXH. 4, S.C. Revenue Procedure
19 #95-5 (Tax), was marked for identification.)

20 BY MR. TRESH:

21 Q. Okay. I handed you a copy of South Carolina
22 Revenue Procedure 95-5. Are you familiar with this
23 document?

24 A. Yes.

25 Q. Did you have a role in drafting this

1 document?

2 A. No.

3 Q. Did you have a role in reviewing this
4 document after it was drafted?

5 A. I think I did because they send those
6 documents around to everybody by e-mail. Not everybody
7 in the Department of Revenue, but a lot of the managers
8 would have seen this.

9 Q. Okay. And why would a document like this --
10 well, first of all, what's your understanding of this
11 document, 95-5?

12 A. What it does, it explains how refunds are
13 going to be handled now that you have the authority to
14 extend the time for granting refunds with 12-60-40, and
15 it also talks about the new refund statute 12-64-70.

16 And just to clarify, you know, how things are
17 going to be done because of all these statutory changes
18 that came into effect on August 1st of '95.

19 Q. Okay. So the reason this would have been
20 issued was to provide guidance to taxpayers prior --
21 after the statute?

22 MR. TRESH: Objection to the form.

23 THE WITNESS: Just not to the taxpayers, but
24 the Department of Revenue employees as well.

25 BY MR. TRESH:

1 Q. Okay. And you had mentioned a moment ago TAM
2 89-3 --

3 A. Correct.

4 Q. -- which talked about refunds?

5 A. Correct.

6 Q. Is this document consistent or inconsistent
7 with 89-3?

8 A. Well, it would be hard to say because they're
9 talking about different statutes. 89-3 was talking
10 about 12-47-440, which didn't exist. So that's the
11 purpose of this because the statutes at 12 -- that the
12 TAM relied upon no longer exists. So it would be
13 inconsistent for a very good reason, the statutes are
14 now different.

15 Q. So it would be inconsistent? I understand
16 there's a reason --

17 A. It would -- you're right, you're correct.

18 Q. So it would be inconsistent.

19 So up at the top of this document it says,
20 "supersedes," and there's a host of South Carolina
21 Revenue Procedure ruling decisions that this
22 supersedes. Why wouldn't TAM 89-3 not be listed there?

23 A. It may be just because it's internal document
24 for -- TAMs were issued to employees that were involved
25 in a specific question with the taxpayer to give them

1 guidance to the employee, and it may be because of
2 that. But I don't know why they put that. They may
3 have overlooked TAM. You never know. I mean, you
4 would have to ask policy that because I wouldn't know
5 why they would do that.

6 Q. Well, a moment ago you said that you might
7 have been involved in the review of this document.

8 A. He'd be involved in the review --

9 Q. No, I asked if you were involved in the
10 review of this, and you said yes.

11 A. Let me clarify what the review is. It comes
12 up on an e-mail and you read through it and that's your
13 review.

14 Q. Okay.

15 A. It's not where you sit down with them and
16 talk in detail about it. It's not a whole lot of
17 review process. Go ahead. That's it.

18 Q. Okay. So you said you read the document
19 before it was issued, you reviewed it.

20 A. Uh-huh.

21 Q. You've also said that in your view this
22 document is inconsistent with TAM 89-3. Is there a
23 reason why you didn't include -- when you reviewed it,
24 that you didn't suggest that TAM 89-3 be included in
25 the section about what it supercedes?

1 A. It didn't cross my mind probably at the time
2 because there's so many documents out there. There
3 could be other documents in addition to that TAM that,
4 you know, would state the same thing. It's just
5 there's too many documents. It's not all going to
6 cross your head -- cross through your mind when you're
7 reviewing these things of all the hundreds of documents
8 out there that might be different than this because the
9 statutes are different.

10 Q. Is there any document that you're aware of
11 other than TAM 89-3?

12 A. There could be. There could be. I don't
13 know. I don't know.

14 Q. Okay.

15 A. It's easy enough -- well, it's not easy
16 enough to find, but they're out there online.

17 Q. You mentioned a moment ago -- a moment ago
18 you were describing a TAM. Can you please describe a
19 TAM for me, what is that?

20 A. Yeah. That's Advisory Memorandum -- Tax
21 Advisory Memorandum. What they're used for is to issue
22 to an employee within the department, when they've got
23 an issue that's come before them and they're asking for
24 guidance, what's the Department's or -- back then what
25 was the Tax Commission's policy on a particular issue

1 or what's the law on a particular issue. And that's
2 what it addressed. It's to a specific instance whereas
3 this is -- well, the document we have before us is more
4 of a general document as to all -- as to how we're
5 going to apply this procedure forever. Not forever but
6 until it's replaced.

7 Q. Are TAMs published?

8 A. I think they're all published, yes.

9 Q. Where would they have been published?

10 A. I don't know back then. They actually had
11 documents that were available to the public. Now
12 they're all on line.

13 Q. So the TAM was somebody within the Department
14 requesting advice, correct?

15 A. Uh-huh.

16 Q. And about a specific situation?

17 A. Correct.

18 Q. Okay. And it was a public document. Okay.

19 In the course of your review around the
20 issuance of this document, 95-5, were there any
21 discussions among those within the Department that you
22 took part in regarding the effect and the impact of
23 this document?

24 A. No.

25 Q. And you would agree that this document made

1 clear the Department's policy that a waiver -- that the
2 Department had the ability to extend the time for
3 taxpayers to file a refund claim using a waiver form;
4 is that correct?

5 MR. GREEN: Objection as to form.

6 THE WITNESS: I don't know if it says waiver
7 form in there or anything, but it does specifically say
8 that they now have to authority under 12-40-60 -- or
9 excuse me, 12-60-40.

10 BY MR. TRESH:

11 Q. Okay.

12 A. Clearly states that.

13 MR. TRESH: Okay. Let's go to the procedural
14 bulletin.

15 (PETITIONER'S EXH. 5, S.C. Revenue Procedural
16 Bulletin #00-3, was marked for identification.)

17 BY MR. TRESH:

18 Q. I've now handed you a copy of
19 South Carolina Revenue Procedural Bulletin 00-3.
20 Subject matter is Claims for Refund and Correction of
21 Errors in Tax Years Barred by Time Limitations; is that
22 correct?

23 A. That's correct.

24 Q. Are you familiar with this document?

25 A. Yes, I am.

1 Q. Were you the author of this document?

2 A. No, I wasn't.

3 Q. Did you review this document before it was
4 issued?

5 A. I probably did because it would have been,
6 again, like the previous document, it would have been
7 e-mailed around the Department before it was issued.

8 Q. Okay. And this document, in terms of -- in
9 section -- I believe page 4, bottom of the page. It
10 states, "Consistent with its longstanding
11 administrative position, the Department will continue
12 to interpret the time limitations in Code Section
13 12-54-85 consistent with the following rules."

14 Correct?

15 A. Correct.

16 Q. And then it goes on to state what those rules
17 were.

18 Given that you're familiar with the document,
19 what would your view of these rules be?

20 A. I would take it to mean when 12-54-85 was
21 enacted in 1995, the Commission had consistently
22 followed 12-54-85 as, you know, after its enactment as
23 it states here. I believe that's what it's saying.

24 Q. And is this still the current policy of the
25 Department with respect to waivers to the best of your

1 knowledge?

2 A. Well, as to extensions it probably -- it
3 probably is unless there's been a statutory change.

4 MR. TRESH: Okay. Five minutes, Tracy. Like
5 a two-minute break.

6 (A recess transpired.)

7 BY MR. TRESH:

8 Q. I wanted to continue with some questions.

9 We had spoken earlier about Marvin Davant and
10 his role in Field Services. Do you know Marvin Davant?

11 A. I know Marvin Davant.

12 Q. Okay. And what was Marvin's title around the
13 period 1993 to 1998, the periods we were talking about
14 in those waivers, what was Marvin's title?

15 A. Field Service director.

16 Q. Field Service director. And do you know if
17 Marvin had people reporting to him?

18 A. Yes, he did.

19 Q. Do you recall about how many?

20 A. No.

21 Q. Who did Marvin report to?

22 A. He would have reported to probably Harry.

23 Well, part of that time he would have reported to a
24 person named Greg Frampton. Greg was -- under the
25 commission, he was what was called the executive

1 director or something. He would have reported to Greg.

2 And I don't know how much -- if there was a
3 break between Greg's time and when Harry took over,
4 Harry Cooper. But he would have reported probably to
5 Harry Cooper, as well, during some of that time. I
6 don't know if there's anybody between Greg Frampton and
7 Harry Cooper.

8 Q. And you also reported to Harry Cooper at two
9 different points during your time?

10 A. That is correct. No -- yeah, two different,
11 you're correct.

12 Q. So you reported to Harry Cooper two different
13 times, and Marvin reported to Harry Cooper two
14 different times?

15 A. Correct.

16 Q. During the time period that Harry Cooper --
17 that Marvin reported to Harry Cooper, would Harry
18 Cooper have been aware that was in 1993 issuing these
19 forms that you claim he didn't have the authority to
20 sign?

21 A. Probably not aware of it.

22 Q. So his direct boss would have had no idea?

23 A. Probably not. But I can't answer that
24 definitively.

25 Q. Okay. Are you aware of any time while you

1 were at the Department of Revenue that the Department
2 of Revenue has denied the effectiveness of a form
3 FS-43?

4 A. No. I'm not aware of any time that they had
5 denied it, but on the other hand, I was aware of the
6 form.

7 MR. GREEN: Let him answer the question.

8 BY MR. TRESH:

9 Q. When did you first become aware of form
10 FS-43?

11 A. At the meeting we had about a week before I
12 retired.

13 Q. So during the period 1995 through when you
14 retired in 2010, up until that meeting, you had no
15 knowledge that a form FS-43, an extension, as you put
16 it, existed?

17 A. Correct.

18 Q. Okay. And you would have known had there
19 been any -- you were in a position to know --

20 MR. GREEN: Objection as to form.

21 BY MR. TRESH:

22 Q. Was there any litigation, to your knowledge,
23 around the effectiveness of a form SF-43?

24 A. Not to my knowledge.

25 Q. And you would have been in a position to know

1 in your role as chief counsel, correct?

2 A. Should have been, yes.

3 Q. Okay. When this TAM 89-3 was issued, would a
4 TAM typically have been shared with employees of the
5 Department?

6 A. I believe so.

7 Q. Would a TAM have been shared with Marvin
8 Davant in his role as director of Field Services?

9 A. Yes, it would have been.

10 Q. And so the TAM was issued in 1989, and we
11 have before us at least one waiver that was signed --
12 exemplar that was signed in 1993?

13 A. Correct.

14 Q. And so even though Marvin Davant was director
15 of Field Services who reported to Harry Cooper, fairly
16 senior person within the Department of Revenue, Marvin
17 would have been aware of the '89 TAM, yet he was still
18 issuing form SF-43s, which you claim are inconsistent
19 with the TAM?

20 A. That's correct. And he would have been
21 reporting in '89 probably to Greg Frampton, not Harry
22 Cooper, probably.

23 Q. So Harry would have known the TAM and in your
24 view was intentionally disregarding it?

25 A. Correct. I can't say he knew of it, but he

1 was not following probably what the guides in the TAM
2 was stating.

3 Q. But it would have been common, you would have
4 expected Marvin to have received a copy of the TAM?

5 A. Marvin would have received a copy of the TAM
6 just like with the other documents because they -- I
7 don't know if in '89 they were displayed on the
8 computer at that time, but they would have been
9 circulated. And Marvin was much higher than I was at
10 that time. Not much higher, but higher. And if I was
11 getting them, he would have got one.

12 Q. Can you tell me your understanding of the
13 1989 TAM.

14 A. The '89 TAM dealt with the school teacher,
15 retired school teacher who had retired in
16 South Carolina. And I think she was asking if her
17 income was subject to income -- she asked somebody if
18 she had to file tax returns and report it to
19 South Carolina.

20 And somebody at the Department of Revenue --
21 well, then the Tax Commission told her yes. And I
22 think she alleges it happened on more than one
23 occasion. And it was too late to put a claim for a
24 refund in. And so she was asking if the Tax Commission
25 waive the time limitation so that she could get her

1 refund. Because she clearly did not owe those taxes.

2 And the Department of Revenue said a couple
3 of things. It said, "First of all, we can't --" it
4 actually said three things. I think it said, "We can't
5 waive the time limitations at 12-, you know, -47-440."

6 And then it said, you know, even if you're
7 harmed by it, you know, equitable estoppel or words to
8 that effect don't run against the Department of
9 Revenue.

10 And then finally it said, you know, you don't
11 have an official written document that we issued saying
12 that, you know, that we actually told you this;
13 therefore, you know, we don't believe you -- not that
14 we don't believe you, you haven't substantiated what
15 you were claiming anyway.

16 The best of my recollection, that's kind of
17 what it says. It may say may more or less.

18 Q. So it talked about the lack -- they talked
19 about oral communication and lack of a written
20 document?

21 A. It talks about that, I think, at the tail
22 end. Just as an aside it talks about it. Not an
23 aside, but it talks about it in detail, I believe.

24 Q. It does mention that as a grounds for why
25 this taxpayer --

1 A. As one of the grounds, yeah.

2 Q. Okay.

3 A. Yeah, that's correct.

4 Q. Do you know how many years Marvin Davant was
5 employed at the Department of Revenue approximately?

6 A. It probably close to -- I don't know. But
7 since he retired from there, he probably worked there
8 28 years, 30 years. I don't know.

9 Q. All right. If the Department of Revenue and
10 a taxpayer were to agree upon something, thinking about
11 our school teacher here, one of the reasons for denying
12 her refund claim was because there was nothing in
13 writing, correct?

14 A. That wasn't the primary reason. The primary
15 reason was because they didn't --

16 Q. That wasn't my -- was that one of the
17 reasons?

18 A. I would not agree with that. I think that
19 they were stating that because they were saying, "We
20 don't have authority to do it." Had they had the
21 authority, I'm confident they would have waived the
22 time limitation for her. They're saying -- explaining
23 to her, "Well, you know, just as an aside, even if our
24 employee did tell you wrong, that's of no consequence
25 because equitable estoppel does not run against the

1 state."

2 And it also goes in there and states, you
3 know, we're not going to -- you know, "If you're going
4 to make an allegation about one of our employees, it
5 has to be in writing anyway. The employee had to
6 inform you in writing of our position."

7 Q. Why was the writing relevant?

8 A. I don't know. I don't know. It's just what
9 it says there.

10 Q. All right.

11 A. I think it says official policy by the
12 Department is usually issued in the form of documents,
13 like policy documents. I think that's what it says.

14 Q. Okay. During your time working at the
15 South Carolina Department of Revenue, were you involved
16 in settlements between taxpayers and the Department?

17 A. Yes.

18 Q. Approximately how many times, many, few?

19 A. Lots. Very many.

20 Q. Very many. Okay.

21 And what was typically the scope of your
22 involvement?

23 A. Actually, it's somewhat formalized once we
24 became the Department of Revenue. And that would be
25 going forward from '95 forward. And there's a document

1 that talks about how cases are to be settled. It's
2 95 -- Revenue Procedure 95-6. And I'm well familiar
3 with that because that talks about how internal appeals
4 are supposed to be handled at the Department once they
5 got the Revenue Procedures Act.

6 And in it it also talks about if you're going
7 to settle a case based on hazards litigation, it
8 explains who has the authority to do that and the
9 process it has to take before a case can be settled.

10 Q. Does that document -- does that document or
11 that process require a written settlement agreement?

12 A. It does, and it calls it a resolution report.

13 Q. Okay. Was your compensation in any way tied
14 to the number of cases you settled?

15 A. I wish it had been, but it wasn't. Nor the
16 cases we won, either way.

17 Q. Okay. That document, that resolution report
18 that you mentioned, is that typically signed by both
19 the taxpayer and the Department of Revenue?

20 A. I don't think so. Let me tell you how it
21 usually occurred. If you look at the document, not the
22 resolution report but the document itself, it says in
23 the Field Service level they didn't have the authority
24 to resolve a case based on hazards litigation. It's
25 only once that it got to the appeals section, they

1 would have had that authority.

2 And then that -- the person in appeals would
3 have had to first go through General Counsel's office
4 and then it would go to the director and the director
5 could sign off -- could agree to it. And then
6 basically, it would go back to -- usually back to the
7 appeals section, they would write a resolution report
8 resolving it.

9 And I don't believe the taxpayers had to sign
10 off on it, because it was usually accept -- it was
11 usually just memorializing an agreement that the
12 taxpayer had agreed to. Sometimes there would be an
13 exchange of letters back and forth, "We accept your
14 agreement," and then they would memorialize that with
15 the resolution -- resolution report.

16 So there would be something in the file
17 usually saying something had been resolved. Clearly a
18 resolution report was required by the revenue
19 procedure.

20 Q. So these many settlements you were involved
21 in, I assume some of them, maybe a lot of them, had a
22 lot of money at issue; is that fair?

23 A. Yes. Yes.

24 Q. And at least sometimes would taxpayers often
25 have to pay a lot of money as these matters were

1 settled?

2 A. Sometimes not always. I mean sure. I mean,
3 sometimes you would have very large taxpayers and you
4 negotiate a settlement and you'd still, you know, you'd
5 still either get a lot. You would, you know, receive a
6 lot of money or you -- you know, you might agree that,
7 you know, to settle it for, you know -- the percentage
8 can vary depending how strong you think your case is.

9 Q. Sure. And taxpayers would give up rights to
10 refunds in addition to paying money as part of some of
11 these settlements, I would imagine?

12 A. Sometimes that would occur.

13 Q. Okay. And it's your testimony that the
14 formal settlement procedure did not require a
15 taxpayer's signature to either give up a lot of money
16 or pay a lot of money?

17 A. No. That's not what I'm trying to say.

18 Q. Okay.

19 A. What I'm trying to say is oftentimes a
20 taxpayer would send a settlement offer in by letter or
21 something to the appeals section. And then they would
22 come to us and say, "This is what the taxpayer wants,
23 should we accept it or not accept it?" And then, you
24 know, we'd make a recommendation.

25 But we weren't the deciders on this. The

1 director would be the decider, and so it would go to
2 the director. And the director would say, "Yeah,
3 that's good," or "No, that's not good," or "Let's
4 counteroffer with something."

5 So there may be an exchange of letters back
6 and forth. There was a counteroffer. But eventually
7 there would be something in the file where the taxpayer
8 would say, yeah, that --

9 Q. "I agree"?

10 A. Yeah, "I agree," or we just say, "Well, their
11 offer is good," so we'll just say, "Hey, we're going to
12 accept your offer. Here's a resolution report deciding
13 the case based on what you want in your letter."

14 Q. So there would be either, one, something from
15 the taxpayer saying they agreed to the terms of the
16 settlement, whatever those terms were, correct?

17 A. Correct.

18 Q. Or there would be an offer and an acceptance
19 in writing from both the taxpayer and the Department?

20 A. That's correct. There should be something in
21 the file 95-5, you know, lays out a pretty good
22 framework. Excuse me, 95-6 lays out a pretty good
23 framework how to settle these cases, or how to document
24 it and what the procedure you have to go through to do
25 it.

1 There may be instances where they didn't
2 follow it, but that's what they were supposed to do.

3 MR. TRESH: Okay. I'm going to hand you a
4 form 870AD.

5 (PETITIONER'S EXH. 6, Form SC870AD, was
6 marked for identification.)

7 BY MR. TRESH:

8 Q. What I've handed you, in upper right-hand
9 corner labeled SC870AD; is that correct?

10 A. That's correct.

11 Q. And have you ever seen this form before?

12 A. Yes, I have.

13 Q. Okay. And what's your understanding of this
14 form?

15 A. This is -- this form is also referenced in
16 that revenue procedure we just talked about. This is
17 how you resolve an issue for a particular tax type for
18 a particular tax period. You know, according to this,
19 I would say Duke is in agreement that they owe sales
20 tax that -- the amounts dated for the time periods
21 stated and that's what it relates to. It says
22 basically it stands for the proposition Duke's now
23 going to try to get a refund of that sales tax for that
24 time period, any sales tax, and the Department of
25 Revenue is now going to issue a proposed assessment for

1 sales tax for that time period.

2 Q. So in the bulletin you were talking about
3 that describes how matters are processed or how matters
4 are settled for a specific tax type or a specific set
5 of years a form 870AD is required?

6 A. I don't know if it's always required, but
7 this is how what -- this is a good form to use if you
8 want to resolve it. This is kind of the genesis for, I
9 guess, you wanted to do a resolution report, you could
10 take this and do it if you needed to do it. But this
11 is the form that resolves the issue as to the tax type
12 and a tax period.

13 Q. The document that you were referenced earlier
14 that described how you would go ahead and settle
15 matters, did it require an 870 AD?

16 A. It talks about it in the revenue procedure,
17 this form, and the 870. But I don't know if it says
18 these are required. I think these are real handy
19 things that they like to use in audit to figure out
20 where they are. For lack of a better word, I don't
21 know what to say. You'd have to ask an auditor. Maybe
22 if they use these all the time, but it does refer to it
23 in the document we discussed. I can't recall what it
24 says.

25 Q. And the settlements you were involved in,

1 would it have been typical to have an 870AD?

2 A. I don't know because we would not have used
3 this at our level because at our level it's in court.
4 You would have use -- we would have entered into a
5 consent order with the court, and the parties would
6 have done something like this. We would not have used
7 this form at my level.

8 Q. What kind of form -- what would you have used
9 at your level?

10 A. It would be at the administrative -- it would
11 have been at the ALC. We would just tell the judge we
12 resolved it, and he would say draft up a consent order.
13 That's usually what we'd do. Sometimes it would have
14 everything in there, and sometimes it would merely
15 refer to maybe letters of agreement that the taxpayer
16 had submitted to us and we had agreed to. It could do
17 anything. It could be done different ways at the
18 litigation level.

19 Q. So the revenue bulletin that you referred to,
20 what was the number of that again?

21 A. The one we just talked?

22 Q. I'm sorry, the one that talked about
23 settlements.

24 A. It's the Revenue Procedure 95-6.

25 Q. 95-6.

1 A. Yes.

2 Q. So did that apply, Revenue Procedure 95-6, to
3 the matters that you settled?

4 A. It would apply for matters from 1995 going
5 out, but it really didn't talk about matters that we
6 settled at the litigation level. But if we did settle
7 a matter based on hazard litigation, we also went
8 through the director.

9 Q. Okay. But for the purposes of the cases that
10 you personally were involved in --

11 A. Yeah. We did not use it.

12 Q. You didn't use that form nor did you follow
13 95-6; is that correct?

14 A. We would follow 95-6 because we would usually
15 write up a resolution report, and that's what it talks
16 about in 95-6. It mentions these. It doesn't say
17 these have to be used. It just describes these forms
18 and how they're used. It does talk about resolution
19 reports, and it says when you resolve a matter, whether
20 you rule -- for the -- sometimes you decide for the
21 taxpayer, that happened on occasion, too, and you'd
22 write a resolution to the court.

23 If you resolved it based on hazards of
24 litigation, we'd write up a resolution report and put
25 it in the file. If it was resolved while it was in

1 court, there would usually be a consent order.

2 Q. So if it was in court, you'd have a consent
3 order?

4 A. Correct.

5 Q. Were you involved in settlements that were in
6 court?

7 A. Yes.

8 Q. Many?

9 A. Yes.

10 Q. Okay. And those settlements that were in
11 court where you didn't have a consent order, would it
12 have been typical to use a form 870AD?

13 A. No. There was always some type of consent
14 order. It's just a matter of whether the consent order
15 would have a lot of detail as to what the agreement
16 was. Sometimes taxpayers didn't want all that in the
17 consent order. So it just probably agreed to resolve
18 this matter pursuant to, you know, agreement dated such
19 and such that we maybe have -- that the taxpayer
20 prepared or we prepared and both parties had signed.

21 Q. So in the cases that were in court consent
22 order, if you're not in court, so now we're not before
23 a judge, you would still do a consent order?

24 A. No. If they were at my level, we would
25 usually do a resolution report is what we would do.

1 Q. Okay. In the cases that were not in court,
2 you did a resolution report, would it be typical to
3 have a South Carolina 870AD?

4 A. Not if they were settled in my litigation
5 section, they would not have done that.

6 Q. Okay. This particular form 870AD, this is
7 signed by Duke Energy Corporation and somebody on
8 behalf of the Department, correct?

9 A. Correct.

10 Q. Somebody on behalf of the Commission?

11 A. Correct. Well, Department. What year is
12 this?

13 Q. Yeah, this is actually Department.

14 A. 2002, it would be Department.

15 MR. TRESH: Okay.

16 (PETITIONER'S EXH. 7, Form SC870, was marked
17 for identification.)

18 BY MR. TRESH:

19 Q. Okay. I've just handed you what's been
20 labeled in the upper right-hand corner SC870; is that
21 correct?

22 A. Correct.

23 Q. Have you seen this form before?

24 A. I have seen this form before.

25 Q. And you're familiar with it?

1 A. Yes.

2 Q. And what was your understanding of the effect
3 of this form SC870?

4 A. This would -- this form was used at times,
5 for example, if a taxpayer was being audited and they
6 had arrived at a liability and the tax -- and, of
7 course, until that tax is paid, interest is going to
8 run on it. The taxpayer may wish to just pay the taxes
9 so the interest doesn't run. And then at a later date,
10 contest it by putting a claim for refund in or maybe
11 protesting it just, you know, assessment itself.

12 But they wanted to stop -- they wanted to
13 stop interest from running. And it did not preclude
14 the taxpayer from challenging that tax, and it did
15 preclude the Department of Revenue from going back in
16 and doing an additional audit for that particular tax
17 time for that period.

18 Q. Did or did not?

19 A. Did not.

20 Q. Okay. And so this form 870 was used to close
21 out years essentially, correct?

22 A. No. It was just used basically to stop the
23 running of interest so a taxpayer could pay what was
24 due and put a claim for refund in.

25 Q. Okay.

1 A. If that's what the matter was. That's
2 generally how it was used.

3 Q. Okay. And what's the difference, in your
4 view, between a form 870 and a form 870AD?

5 A. On the 870AD, that was final. That closed it
6 for that -- tax type for that tax period. The taxpayer
7 agreed to pay it. They couldn't put a claim for refund
8 in. And the Department of Revenue could not go back in
9 and do an audit unless there was fraud or something
10 like that involved.

11 Q. Were these forms, the 870 or the 870AD, were
12 they generally available to taxpayers? Could you have
13 gone on a Web site and gotten them?

14 A. I don't know that. I just don't know. May
15 have been. I don't know.

16 Q. And to your knowledge was the form 870AD, the
17 one that would be final, that would foreclose
18 everybody's rights, the Department and the taxpayer,
19 was that ever signed by Duke Energy for income taxes?

20 A. I'm not aware of that.

21 MR. TRESH: Okay.

22 (PETITIONER'S EXH. 8, General Information and
23 Instructions for SC870, was marked for identification.)

24 BY MR. TRESH:

25 Q. Okay. So what I've given you now is General

1 Informations and Instructions, SC870; is that correct?

2 A. Correct.

3 Q. And if I can direct you to the second
4 paragraph from the top. "If you wish to give up your
5 right to file a claim for refund and prevent the
6 Department from assessing additional amounts at a later
7 date, SC870AD should be executed in lieu of this
8 SC870."

9 Correct?

10 A. Correct.

11 Q. And what would be your interpretation of
12 what -- what was this telling the taxpayers?

13 A. That was telling the taxpayer if you've
14 got -- if you're going -- if you're happy with the
15 proposed assessment and you agree that you owe it, you
16 don't want the Department of Revenue coming back
17 auditing you for this tax period, sign the 870AD, don't
18 sign the 870. Because if you sign 870, that doesn't
19 foreclose this tax or this tax period.

20 Q. Would it also tell the taxpayer that if you
21 wanted to file a refund, that the 870AD -- you'd be
22 giving up your right to file a refund by signing an
23 870AD?

24 MR. GREEN: Objection as to form.

25 THE WITNESS: Yes.

1 BY MR. TRESH:

2 Q. Okay. How long have these forms -- to your
3 knowledge, how long have these forms 870 and 870AD
4 remained in effect?

5 A. I don't know. I don't know. I don't know if
6 there's anything on the form that would tell you
7 numberwise. I just don't know.

8 Q. Okay. Certainly from --

9 A. Excuse me. I may have misunderstood your
10 question. Are they saying did they remain in effect
11 forever once you sign it?

12 Q. I'm curious how long they've been around.

13 A. I don't know.

14 Q. Okay. To your knowledge, was there ever any
15 resolution report prepared in connection with the
16 settlement of Duke Energy's sales tax audit?

17 A. Sales tax?

18 Q. Yes.

19 A. I don't know if there would have been a
20 resolution report. Did they settle the case or did
21 they -- or did Duke just agree, "Yeah, we owe them the
22 sales tax"?

23 Q. We looked earlier and there was an 870AD.

24 A. That's kind of agreeing that we owe the tax.
25 It's not a settlement. They're just saying, "Yeah,

1 we'll pay the tax."

2 Q. Are you aware of any resolution report?

3 A. I don't think there was a resolution report
4 in that situation.

5 Q. There only would have been a resolution
6 report if there was a settlement?

7 A. If there had been a settlement or if the
8 Department said, "You're right, you don't owe any sales
9 tax."

10 Q. Okay. And for these years at issue, 1978
11 through -- this case at issue, the income tax refund
12 claims from 1978 through 2001, are you aware of any
13 resolution report being prepared by the Department in
14 settlement for this matter?

15 A. No, I'm not. No.

16 Q. And that resolution report would have been
17 required?

18 A. According to the documents, 95-6, it would
19 have been.

20 Q. Okay. So to your knowledge, there was no
21 South Carolina form 870AD that was ever entered into
22 for Duke's income tax refund claims for the periods
23 1978 through 2001; is that correct?

24 A. That's correct.

25 Q. And there was no resolution report prepared

1 and entered into the file for Duke's income tax refund
2 claims for 1978 through 2001; is that correct?

3 A. That's correct.

4 Q. And is there any settlement agreement that
5 was executed by both Duke and the commissioner or
6 somebody on behalf of the commissioner for Duke's
7 income tax plan for the periods 1978 through 2001?

8 A. It would have been a director. But, no, I'm
9 not aware of any that would have been executed.

10 Q. Is there anything in writing that would
11 evidence a settlement agreement between Duke and the
12 Department of Revenue for its income tax refund claims
13 for the periods 1978 to 2001 that you're aware of?

14 A. Not that I'm aware of.

15 MR. TRESH: Okay. Tracey, give us two more
16 minutes. Okay.

17 (A recess transpired.)

18 BY MR. TRESH:

19 Q. Okay. A couple more questions.

20 You had mentioned earlier that the
21 South Carolina Tax Commission, it was your recollection
22 that they had a forms committee which reviewed or
23 vetted the various forms that were being published; is
24 that correct?

25 A. I don't know if it was a forms committee or a

1 forms section, but there was somebody in charge of
2 forms, I believe.

3 Q. Somebody or would have been more than one
4 person?

5 A. I don't know.

6 Q. But certainly somebody within the Department
7 of Revenue?

8 A. Well, both the Tax Commission and the
9 Department. I'm confident the Department of Revenue
10 has that. I don't know if the Tax Commission had a
11 person in charge of it or a committee. The Department
12 of Revenue actually does have a form section.

13 Q. And if somebody wanted to put out a form and
14 that person was a director at the Tax Commission, what
15 process would they have followed?

16 A. Well, ordinarily, I don't know for sure, so I
17 don't know if I should even answer. I would assume,
18 though, they would try to get the form approved. But I
19 don't think that often happened. I think sometimes
20 they just created a form and used it. But I'm not
21 certain.

22 Q. But there was some at least somebody who was
23 responsible for vetting the forms?

24 A. That's true. But I think that was in most
25 instances that would be the people creating the state

1 income tax form, the state sales tax form, and the
2 supporting documents that go with it. We looked at
3 that form a little while ago, that 780 form. That
4 would be an example of a form that would go through --
5 be created by either at the Tax Commission level or
6 the, you know, Department of Revenue level. Some form
7 like that.

8 I'm sure that sometimes -- I take that back.
9 I'm not sure, but on occasion I guess the operating
10 divisions who create forms and use them. Whether or
11 not they got them approved, I don't know.

12 Q. Was it the policy of the Department of -- was
13 it the policy of the Tax Commission to have the forms
14 approved by the forms commission division person?

15 A. I don't know.

16 Q. Okay. Was it the policy of the Department of
17 Revenue to have the forms approved by the forms
18 division?

19 A. I think it probably was. Whether it was
20 actually done, I don't know.

21 Q. But that would have been the policy?

22 A. I think so.

23 Q. Okay. And do you have any reason to believe
24 that Field Services would not have generally followed
25 that policy of the Department of Revenue while it was

1 in effect?

2 A. I don't have any reason to believe one way or
3 the other. I just don't.

4 Q. When people at the Department of Revenue
5 didn't follow policy, would there generally have been
6 consequences if you didn't follow policies?

7 A. Not all the time, no.

8 Q. So you could break policy and there would be
9 no consequence?

10 A. It depends on what you had done probably.
11 But there was not always consequences if you broke
12 policy. It depends what the policy was you broke and
13 things of that nature. Because you would often have --
14 not often but on occasion auditors would audit. They
15 would do something wrong in the audit, and, you know,
16 sometimes they would -- and by that I mean, apply the
17 wrong law or not follow normal audit procedures. And
18 sometimes they would probably be punished, sometimes
19 they would not be punished -- or reprimanded is a
20 better word.

21 Q. What would that reprimand take the form of?

22 A. I don't know. Oftentimes it was not public.
23 It would be between the manager and the person himself.
24 That would not be a public situation.

25 Q. And so if a director didn't follow policy,

1 there would be no public record of a reprimand that
2 they --

3 A. No. What would happen is oftentimes if it
4 would be -- there would be a situation where if the
5 Commission found out, they would just direct that
6 particular division not to do it that way anymore or to
7 change their -- change what they're doing once it came
8 in the Tax Commission's position.

9 MR. TRESH: I think we're done.

10 MR. GREEN: No questions from me.

11 (The deposition concluded at 12:16 p.m.)

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Ronald W. Urban 3/14/2012

84

1 SIGNATURE OF DEPONENT

2

3 I, the undersigned, RONALD W. URBAN, do
4 hereby certify that I have read the foregoing
5 deposition and find it to be a true and accurate
6 transcription of my testimony, with the following
7 corrections, if any:

8 PAGE LINE CHANGE REASON

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RONALD W. URBAN DATE

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25

1 CERTIFICATE OF REPORTER

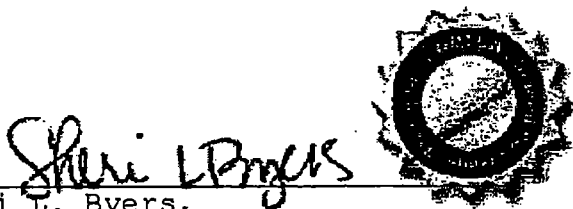
2 I, Sheri L. Byers, Registered
3 Professional Reporter and Notary Public for the
4 State of South Carolina at Large, do hereby
5 certify:

6 That the foregoing deposition was
7 taken before me on the date and at the time and
8 location stated on page 1 of this transcript; that
9 the deponent was duly sworn to testify to the
10 truth, the whole truth and nothing but the truth;
11 that the testimony of the deponent and all
12 objections made at the time of the examination were
13 recorded stenographically by me and were thereafter
14 transcribed; that the foregoing deposition as typed
15 is a true, accurate and complete record of the
16 testimony of the deponent and of all objections
17 made at the time of the examination to the best of
18 my ability.

19 I further certify that I am neither
20 related to nor counsel for any party to the cause
21 pending or interested in the events thereof.

22 Witness my hand, I have hereunto
23 affixed my official seal this 19th day of March,
24 2012, at Columbia, Richland County, South Carolina.

25


Sheri L. Byers,
Registered Professional Reporter,
Notary Public
State of South Carolina at Large
My Commission expires:
January 5, 2014

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1 STATE OF SOUTH CAROLINA

2 ADMINISTRATIVE LAW COURT

3

4 DUKE ENERGY CORPORATION,

5 Petitioner(s),

6 vs.

Case No: 10-ALJ-17-0270-CC

7 SOUTH CAROLINA DEPARTMENT OF REVENUE,

8 Respondent(s).

9

10 D E P O S I T I O N

11 WITNESS: SARAH G. MAJOR

12 DATE: Wednesday, March 14, 2012

13 TIME: 1:23 p.m.

14 LOCATION: Willoughby & Hoefer, P.A.
15 930 Richland Street
Columbia, South Carolina

16 TAKEN BY: Attorneys for the Petitioner

17 REPORTED BY: SHERI L. BYERS
18 Registered Professional Reporter

19 - - - - -

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23 HARRY A. HANCOCK, ESQ.
24 T. COOPER MONROE

25 (INDEX AT REAR OF TRANSCRIPT)

1 STIPULATION: It is stipulated among counsel
2 that this deposition is being taken in accordance with
3 the Rules of the Administrative Law Court, and that the
4 deponent reserves the right to read and sign the
5 deposition transcript.

6 - - - - -

7 SARAH G. MAJOR, being first duly
8 affirmed, testified as follows:

9 EXAMINATION

10 BY MR. TRESH:

11 Q. Good afternoon. Ms. Major, my name is Eric
12 Tresh. I'm a lawyer with Sutherland, Asbill & Brennan
13 and represent Duke Energy. Today we're going to take
14 your deposition.

15 Can you please state your full name for the
16 deposition, please.

17 A. Sarah Major.

18 Q. A couple of ground rules first. First, if at
19 any time you don't understand my question, would you
20 please let me know and ask me to rephrase that
21 question. Otherwise, I'll assume that you understand a
22 question, that your response is to the question that
23 I've asked you.

24 Do you understand?

25 A. Yes.

1 unable to respond completely and truthfully to
2 questions that I ask you today?

3 A. No.

4 Q. Okay. Did you do anything to prepare for
5 today's deposition?

6 A. Yes.

7 Q. Can you tell me what that is?

8 A. I read through two depositions for the case.
9 One for McSwain and one for Pomp. And one other one
10 that was done by, like, the treasurer of Duke. But I
11 can't remember what his name is.

12 Q. What would have been Sherwood Love?

13 A. It could have been.

14 Q. So you read those depositions?

15 A. Yes. I also read a few court cases, general
16 court cases, and some Commission decisions. I looked
17 at the statutes that I was asked to review. I talked
18 to some -- I talked to some auditors who have been at
19 the Department. And some other colleagues in the
20 policy division. I think that's it.

21 Q. Okay. You mentioned you talked to auditors
22 and folks in the policy division department. Can you
23 tell me the names of who you spoke to?

24 A. Yes. I talked to John Swearingen and Orville
25 Sharpe. They're both auditors. And Ricky Taylor, who

1 is the audit supervisor.

2 Q. Why did you talk to these three folks?

3 A. Just to ask if they -- what they remembered
4 about the issue of net gains, whether they had any
5 information about cases or audits that did anything
6 different than net gains in the apportionment factor.

7 Q. Did they have recollection of any cases where
8 this issue had come about?

9 A. No.

10 Q. So no recollection of this issue, net versus
11 gross or what gross means?

12 A. Correct.

13 Q. Okay. And you mentioned you talked to some
14 folks in the policy division.

15 A. Right.

16 Q. Were there others? Who did you speak to in
17 the policy division?

18 A. Rick Handel.

19 Q. Okay.

20 A. Dena West. And that was mostly about Section
21 12-6-2295.

22 Q. What is 12-6-2295?

23 A. That's the sales and gross receipts
24 definition that came in in 2007.

25 Q. Did you speak to Mr. Handel or Ms. West about

1 the definition prior to 2007?

2 A. We spoke in terms of was it always their
3 understanding that we, in the Department of Revenue,
4 had used net gain instead of gross in the apportionment
5 factor, yes.

6 Q. Was there ever any kind of case where this
7 issue came up that Mr. Handel and Ms. West was aware
8 of?

9 A. None where we didn't use net and the same
10 thing with the auditors asked if they were aware of --
11 it's never been -- it hasn't been an issue in the case,
12 but they have used net. So it wasn't an issue.

13 Q. If it wasn't an issue -- if net versus gross
14 was not an issue, why would Mr. Handel have been
15 involved?

16 A. I was just asking him whether he had any
17 recollection of the Department using anything other
18 than net or gross as our position in the Department.
19 And he said, no, that it had always, to his knowledge,
20 always been -- we had always used net.

21 Q. I guess my question is, if it had never been
22 an issue, which is what you said Mr. Handel said, why
23 would it have gotten to Mr. Handel, who's counsel for
24 the Department, correct?

25 A. Well, he's general counsel of policy.

1 Q. Right.

2 A. Some of it would have been as a result of
3 drafting 12-6-2295.

4 Q. Okay. Is there anything else? You said
5 "some of." Is there any other reason why it would have
6 gotten to Mr. Handel's attention?

7 A. Well, in 2000 -- there is a corporate manual
8 and in that, it states that we use net as opposed to
9 gross. And he was involved in that particular
10 publication, too.

11 Q. Okay. In addition to the people of the
12 Department that you mentioned, did you speak with
13 anybody else?

14 A. Then I also spoke to Harry Hancock, who's the
15 attorney for -- on this case. I've spoken to these two
16 gentlemen.

17 Q. Okay. With you today, do you have any of the
18 materials that you used to prepare for this case?

19 A. No.

20 Q. What materials do you have with you today?

21 A. I just have this.

22 Q. I'm sorry, what is that?

23 A. That's just the respondent's amended
24 prehearing statement.

25 Q. Do you have any notes that you took to

1 prepare for today's case with you?

2 A. I have some scratches where I was writing
3 down code sections..

4 MR. GREEN: Let me see those first.

5 MR. TRESH: Absolutely.

6 MR. GREEN: These are where you met with us?

7 THE WITNESS: Yes.

8 MR. GREEN: I think these would be work
9 product.

10 MR. TRESH: Work product?

11 MR. GREEN: Because she took these notes when
12 she met with us to talk about the case. I'm not going
13 to preclude you from asking questions, but the notes
14 lead to issues that we were discussing based on our
15 thoughts of the case. I think that's a work product
16 under Rule 26(b) (3).

17 MR. TRESH: And I would agree to the extent
18 that I asked her questions that would be work product,
19 but I think the notes -- we're allowed to take a look
20 at them.

21 MR. GREEN: I'm not sure that I can agree to
22 that because I think those reflect our thoughts because
23 they reflect what we were asking her and talking to her
24 about specifically.

25 BY MR. TRESH:

1 Q. So those notes document what your attorneys
2 told you and not your own individual thoughts?

3 A. Those are what we were talking about in our
4 discussion.

5 MR. GREEN: They weren't topics to discuss to
6 say. They were just points we were talking about as
7 far as preparing for the deposition.

8 MR. TRESH: All right. Can we go off the
9 record for a moment?

10 (Off the record.)

11 BY MR. TRESH:

12 Q. Did you do anything else to prepare for the
13 deposition?

14 A. I don't think so.

15 Q. Okay. Is there anything else that you
16 brought with you today? I see some blue and some pink
17 papers.

18 A. That's just code sections.

19 Q. Okay. Ms. Major, what is your current
20 position? Who are you employed by?

21 A. The South Carolina Department of Revenue.

22 Q. And in what capacity?

23 A. My title is revenue law consultant for the
24 Office of General Counsel for Policy.

25 Q. Do you act as an attorney with the Department

1 of Revenue, or are you a consultant to the Department
2 of Revenue?

3 A. No. I am in the General Counsel's Office at
4 the Department of Revenue.

5 Q. Okay.

6 A. In the policy department. There are two
7 parts. There's the litigation -- there's the
8 Litigation General Counsel's Office and there's a
9 Policy Department General Counsel's Office.

10 Q. In your position with the Department of
11 Revenue, are you acting as an attorney?

12 A. Yes.

13 Q. And do you have any professional licenses?

14 A. Yes. I have a -- I have a J.D. from
15 South Carolina -- I mean, I'm a licensed member of the
16 bar in South Carolina. And I am a CPA in
17 South Carolina.

18 Q. Okay. And before your current position with
19 South Carolina Department of Revenue, where were you
20 employed before that or were you employed before that?

21 A. Yes. I've come -- I've been at the
22 Department of Revenue twice. I originally came in
23 1989, and I left in 2002 and went to work for the
24 South Carolina Retirement System. And that's with the
25 state also. And then I left there in 2007 and came

1 back to the Department of Revenue.

2 Q. In what capacity were you employed at the
3 retirement system?

4 A. I was an attorney.

5 Q. Okay. Did you always hold the same job title
6 both before and after in both stints at the Department
7 of Revenue?

8 A. No. I was originally hired in 1989 in the
9 policy division where I am now. And then from 2002 --
10 wait a minute. 2002 -- no, from 1989 I went to the
11 Department. 1992, I transferred to the litigation
12 division. I was in the litigation division from 1992
13 to 2002. Then I went to work at retirement, and then I
14 came back into the policy division.

15 Q. Okay. Give me a general description of your
16 job duties while you were employed in the policy
17 section of South Carolina Department of Revenue.

18 A. We draft policy documents, like revenue
19 rulings and revenue procedures and that sort of thing;
20 draft legislation; advice, provide legal advice to
21 employees in the Department and the director and the
22 upper management; and research projects. That sort of
23 thing.

24 Q. Okay. Have you ever been involved in audits
25 of taxpayers?

1 A. No. Only from a standpoint of litigating
2 cases that came from audit, but I have not ever
3 audited.

4 Q. Have you been involved in audits?

5 A. No.

6 Q. Has an auditor ever come to you for policy
7 advice or for advice on the law in your role as policy
8 counsel for the Department?

9 A. Yes.

10 Q. And you have rendered that advice?

11 A. Yes.

12 Q. Can you distinguish for me being involved in
13 an audit and rendering advice on an audit, what the
14 difference would be?

15 A. Not directly -- not being directly involved
16 in any particular audit or any particular things with
17 regard to that audit, but more general legal advice
18 about an issue.

19 Q. So an auditor would come to you and say,
20 "I've got a tax issue for a specific taxpayer."

21 A. Well, they might not even tell me who the
22 taxpayer is. They might just say, "What do you think
23 about this issue?"

24 Q. Were there times when they told you who the
25 taxpayer was?

1 A. I would imagine there were. I don't know
2 specifically, but probably.

3 Q. And was the advice that you'd given always
4 followed?

5 A. I don't know.

6 Q. Were you ever involved in Duke's audit?

7 A. No.

8 Q. Neither the sales tax or the income tax or
9 any particular product?

10 A. No.

11 Q. Indirectly speaking, did anybody within the
12 Department of Revenue ever ask for your opinion on
13 anything related to Duke?

14 A. Not that I know of.

15 Q. Are you aware that Duke Energy had a sales
16 tax audit going on for periods in the '90s and 2000s?

17 A. I wasn't aware of that until I read the
18 prehearing statements.

19 Q. Were you aware that Duke had an income tax
20 controversy with the Department the years 1978 through
21 2001?

22 A. I wasn't aware of it until this case came up
23 now. I mean, I wasn't aware of it at the time.

24 Q. So no one within the Department ever asked
25 for your advice as counsel to the Department and the

1 policy section relating to any matters concerning Duke,
2 including whether gross receipts should be applied to
3 gross -- or whether the receipts should be included in
4 the sales factor denominator?

5 A. Correct. Not that I'm aware of.

6 Q. Have you ever rendered advice, policy advice
7 on whether sales of securities should be included in
8 the denominator at gross or at net?

9 A. I have discussed it with people before and
10 before this case, and I would have -- and I concluded
11 that they shouldn't be, but it was net. I mean, there
12 have been discussions in the Department. I've been
13 party to those discussions.

14 Q. And were you the lead in those discussions,
15 in other words, were you forming the department's views
16 on those discussions?

17 A. No.

18 Q. Who would have been?

19 A. I think that most of the discussions were
20 probably "What have we been doing?" I mean, "What has
21 been our position in the past?"

22 Q. Was there somebody that would have formed
23 that position at the Department?

24 A. If there was somebody who formed the position
25 at the Department, it would have been before my time.

1 Before 1989.

2 Q. Okay. So you're not aware of anybody who
3 might have determined that was the position of the
4 Department?

5 A. Well, I know there's a Commission decision
6 from the '80s where the commissioners decided that
7 those types of sales should be included at gain and not
8 at gross. So that was -- and that Commission decision
9 has been cited subsequently for that being the
10 department's position. But that Commission decision
11 was before I came to the Department.

12 Q. Okay. Are you familiar with the different
13 apportionment methodologies that taxpayers are required
14 to use in apportioning their multistate income to
15 South Carolina?

16 A. Yes.

17 MR. TRESH: I'll pass you a document in a
18 moment.

19 (PETITIONER'S EXH. 1, South Carolina Ann.
20 Section 12-6-2290 (2005), was marked for
21 identification.)

22 BY MR. TRESH:

23 Q. What I've just passed to you is
24 South Carolina Code Section 12-6-2290; is that correct?

25 A. Yes.

1 Q. And are you familiar with the statute?

2 A. Yes.

3 Q. Okay. And what is the effect of the statute
4 in your view?

5 A. It's saying that someone who is not involved
6 in the activities described in 2250, which is related
7 to tangible personal property or Section 12-6-2310,
8 which I think are special apportionment factors for
9 special industries, should use gross receipts in
10 dividing up their multistate income.

11 Q. In the first section of 12-6-2290 that's in
12 front of you, it uses the term "gross receipts"; is
13 that correct?

14 A. Yes.

15 Q. And the term "total gross receipts"?

16 A. Yes.

17 Q. What's your understanding of the term "gross
18 receipts"?

19 A. That gross receipts includes for -- gross
20 receipts is different things for different types of
21 income. For services, it's going to be the amount paid
22 for services. For sales of assets, it's going -- used
23 in a trade or business, it's going to be based on net
24 gains. For --

25 Q. Go ahead, I'm sorry.

1 A. So for different types of income, it's --

2 Q. So for assets -- you said a moment ago for
3 assets it was net gains; is that correct? Sale of
4 assets?

5 A. Correct.

6 Q. So if I was in the business of selling desks
7 and I sold that desk for a hundred dollars --

8 A. For inventory? Out of inventory?

9 Q. You said for sales of assets, it would be
10 included at net gains. If I sold a desk, would it be?

11 A. No. If it's inventory, then it's going to be
12 at the gross sales price.

13 Q. Is there somewhere in South Carolina law
14 where you're aware of that it says that inventory is
15 somehow treated differently than other sales of assets?

16 A. No. The only reason why I didn't bring up
17 the inventory in the sales is because that was under
18 the three-factor formula and so it was the sales.

19 Q. Under the single factor is --

20 A. But it's treated the same way.

21 Q. Okay. And so is there any place in
22 South Carolina law where it says that it makes a
23 distinction in applying the term gross receipts, is
24 there a difference between inventory and noninventory
25 items?

1 A. Now there is in 12-6-2295.

2 Q. Was there prior to 2007?

3 A. No.

4 Q. And the term "total gross receipts," that
5 appears in this statute, too, right?

6 A. Yes.

7 Q. Is there a difference, in your view, between
8 gross receipts and total gross receipts?

9 A. I think total gross receipts just means
10 you're adding it up from all of the states.

11 Q. Okay. And does the term "total gross
12 receipts," would it have any different meaning than
13 "entire gross receipts"?

14 MR. GREEN: Objection as to form.

15 BY MR. TRESH:

16 Q. Would there be a different meaning ascribed
17 to the term "total gross receipts" in South Carolina
18 statutes as "entire gross receipts" in South Carolina
19 statutes?

20 A. Our statutes says "total gross receipts."
21 I've never considered what if it said entire gross
22 receipts. But I wouldn't treat it any differently, I
23 don't think.

24 Q. In your view "entire" and "total" mean the
25 same thing?

1 MR. GREEN: Objection as to form.

2 THE WITNESS: I think total gross receipts
3 means that you're adding up all of the gross receipts
4 from all of the states. That's what the total means.

5 BY MR. TRESH:

6 Q. What would entire mean?

7 A. I have no idea.

8 MR. TRESH: Okay.

9 (PETITIONER'S EXH. 2, South Carolina Ann.
10 Section 12-6-2290 (2011), was marked for
11 identification.)

12 (PETITIONER'S EXH. 3, South Carolina Ann.
13 Section 12-6-2295 (2011), was marked for
14 identification.)

15 BY MR. TRESH:

16 Q. Okay. I've handed you two statutes. The
17 first is South Carolina Code Section 12-6-2290; is that
18 correct?

19 A. Correct.

20 Q. Okay. Do you have any knowledge relating to
21 the amendment of South Carolina Code Section 12-6-2290
22 amended to include a reference to 12-6-2295, which is
23 the second statute you have in front of you, do you
24 have any knowledge pertaining to these amendments that
25 took place in 2007?

1 A. Yes.

2 Q. Okay. Are you aware of what substantive
3 changes were made?

4 A. What was happening at that point in time is
5 we were going from a three-factor state to a
6 single-factor state, so they were phasing out the
7 property and the payroll part of the three-factor
8 formula. Because that was -- well, it was kind of a
9 four-factor formula, two times sales and property and
10 payroll.

11 And then 2295 was added in to codify, for the
12 most part, what the Department was -- what the
13 Department's view of sales and gross receipts were.

14 Q. Now, you testified a moment ago that the term
15 "gross receipts" or "total gross receipts" meant all
16 gross receipts, correct?

17 A. It means adding up all of the gross receipts
18 from all of the states.

19 Q. Okay. And why would these amendments that
20 took place, we look over at 12-6-2295, the statute goes
21 ahead and excludes a number of items from what's
22 included in gross receipts; is that correct?

23 A. That's correct.

24 Q. Why would the legislature have needed to act,
25 in your view, why would the statute have been passed if

1 the prior statute, the one that said "total gross
2 receipts include all the gross receipts," why would all
3 these items have to be now excluded via statute?

4 A. I don't think they had to. I think it was
5 just a clarification of what the longstanding
6 administrative policy was of the Department and what we
7 had already been doing. So as long as we were making
8 changes to the statute, it was decided to add this in.

9 Q. Does it say anywhere in the statute that this
10 is a clarification?

11 A. No, it does not.

12 Q. Would it be typical -- are there statutes in
13 South Carolina where they do say it's a clarification
14 when they mean to clarify the law?

15 A. Sometimes, but rarely.

16 Q. If I look at this statute and I see -- if I
17 point you to section (A)(3) or (A)(4)(a). So it says,
18 "For purposes of this subsection, property used in the
19 trade or business means property subject to the
20 allowance for depreciation, real property used in the
21 trade or business, and intangible property used in the
22 trade or business, which is" -- and then it holds a
23 number of different items, right?

24 "Receipts from the sale of intangible
25 property, property held by the business primarily for

1 sale."

2 Is that correct?

3 A. Which is the property -- which is the kind of
4 property that would be included in the inventory?

5 Q. Yeah.

6 A. Which is not the kind of property -- yeah.

7 Q. Okay. And would it be your testimony that
8 everything in 12-6-2295 was a clarification, or were
9 some of these changes?

10 A. I would say that some of them -- some of them
11 were changes. In (B), I don't think we always had all
12 of these. Meaning these were from an MTC model
13 regulation, and some of them were things that we were
14 always doing. Like one was something we were always
15 doing; two is something that we had already been doing;
16 three was something we had already been doing; four,
17 the damages amount, I think that -- I'm not sure what
18 we were doing in that case. Pension reversions, I'm
19 not sure what we were doing in that.

20 So some of these things I don't think had
21 necessarily come up, but the decision was made to go
22 uniformly with the MTC rules.

23 Q. So some of these items -- prior to this
24 enactment in 2007, some of these items, it would be
25 your testimony that it reflected the position of the

1 Department and some of these items were just
2 statutorily enacted?

3 A. I wouldn't say they worked -- I would say the
4 Department didn't necessarily have a position on some
5 of them.

6 Q. So --

7 A. Meaning that like pension reversion, I'm not
8 sure that had ever come up. So I don't think that we
9 had a position on pension reversions, for example.

10 Q. Would it be your testimony that none of these
11 items in here would reflect a change to the
12 Department's policies prior to the enactment of this
13 statute?

14 MR. GREEN: Objection as to form.

15 BY MR. TRESH:

16 Q. Let me rephrase. Is it your testimony or do
17 you believe in your role as policy --

18 A. Right.

19 Q. -- for the Department, policy counsel --

20 A. Right.

21 Q. -- that all of the items in (B) (1) through
22 (10) would have reflected the Department's policy? In
23 other words, that none of them reflected a change in
24 law?

25 MR. GREEN: Objection as to form..

1 THE WITNESS: I would say that there are not
2 all longstanding administrative policy with regard to
3 all of those, and that some of them had not come up
4 before. And, for example, damages, I do think that
5 they -- that there might have been cases where we
6 actually looked at the damages and decided what the
7 damages -- what kind of damages they were. And we
8 might have included them in the factors before.

9 But for the most part, I would say either
10 they hadn't been considered before or they were the
11 Department's position.

12 BY MR. TRESH:

13 Q. So prior to 2007 some damages would have been
14 included in gross receipts and some damages wouldn't
15 have?

16 A. I think that's possible. Yes.

17 Q. Okay. And so how would a taxpayer have known
18 which portions of this statute reflected a change,
19 which portions reflected a clarification of
20 longstanding Department policy, and which portions of
21 this statute represented just new law, new policy,
22 whatsoever, things the Department hadn't considered in
23 your view?

24 A. I don't know.

25 Q. Is there any --

1 A. There's nothing within the scope of the
2 statute itself that would tell you that.

3 Q. That would tell you which was a change and
4 which was a clarification and which was just new?

5 A. Correct.

6 Q. Prior to 2007, had other taxpayers ever
7 requested a refund of South Carolina income taxes based
8 upon the inclusion of sales of treasury receipts in
9 their sales factor denominator?

10 A. Not that I'm aware of.

11 Q. And prior to 2007, had the Department ever
12 ruled that a taxpayer was liable for tax, in other
13 words, issued an assessment because the taxpayer had
14 included sales of treasury receipts in their sales
15 factor denominator?

16 A. Repeat that.

17 Q. Prior to 2007 had the Department ever issued
18 an assessment of tax because it found that a taxpayer
19 improperly included sales of securities in their sales
20 factor denominator?

21 A. I don't know.

22 Q. So you testified a moment ago that it was
23 longstanding Department policy to exclude sales of
24 securities from the sales factor denominator; is that
25 correct?

1 A. No.

2 Q. Okay.

3 A. We've done -- we've used net gains.

4 Q. Okay. Had there ever been a situation where
5 a taxpayer was denied a refund for including the sales
6 of securities based upon gross instead of net?

7 A. Say that again. I'm sorry.

8 Q. Sure. Are you aware of any situation where
9 the South Carolina Department of Revenue denied a
10 taxpayer a refund based upon its inclusion of sales of
11 securities at gross as opposed to net?

12 A. Am I aware that there has been a denial?

13 Q. Either a denial of a refund or an assessment
14 of tax?

15 A. I don't know.

16 Q. Okay. And so what is the Department's --
17 you've testified it was the Department's longstanding
18 policy prior to 2007 to include the sales of securities
19 at net as opposed to gross. What is that longstanding
20 policy based upon if the issue had never come before
21 the Department of Revenue?

22 A. Well, it did in the Commission decision, that
23 early Commission decision in the 1980s.

24 Q. How did that decision come about? Was it the
25 result of a refund, an assessment?

1 A. That would have been as the result of some of
2 audit. I mean, that would have been how it got to the
3 Commission.

4 Q. That was my question.

5 A. Yes.

6 Q. So you are aware of a situation?

7 A. Yes, I am.

8 Q. Okay. Other than that decision, are you
9 aware any of situation?

10 A. No. That one, and then there's one about
11 foreign exchange contracts. And those went in at net.
12 So those two.

13 Q. You mentioned a moment ago that the
14 Department's policy, different types of damages are
15 included at net versus gross. Can you explain what
16 that distinction would be made upon -- made on?

17 A. No. I mean, I would assume it would be based
18 on whether it would normally -- the damages related to
19 something that would normally be included in the
20 numerator or denominator. There is one Commission
21 decision that deals with damages, I think.

22 Q. What would be the -- I mean, you were counsel
23 to the Department of Revenue for policy, what would be
24 the policy reason for including some damages but not
25 others?

1 A. Well, perhaps if the damages related to
2 something totally unrelated. I don't -- to what would
3 be normally going on, I don't -- I don't know.

4 Q. So an extraordinary event perhaps?

5 A. Perhaps. I mean, perhaps. But if there's
6 some -- the particular case in here was a breach of
7 contract that had to do with sales of something that
8 normally happened in the ordinary course of their
9 business. But I'm not aware of -- I am not aware of
10 what's been done in the past with regard to damages in
11 general, and I've not ever been -- I've not really had
12 any discussions about it.

13 Q. And so why would damages -- let's assume they
14 are related to something that goes on, in your words,
15 part of the ordinary course of business. Why would
16 damages be treated differently, from a policy
17 perspective, than gross receipts from the sales of
18 securities?

19 A. I think that the reason why damages was put
20 into this section as an exclusion is because you don't
21 want to have to make those determinations as to what
22 damages go in and what damages don't, and as a general
23 rule, it's not going to be that big of a deal.

24 Q. I completely understand why it's in that
25 section, but why is a policy matter prior to the

1 adoption of this statute in 2007, why is a policy
2 matter with damages occurring in the ordinary course be
3 treated any differently than sales of securities?

4 A. Well, the sales of securities, there's no
5 gain or loss with regard to damages. I mean, they're
6 just two totally different things.

7 Q. So if I were to go ahead and have damages
8 relative to breach of contract, I can't have any gain
9 on that sale that my contract was breached, I wouldn't
10 have any gain on that?

11 A. I don't know.

12 Q. So is that what you stated why the
13 Department -- is that the policy reason why the
14 Department would have treated those two items
15 differently because --

16 A. I don't know. I'm just saying that I don't
17 -- that I know that there is -- that damages is back
18 here. And I know that in the past we have included
19 damages, but now we are excluding them. So I know that
20 we have not been totally consistent in terms of that,
21 that that is a change from what we did in one
22 Commission decision.

23 Q. And would it be fair to say that the
24 Department had not been consistent in interpreting the
25 term "gross receipts" prior to 2007?

1 A. No.

2 MR. GREEN: Objection as to form.

3 BY MR. TRESH:

4 Q. Had you been consistent in applying what
5 damages were included and what damages were excluded
6 from gross receipts?

7 MR. GREEN: Objection as to form.

8 THE WITNESS: I don't know. I would assume
9 so. And when I say I assume so, I would assume they
10 were consistent. That they had a consistent reason why
11 they were putting them in or taking them out.

12 BY MR. TRESH:

13 Q. You were counsel for policy, would you have
14 been privy to the reasons on why something was included
15 or excluded in gross receipts, would you have been
16 consulted?

17 MR. GREEN: Objection as to form.

18 THE WITNESS: I was not ever consulted. I
19 don't know if the issue ever came up.

20 BY MR. TRESH:

21 Q. Prior to 2007 when you looked at the statute
22 that I handed you a couple of moments ago, when you
23 read the term "gross receipts," would you have any
24 reason to believe that gross would mean anything less
25 than all of the taxpayer's receipts?

1 A. I think when you dig into what different
2 things are in receipts and deal with it, yeah, I don't
3 think that you would -- it's not defined. Gross
4 receipts hasn't been defined here. So I think that the
5 term is a very general term, and it's not defined.

6 Q. So what would -- what in the term "gross
7 receipts" would lead you to the conclude that some
8 receipts ought to be excluded?

9 MR. GREEN: Can we go off the record just a
10 second.

11 (Off the record.)

12 BY MR. TRESH:

13 Q. Let me ask you a question about the
14 Department policy. Are all Department policies
15 typically in writing?

16 A. I don't think so.

17 Q. So there are some policies that are written,
18 some policies that are not written?

19 A. Yes.

20 Q. Okay. And with respect to the term "gross
21 receipts," what was the Department's policy prior to
22 2007 with respect to determining whether a sale of
23 something, receipts from the sale of something were in
24 gross receipts or not in gross receipts?

25 A. The policy would be that we -- that the net

1 gains would be in gross receipts, and it would be based
2 on the commission decision that was issued. And that
3 commission decision says it, and it says that it's been
4 the Department's longstanding policy that that's what
5 we've done.

6 Q. I guess what I'm asking, if we can step away
7 from securities for a minute, sales of securities.

8 A. Okay.

9 Q. There was a statute in place, we agree, that
10 said the term "total gross receipts."

11 A. Right.

12 Q. What was the Department's policy with regard
13 to what receipts were included and what receipts were
14 excluded? Not just securities, but what was the policy
15 behind deciding what was gross and what was not gross?
16 Was there a policy?

17 A. Normal inventory items would be gross.
18 Receipts from use of intangibles would be gross. Sales
19 of items for the most part are going to be net.

20 Q. What in the statute tells you that from the
21 Department setting policy?

22 A. The statute itself doesn't define gross
23 receipts, so there's something in the statute that
24 tells you that.

25 Q. Nothing in the statute that tells you that.

1 Okay.

2 Was it ever discussed as a matter of policy
3 within the Department, if I go to the amendments made
4 in 12-6-2295, those items 1 through 10 that we were
5 looking at, did the Department articulate a policy on
6 each of those items, written or nonwritten, prior to
7 2007?

8 A. By articulate, do you mean did we have a
9 policy on them?

10 Q. Yes.

11 A. We had a policy on repayment of the number 1.

12 Q. Was that policy written or verbal?

13 A. It would be based, at least in part, on the
14 commission decision. In 2, we would have had a policy
15 on that.

16 Q. Written or verbal?

17 A. Probably both. I don't know that we -- I
18 don't -- tax refunds and other tax benefit recoveries,
19 I think the Department would have had a position on
20 that which would not have necessarily been written.

21 Q. So that was verbal.

22 Would taxpayers have any means of knowing
23 about a verbal policy?

24 A. They could.

25 Q. How would they know?

1 A. From talking to people in the Department.

2 Q. If a taxpayer didn't talk to somebody in the
3 Department, would they have any means of knowing about
4 a verbal policy?

5 A. I don't know.

6 Q. You all didn't hold teleconferences to
7 announce these verbal policies or anything like that?

8 A. Not that I know of. I don't think we
9 actually -- sometimes we have classes on corporate
10 income. I don't know whether they would come up in
11 those classes or not. We do hold classes for the
12 public, but I don't know whether that's discussed or
13 not.

14 (PETITIONER'S EXH. 4, South Carolina Code
15 Section 65-606, was marked for identification.)

16 BY MR. TRESH:

17 Q. Okay. I just passed you an exhibit,
18 South Carolina Code Section 65-606, 1953; is that
19 correct?

20 A. I don't know that it's 19--- yeah. Yes.

21 Q. Okay. If you go to the second paragraph, it
22 begins, "Section 65-606 --"

23 A. Yes.

24 Q. "-- in addition to the license fee provided
25 by Section 65-605, and any and all other license taxes

1 and fees or taxes of whatever kind, is hereby levied an
2 annual license fee of three mills upon the entire gross
3 receipts from the business within South Carolina."

4 Is that correct?

5 A. Yes.

6 Q. Has it always been the Department's position
7 that the license fee includes or is imposed on the
8 entire gross receipts of the taxpayer?

9 A. It is imposed on -- depending on what you
10 mean by "entire gross receipts," yes.

11 Q. Okay. And in the context of this license
12 fee --

13 A. Right.

14 Q. -- what would the Department have included in
15 gross receipts?

16 A. Under the license fee, the Department has in
17 the past included all -- has included income from
18 customer service, income from -- income from all other
19 businesses that were done by the business. In one case
20 they included the gross sales of a piece of real estate
21 in South Carolina. But even in this definition for
22 securities and sales of treasury functions and bonds
23 and loans, they did not include the principal amounts.

24 Q. Is there anything that says that?

25 A. The briefs associated with the Duke case.

1 Q. And so it's your position that the Department
2 would have excluded sales of securities in which --

3 A. Net gain.

4 Q. Net gain.

5 Which Duke case was that?

6 A. The one in 1987. Is that the year?

7 Q. So there was a Duke case in 1985.

8 A. If you have a copy of the case, I can look at
9 it.

10 MR. GREEN: I just want to know note, too, I
11 don't think there was anything specific referenced in
12 the 30(b)(6) notice about license taxes. I just note
13 that for the record.

14 MR. TRESH: And I will be cognizant to stay
15 on the term "gross receipts."

16 (PETITIONER'S EXH. 5, A Finding Concerning
17 the License Fee Liability Under Section 12-19-110 of
18 Duke Power Company, was marked for identification.)

19 BY MR. TRESH:

20 Q. I believe the case that you're referring to
21 from 1987 originated with the South Carolina Tax
22 Commission in 1985. I've handed you a copy of the
23 South Carolina Tax Commission's opinion in the matter
24 of Duke Power Company versus South Carolina Tax
25 Commission; is that correct?

1 A. Yes.

2 Q. Okay. Were you involved in the issuance of
3 this decision?

4 A. No. This is before I was at the Department.

5 Q. Okay. And were you involved in any of the
6 subsequent appeals of this decision?

7 A. No. The case was concluded before I got to
8 the Department.

9 Q. Were there any discussions among the
10 Department personnel that you were involved in after
11 this decision?

12 A. No.

13 Q. Okay. In this commission decision --

14 A. I have to say I've not read this decision in
15 whole. Will you give me a minute to read it?

16 Q. Absolutely.

17 A. I think what I have is a summary.

18 Have you all seen --

19 MR. GREEN: I've not seen this form of it.
20 Take your time. This may be what you've seen before,
21 it's just a different format.

22 THE WITNESS: I just think that mine is an
23 abbreviated version of this.

24 Okay. It's the same decision. It's just
25 more of it.

1 BY MR. TRESH:

2 Q. Okay. I'll note that this was produced to us
3 by the Department of Revenue.

4 A. Okay. I just haven't seen it. I've seen,
5 like I said, an abbreviated form of this.

6 Q. If I could ask you to turn to page 5 of the
7 decision. And focusing on the second paragraph,
8 South Carolina Tax Commission says -- Is it correct
9 that I'm looking in the middle of the second paragraph,
10 "The license fee must be levied upon gross receipts,
11 not net receipts. The two are something separate and
12 apart. Gross receipts have been defined to mean the
13 whole receipts as opposed to the net receipts"?

14 A. Yes.

15 Q. Is there any reason why given the language in
16 this Tax Commission decision that the Department would
17 interpret the term "gross receipts" to mean net
18 receipts in the income tax context from a policy
19 perspective?

20 A. Well, you're doing two totally different
21 things. This is determining a tax base for a license
22 fee, so you're trying to determine what the tax base
23 is. And for apportionment, you're trying to determine
24 what part of -- how to divide up the income between
25 various states. So they're not serving the same

1 purpose. This one is, like I said, determining a base.

2 The other is to try to -- is to as the one of
3 the earlier codes, 2210 I think says, what you're
4 trying to do with regard to apportionment is to
5 determine the amount that reasonably represents the
6 business done in South Carolina. And that's not what
7 you're trying to do here.

8 Q. So if the legislature -- you've acknowledged
9 that the legislature used those terms, those words,
10 "gross receipts" in both the income tax statute and
11 license tax statute, correct?

12 A. Yes, I do.

13 Q. And you acknowledge that the court in this
14 case said that gross receipts and net receipts are two
15 different things, correct?

16 A. Yes.

17 Q. So why, as a matter of policy, would the
18 Department take those words, those same words and
19 interpret them differently? In other words, I
20 understand the difference between tax base and
21 apportionment, why does that matter for interpreting
22 gross receipts as a matter of policy for the
23 Department?

24 A. As a matter of longstanding administrative
25 policy for the Department, there is a longstanding

1 administrative policy that occurred before this case
2 that said that we were going to look at net gains
3 instead of gross because the gross is going to
4 distort -- is going to distort your apportionment
5 factor. And it doesn't make sense. It leads to absurd
6 results.

7 So we're going to interpret it in a way so
8 that it reasonably -- we interpret gross receipts in a
9 way that will make it reasonably represent, which is
10 what the statute says you're supposed to be doing, the
11 amount of income that should be taxed to the state.

12 Q. That's what I was getting at. So the
13 reason -- so the Department's policy behind including
14 sales of securities at net would be that to include
15 them at gross would be distortive; is that correct?

16 A. It's not just distortive. It's not -- it's
17 that when you're looking at that term in terms of what
18 it is that you're doing, that the best way to interpret
19 gross receipts for that is to do it at net. That
20 that's going to give you the most reasonable answer.
21 Otherwise, it's going to result in a -- it can lead to
22 absurd results, so we're going to interpret it in that
23 manner.

24 Q. Can lead to absurd results or will? I other
25 words, would it lead to absurd results in all cases or

1 just some cases?

2 A. I would say most cases.

3 Q. Most cases but not all?

4 A. There could be a case where it doesn't if
5 there's not very much involved, not very much money
6 involved.

7 Q. Sure. And why would -- why would -- okay.

8 So I understand that it was policy, that it
9 could lead to absurd results. Why would the Department
10 interpret those words differently? In other words, was
11 it because you were invoking some sort of Section 18
12 authority?

13 A. No.

14 Q. No. Okay. If the legislature used the same
15 words, is it typical that the Department, as a matter
16 of policy, would interpret the words of the legislature
17 to avoid distortion, is that something that the
18 Department typically did?

19 A. I wouldn't say to avoid distortion, but to
20 arrive at a reasonable -- at the base that most
21 reasonably represents the base that should be taxed in
22 South Carolina.

23 Q. Okay. So it wasn't necessarily that the
24 words "gross receipts" meant something different in the
25 sales and income tax -- in the income tax versus

1 license tax context, it was more that in the
2 Department's view, sometimes it might lead to absurd
3 results and therefore -- or often it would lead to
4 absurd results and, therefore, we're going to interpret
5 it in this other manner?

6 MR. GREEN: Objection as to form.

7 THE WITNESS: When you're interpreting a
8 statute, you need to look at the whole series of what
9 you're doing. And in doing that, then the terms aren't
10 defined. And in doing that, you define the terms in a
11 way that is going to accomplish what the whole set of
12 statutes is set out to do.

13 BY MR. TRESH:

14 Q. So let's go back to the statute -- in your
15 position statute prior to 1997. Prior to 2007, excuse
16 me. So I'm looking at 12-6-2290.

17 A. Uh-huh.

18 Q. It's entitled Apportionment of Remaining Net
19 Income where Principal Profits or Income Derived from
20 Sources Not Otherwise Described in this Chapter.

21 A. Right.

22 Q. And this paragraph underneath there that
23 talks about, "If the principal profits or income of a
24 taxpayer are derived from sources other than those
25 described in 12-6-2250 or Section 12-6-2310, the

1 taxpayer shall apportion its remaining net income use
2 of a fraction which the numerator is the gross
3 receipts from within this state during the taxable
4 year. And the denominator is total gross receipts from
5 everywhere during the taxable year."

6 Interpreting the term "gross receipts"
7 differently here than you did in the license fee, what
8 other portions of the South Carolina income code would
9 you have taken into consideration? In other words,
10 this is fairly clear.

11 A. 12-6-2210.

12 Q. Which says what?

13 A. Which says that what you need to do is you
14 need to determine that income will be -- if you're
15 doing business in more than one state, income should be
16 divided up so that it reasonably represents the amount
17 of income earned within the state.

18 Q. And is 12-6-2210 a provision that invoked, is
19 that -- is that typically a distortion provision? In
20 other words, where any taxpayer for any reason has --
21 uses the standard apportionment formula and it doesn't
22 fairly reflect the business in South Carolina, the
23 Department would invoke 12-6-2210 to adjust their
24 apportionment to have it reflect South Carolina income?

25 A. It has been used by both taxpayers and the

1 Department.

2 Q. Did the Department use 12-6-2210 in this
3 case?

4 A. I don't know.

5 Q. And so it would have been -- in interpreting
6 12-6-2290 prior to 2007, the Department would have used
7 12-6-2210 as part of the basis in which they were
8 interpreting the statute, right?

9 A. Interpreting it within the context of what
10 it's telling you that you're supposed to do, yes.

11 Q. So had 12-6-2210 not existed, would there
12 have been any basis -- if 12-6-2210 doesn't exist --

13 MR. GREEN: Objection as to form.

14 BY MR. TRESH:

15 Q. In the absence of 12-6-2210, what would be
16 the basis for interpreting -- if 12-6-2210 did not
17 apply, what would be the basis for interpreting gross
18 receipts differently in the income tax context as
19 opposed to the license tax context?

20 A. I think just what you're trying to do, which
21 is divide up -- one of them is dividing up the income
22 among states and the other is just a tax base.

23 (PETITIONER'S EXH. 6, I-D-351 Continued and
24 I-D-352, was marked for identification.)

25 BY MR. TRESH:

1 Q. I handed you excerpts from a letter to Duke
2 Power taken from the Department to Duke Power Company
3 dated September 14th, 1984, from the South Carolina Tax
4 Commission.

5 A. That's not what I have.

6 MR. TRESH: I think we got the wrong exhibit,
7 sorry.

8 (PETITIONER'S EXH. 7, Letter Dated September
9 14, 1984, was marked for identification.)

10 THE WITNESS: I've not seen this before.

11 BY MR. TRESH:

12 Q. Okay. And if I can direct -- you want to
13 take a minute to look it over?

14 A. Yes.

15 Can I just meet with my counsel since I've
16 not seen this?

17 MR. TRESH: No.

18 MR. GREEN: The rule says if she hadn't seen
19 a document before, that she can talk to me real quick.

20 THE WITNESS: And I may not need to. I just
21 need to read it.

22 MR. TRESH: Okay.

23 (A recess transpired.)

24 BY MR. TRESH:

25 Q. So I've handed you a letter from the

1 South Carolina Commission to Duke Energy.

2 A. Yeah.

3 Q. Duke Power Company dated September 14th,
4 1984, correct?

5 A. Correct.

6 Q. Did you draft or play any role in drafting
7 this document?

8 A. No.

9 Q. In page 5 -- actually, excuse me, if you look
10 at the second paragraph.

11 A. Right.

12 Q. You know it says, "It is the Division's
13 position that the phrase 'entire gross receipts' was in
14 the original act and further emphasizes the intent to
15 include all receipts."

16 Is that correct?

17 A. That's what this -- that's what the language
18 says in this letter, yes.

19 Q. Okay. And then it goes on to say, "In
20 addition to Regulation 117-89.1 says gross receipts
21 shall include all receipts from operations within this
22 state, other profit and loss items with a local situs
23 and income from intangibles used in the business within
24 this state."

25 Is this correct?

1 A. Yes.

2 Q. "The inclusion of other profit and loss items
3 and income from intangibles would clearly include
4 receipts in addition to customer charges."

5 Is that correct?

6 A. That is correct.

7 Q. And this was a letter from the South Carolina
8 Tax Commission explaining to Duke Energy what should
9 and should not be included in the definition of gross
10 receipts for license tax purposes; is that correct?

11 A. That is correct.

12 Q. Okay. And is this letter consistent with the
13 way you -- with your understanding from a policy
14 perspective of how the Department interpreted gross
15 receipts for license tax purposes?

16 A. Yes. Except for that with regard to
17 intangibles and sales of intangibles, those were
18 included at net.

19 Q. In this case?

20 A. In this case.

21 Q. In the South Carolina Tax Commission case?

22 A. Yes.

23 Q. And how do you know that?

24 A. The briefs from the Supreme Court, the case,
25 the Supreme Court decision, the Supreme Court briefs.

1 Q. Okay. And are you aware of any situation,
2 other than this case, this Duke present controversy,
3 where the Department took the position that gross means
4 anything other than all? In other words, are there
5 other statutes outside of the income tax context where
6 you would say that gross somehow is qualified and means
7 something other than all?

8 MR. GREEN: Objection as to form.

9 THE WITNESS: I am not aware of any gross
10 receipts. If you show me another section that says
11 gross receipts in it, I can look at it. But I don't
12 know of any other sections that have gross receipts in
13 it except for this one and the license fee section and
14 the apportionment section.

15 MR. TRESH: Okay. You want to give us a
16 minute, Tracey?

17 MR. GREEN: Sure.

18 (A recess transpired.)

19 BY MR. TRESH:

20 Q. You had mentioned earlier Section 12-6-2210
21 as interpreting 12-6-2290 to fairly reflect income.
22 Are there other examples of statutes where 12-6-2210
23 has been used to interpret the words of this statute as
24 a matter of policy? In other words, where the
25 Department made some equitable judgment about what

1 fairly reflects or doesn't fairly reflect a taxpayer's
2 apportionment?

3 A. There's a couple of cases -- let me tell you
4 what the cases are. There's a case called Hercules
5 that deals with depreciation and gain from --
6 allocation of gain from the sale of property in the
7 state. And the state had taxed the entire gain because
8 we allocate gains of real property to the state of
9 South Carolina. And there was a lot of depreciation in
10 there.

11 And the taxpayer argued that that didn't
12 reasonably represent what part of the gains should be
13 taxed in South Carolina, that because the depreciation
14 had been taken all over the United States, that you
15 shouldn't tax the whole gain here. And the court said,
16 yeah, that makes sense.

17 Q. Relying on 12-6-2210?

18 A. Yes.

19 Q. So the taxpayer argued as a matter of equity
20 that -- is it true that the Department -- that the
21 taxpayer argued as a matter of equity that the plain
22 words of the statute should be adjusted to fairly
23 reflect their income in that case?

24 A. I don't know because after that -- after that
25 case that's what we did. We always only allocated the

1 gain up to -- we only allocated the gain to what extent
2 it wasn't depreciation recapture. We always did it
3 after that case.

4 There was another case --

5 Q. And is the reason that you did that because
6 you were of the view -- the Department was of the view
7 that to do -- that after the court decision to do
8 otherwise would not have fairly reflected the income of
9 the taxpayer in the state?

10 A. That doing what we did with allocating didn't
11 reasonably represent the part of the business that was
12 done in the state.

13 Q. Okay.

14 A. There's one more case. Kodak. I think the
15 Department in Kodak, Kodak dealt with some safe harbor
16 leases. And the Department's -- if I'm remembering
17 that right. The Department said to take out -- don't
18 consider the safe harbor leases because they were --
19 it -- things didn't reasonably represent -- the
20 apportionment factor didn't reasonably represent with
21 the safe harbor in there. The safe harbor leases and
22 the court said no. The court disagreed with the
23 Department and said no, the apportion factor is fine
24 like it is.

25 Q. So in that case, the Department relying on

1 12-6-2210 made an argument that, "Hey, these ought to
2 come out"?

3 A. Yes.

4 Q. And the court said, "No, the statute as
5 written ought to --" "-- we think it ought to stay in?

6 A. They just said, yes, it should stay in.

7 Q. So in those two cases, the courts -- is it
8 true that in those two cases, in your view, the courts
9 were making an equitable determination about what did
10 or did not fairly reflect the taxpayer's income?

11 A. I think the court was making the -- making a
12 statement as to what reasonably represented what should
13 go into the factors.

14 Q. Okay. You mentioned a few minutes ago the
15 briefs in the Duke Power case, the license tax case.

16 A. Uh-huh.

17 Q. You mentioned that in the briefs, you had
18 read a brief where somebody argued that sales of
19 securities should be included at net; is that true?

20 A. Duke argued the sales of securities should be
21 included at net.

22 Q. And what did the court rule?

23 A. It really wasn't ruled on. I think the
24 Department agreed, so the Department -- because the
25 Department was saying they were at net, also. I don't

1 think it ended up being an issue.

2 Q. I'm trying to understand where you learned
3 that from, if it was in a brief --

4 A. From the briefs.

5 Q. And the Department at some point conceded
6 that issue during the case?

7 A. I don't think they conceded it. It was
8 that -- I would have to look at the briefs again.

9 Q. Where did you get a copy of those briefs?

10 A. From my attorneys.

11 MR. TRESH: We can go off the record for
12 second.

13 (Off the record.)

14 BY MR. TRESH:

15 Q. In preparing for this case, did you review
16 any other information other than the briefs that were
17 on the South Carolina license tax cases? Is there any
18 other information that you reviewed besides the court
19 cases and these briefs?

20 A. No.

21 Q. Okay. And are you aware of any kind of
22 settlement or any kind of stipulation between Duke and
23 the South Carolina Department of Revenue related to
24 these cases -- related to the Supreme Court case --

25 MR. GREEN: Objection as to form.

1 BY MR. TRESH:

2 Q. -- regarding whether gross is in or net?

3 A. No.

4 MR. TRESH: I think we're done.

5 MR. GREEN: Okay. I don't have any
6 questions.

7 (The deposition concluded at 2:48 p.m.)

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1 SIGNATURE OF DEPONENT

2

3 I, the undersigned, SARAH G. MAJOR, do hereby
4 certify that I have read the foregoing deposition and
5 find it to be a true and accurate transcription of my
6 testimony, with the following corrections, if any:

7 PAGE LINE CHANGE REASON

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SARAH G. MAJOR DATE

23

24

25

1 CERTIFICATE OF REPORTER

2 I, Sheri L. Byers, Registered
3 Professional Reporter and Notary Public for the
4 State of South Carolina at Large, do hereby
5 certify:

6 That the foregoing deposition was
7 taken before me on the date and at the time and
8 location stated on page 1 of this transcript; that
9 the deponent was duly sworn to testify to the
10 truth, the whole truth and nothing but the truth;
11 that the testimony of the deponent and all
12 objections made at the time of the examination were
13 recorded stenographically by me and were thereafter
14 transcribed; that the foregoing deposition as typed
15 is a true, accurate and complete record of the
16 testimony of the deponent and of all objections
17 made at the time of the examination to the best of
18 my ability.

19 I further certify that I am neither
20 related to nor counsel for any party to the cause
21 pending or interested in the events thereof.

22 Witness my hand, I have hereunto
23 affixed my official seal this 19th day of March,
24 2012, at Columbia, Richland County, South Carolina.

25

20 Sheri L. Byers,
21 Registered Professional Reporter,
22 Notary Public
23 State of South Carolina at Large
24 My Commission expires:
25 January 5, 2014



1 I N D E X

2		Page
3	Stipulation	3
4	EXAMINATION	
5	BY MR. TRESH	3
6	Signature of Deponent	55
7	Certificate of Reporter	56

8
9

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11 E X H I B I T S

12 Petitioner's

13	1	South Carolina Ann. Section	16
14		12-6-2290 (2005)	
15	2	South Carolina Ann. Section	20
16		12-6-2290 (2011)	
17	3	South Carolina Ann. Section	20
18		12-6-2295 (2011)	
19	4	South Carolina Code Section	35
20		65-606	
21	5	A Finding Concerning the License	37
22		Fee Liability Under Section	
23		12-19-110 of Duke Power Company	
24	6	I-D-351 Continued and I-D-352	45
25	7	Letter Dated September 14, 1984	46

**Deloitte
& Touche**

TAXPAYER DUKE POWER COMPANY

INSTRUCTIONS FOR FILING

AMENDED CORPORATION TAX RETURN FOR PUBLIC UTILITIES

STATE OF SOUTH CAROLINA

FOR THE YEAR ENDED

12-31-78

To be signed and dated by	☒ Officer ☐ General Partner
Amount of Tax	Total tax Less: payments and credits Balance due (overpayment) \$(2,133,065) ☐ Payable in full
Overpayment	☒ Refunded to you \$2,133.065 ☐ Credited to your estimated tax \$ ☐ \$ refunded and \$ credited
Draw check to N/A	NOTE: Your social security number or employer identification number should be entered on your remittance.
Mail return and check (if applicable) to	SC DEPARTMENT OF REVENUE COLUMBIA, SC 29214
Return must be mailed on or before	IMMEDIATELY Certified mail recommended, with return receipt. For metered mail, the meter date is not evidence of timely filing.
Special Instructions	

MISCSTATELTRS



South Carolina Tax Commission
Form 1101-U

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

DO NOT WRITE IN THIS SPACE

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
CORPORATE SECTION
INCOME TAX DIVISION
S. C. TAX COMMISSION
Columbia, S. C. 29214

Return For
Period Ending December 31, 1978

Consolidated Return? YES ☐ NO ☐ Extension Requested
YES ☒ NO ☐

NAME AND ADDRESS

DUKE POWER COMPANY
P O BOX 33189
CHARLOTTE NC 28242
840205520 32 4900

RETURN DUE ON OR
BEFORE

MAR 15 - 1979

20090024

Employer Identification No. Business Code File Number

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2)	\$ 51,417,230
2. Less: Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$
3. NET INCOME OF CORPORATION	\$ 51,417,230
4. Income Tax Due (6% of Line 3)	\$ 3,085,034
5. Tax Withheld (Attach 1203)	\$
6. Credit from PART III LINE 30	\$
7. Paid with Tentative Return	\$
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$ 5,218,099
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$ 2,133,065
10. Interest Due	\$
11. Penalty Due	\$
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$
13. Application: (If Line 8 reflects refund due)	\$
(a) Credited To: Estimate \$	License Fee \$
(b) Refunded \$	2,133,065

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$
16. Estimated Tax (Line 14 Less Line 15)	\$
17. Installment Due - 1/4 of Line 16	\$
18. Credits - (PART I, Line 13 and PART III Line 30)	\$
19. Paid with Tentative Return	\$
20. Balance due with this return (If lines 16 and 19 exceed Line 17 enter "None")	\$

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$ 785,590,037
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$ 785,590
23. Total Gross Receipts (Schedule C - Page 2)	\$ 424,909,608
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$ 1,274,729
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$ 2,060,319
26. Interest Due	10
27. Penalty Due	
28. Less Amount Paid on Tentative - or from PART I Line 13	2,060,000
29. Balance Due on this Return or Over-Payment	\$ 319
30. Application (If Line 29 Refers Refund Due)	
(a) Credited To: Income Tax \$	Estimate \$
(b) Refunded \$	

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$ 2,133,065

A copy of this Corporation Tax Return, together with any other schedule or statement required by the S. C. Internal Revenue Service for this period must be attached and a part of this return, and Corporation Income Tax Payment Corporation must be enclosed with the return and filed with the S. C. Internal Revenue Service for this period. This return is for the purpose of determining the Corporation's liability for the Corporation Income Tax and for the purpose of determining the Corporation's liability for the Corporation License Fee. It is not to be used for any other purpose.

AMENDED

4184

DES00010544

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Income as Shown on Federal Return (Before Loss Carryovers)		\$190,594,756
Additions:		
a. Losses on or Measured by Income	\$	
b. Allowable Contributions		
c. Depreciation		
d. Interest on tax exempt bonds		
e. Repair allowance		
f. Amortization of pollution control		
Total Additions		
Deductions:		
g. Interest on U. S. Obligations	\$	
h. ESOP credit to qualified pension plan		
i. Wages - job development credit		
j.		
k.		
Total Deductions		
Net Difference		
Net Income as Shown on Page 1, Line 1, Part I (or Line 1, Schedule E) See Attached Audit Adjustments		232,963,127

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date December 31, 1978
 1. Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes. **\$ 785,590,037**

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending <u>12/31/78</u>	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):		
Electric	\$1,396,402,648	\$ 420,350,657
Water and transit	3,670,686	1,819,481
Merchandising	7,046,284	2,257,254
Total Operating Revenues	\$1,407,119,618	\$ 424,427,392
Other Receipts, (Itemize):		
Farms and forestry	4,947	
Interest	1,232,559	371,776
Dividends	645,990	
Sale of assets	254,655	110,440
Total Other Receipts	\$ 2,138,151	\$ 482,216
Totals - Note: Enter total on Line 23 Part III Page 1	\$1,409,257,769	\$ 424,909,608

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS**Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION**

	Gross Amounts	Less Related Expenses	Net Amounts Allocable Directly to S. C. and Other States	Net Amounts Allocable Directly to F. C.	Payrolls to Be Excluded from Payroll Factor	Properties to Be Excluded from Property Factor
1. Interest received not connected with business	\$ 296,218	\$	\$ 296,218	\$ 2,509	\$	XXXX XX
2. Dividends received	645,991		645,991			XXXX XX
3. Rents						\$
4. Gains or losses on real property	27,430,909		27,430,909	19,030,015		
5. Gains or losses on intangible personal property	64,279,996		64,279,996			
Investment income directly allocated						
TOTAL INCOME DIRECTLY ALLOCATED			92,653,114	XXXX XX		
INCOME DIRECTLY ALLOCATED TO S. C.			XXX XX	19,032,524	XXXX XX	XXXX XX
TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AMENDED

Schedule E -
COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS

1. Total net income as reconciled (Schedule A, Page 2)	\$ 232,963,127	
2. Less: Income subject to direct allocation to S. C. and other states from Schedule D, Line 7	14,508,511	
3. Total net income subject to apportionment	\$ 218,454,616	
4. Apportionable to S. C. by appropriate ratio from Schedule 17.5171		\$ 38,266,914
5. Add: Income subject to direct allocation to S. C. from Schedule D, Line 8		13,264,190
6. Total net income allocable to S. C. (sum of Lines 4 and 5 above)		\$ 51,531,104
7. Less: Allocable portion of net operating loss brought forward from prior years (Schedule B)		0
8. Less: allowable Contributions (Do Not Exceed 5% of Line 6 minus Line 7)		113,874
9. Total net income subject to tax. Enter on Line 3 Part I Page 1.		\$ 51,417,230

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1 - (PROPERTY, PAYROLL, SALES) - To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY - (TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Period	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	
RATIO OF SALES (Attach Schedule)			
Total of Three Ratios	XXXXXX XX	XXXXXX XX	
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	

Schedule F-2 - (GROSS RECEIPTS) - To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$ 424,799,168	\$ 2,425,050,132	17.5171%
Ratio of Gross Receipts	XXXX XX	XXXX XX	

Schedule F-3 - (RATIO FOR PUBLIC SERVICE CORPORATIONS) - To be filled in by corporations, as designated in Section 12-7-640, S. C. Code 1976 as amended with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		

AMENDED

4186

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	Charges	Credits
Net Income from Schedule A (Page 2)	\$	\$
Taxable Income:		
(a) Dividends		
(b) Interest		
(c) Schedule attached		
Unallowable Deductions:		
(e) Contributions in Excess of 5% of Net Income		
(f) Taxes on or Measured by Income		
(g) Federal Income Taxes		
(h) Interest		
(i) Life Insurance Premiums		
(j) Dividends Paid		
(k)		
Surplus Beginning of Year (Balance Sheet)		
Surplus End of Year (Balance Sheet)		
BALANCING TOTALS	\$	\$

Schedule H-TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is February 24, 1964
- The Registered Office of the corporation in the State of South Carolina is See line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S. C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S. C.
Nature of principal business in S. C. Production and sale of electricity 29606
- The corporation's books are in care of W. R. Stimart, Controller
Located 422 South Church Street, Charlotte, N. C. 28242

If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina

If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.

9. The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. OF SHARES	PAR VALUE	CLASS
100,000,000	No par	Common

10. The total amount of Stated Capital is:

Total paid in Capital Stock \$ 1,908,475,170

Total paid in Capital Surplus \$ _____

The total amount of Stated Capital is \$ 1,908,475,170

11. The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule)

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List attached	All officers can be reached in care of Duke Power Company, P. O. Box 33189, Charlotte, North Carolina 28242.
	No officer or director owns as much as 1/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service December 31, 1973

Reported to South Carolina? Yes ☒ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.

This statement does not relieve notification requirements of Section 12-7-2330 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under said Code.

DELOITTE & TOUCHE LLP

Return Prepared By

by: Daniel M. Shuler
12/11/2002

Date

12/12/2002

Signature of Officer Authorized to Sign

AMENDED

Duke Power Company

Statement Attached To And Made Part Of
1978 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Depreciation CLADR System</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-78	\$ 416,518	\$ 330,649	\$ 85,869
00.120	EDP	71-78	3,211,249	2,961,612	249,637
00.130	Data handling equip.	71-78	349,246	328,919	20,327
00.230	Buses	74	46,884	49,132	(2,248)
49.110	Hydro	71-78	4,748,391	3,668,704	1,079,687
49.120	Nuclear	73-78	33,157,968	25,344,242	7,813,726
49.121	Nuclear fuel	76-78	25,213,344	21,275,363	3,937,981
49.131	Steam	71-78	28,365,348	24,972,093	3,393,255
49.132	Other production	71-78	1,334,159	983,280	350,879
49.141	Transmission	71-78	22,690,297	17,451,862	5,238,435
49.142	Distribution	71-78	27,894,980	25,418,256	2,476,724
49.300	Water	71-78	170,380	142,139	28,241
			<u>\$147,598,764</u>	<u>\$122,926,251</u>	<u>\$24,672,513</u>

Depreciation on Federal return was computed under Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1978.

AMENDED

Duke Power Company

Statement Attached To And Made Part Of
1978 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Depreciation CLADR System</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-78	\$ 416,518	\$ 330,649	\$ 85,869
00.120	EDP	71-78	3,211,249	2,961,612	249,637
00.130	Data handling equip.	71-78	349,246	328,919	20,327
00.230	Buses	74	46,884	49,132	(2,248)
49.110	Hydro	71-78	4,748,391	3,668,704	1,079,687
49.120	Nuclear	73-78	33,157,968	25,344,242	7,813,726
49.121	Nuclear fuel	76-78	25,213,344	21,275,363	3,937,981
49.131	Steam	71-78	28,365,348	24,972,093	3,393,255
132	Other production	71-78	1,334,159	983,280	350,879
49.141	Transmission	71-78	22,690,297	17,451,862	5,238,435
49.142	Distribution	71-78	27,894,980	25,418,256	2,476,724
49.300	Water	71-78	170,380	142,139	28,241
			<u>\$147,598,764</u>	<u>\$122,926,251</u>	<u>\$24,672,513</u>

Depreciation on Federal return was computed under Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1978.

AMENDED

DUKE POWER COMPANY
PLANT 3, BROWNSVILLE
PERIOD: 1976-1980

8 CUSTOMER SOUTHADAMS, SON
DATE: 1/18/81

RECONSTRUCTION OF NET INCOME & TAX

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328</

ESTATE'S ALLOCATIONS PER 1
 ESTATE'S ALLOCATIONS PER RETURN
 IS ADJUSTMENT;
 INTEREST APPOINTED ON ESTATE
 DISPOSITION PER PROP
 ESTATE PROPERTY CATAWBA
 DISALLOWED ON ESTATE

INVESTIGATE SITUATIONS AS ADJUSTED

1C ALLOCATIONS PER 1 SEC
 2C ALLOCATIONS PER RETURN
 3C INPUT ADJUSTMENTS
 4C REPORT CATEGORY-4TH &
 5C RECEIVED DURING 4TH ALLOCATIONS

RE LOCATIONS AS ADJUSTED

SUBJECT: SOUTHARD-DANIELSON
 DATE: 11/20/78

AUSTON & SOUTHWELLSON		DATE: 11/09/98																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

DES00010551

AMENDMENT

Arthur S. Goldstein
Dru; 512076

[illegible]

4192

AMENUELI

DES00010552

South Carolina Tax Commission
Form 1101-U

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

Page

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
CORPORATE SECTION
INCOME TAX DIVISION
S. C. TAX COMMISSION
Columbia, S. C. 29214

Return For
Period Ending December 31, 1978

Consolidated Return? Extension Requested
YES ☐ NO ☐ YES ☒ NO ☐

DO NOT WRITE IN THIS SPACE

Indexed

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY

P. O. BOX 33189

CHARLOTTE, NC 28242

860205520 32. 4900

MAR 15 1979

20090024

Employer Identification No.

Business Code

File Number

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2)	\$	73,928,264
2. Less: Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$	
3. NET INCOME OF CORPORATION	\$	73,928,264
4. Income Tax Due (6% of Line 3)	\$	4,435,696
5. Tax Withheld (Attach 1203)	\$	2,200,000
6. Credit from PART III LINE 30	\$	
7. Paid with Tentative Return	\$	2,200,000
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$	
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$	2,235,696
10. Interest Due	\$	67,071
11. Penalty Due	\$	
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$	2,302,767
13. Application: (If Line 8 reflects refund due)		
(a) Credited To: Estimate \$	License Fee \$	(b) Refunded \$

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$	
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$	
16. Estimated Tax (Line 14 Less Line 15)	\$	
17. Installment Due - 1/4 of Line 16	\$	
18. Credits - (PART I Line 13 and PART II Line 10)	\$	
19. Paid with Tentative Return	\$	
20. Balance due with this return (If lines 18 and 19 exceed Line 17 enter "None")	\$	

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$	785,590,037
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$	785,590
23. Total Gross Receipts (Schedule C - Page 2)	\$	424,909,608
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$	1,274,729
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$	2,060,319
26. Interest Due		10
27. Penalty Due		
28. Less Amount Paid on Tentative - or from PART I Line 13		2,060,000
29. Balance Due on this Return or Over-Payment	\$	329
30. Application (If Line 29 Reflects Refund Due)		

(a) Credited To: Income Tax \$

Estimate \$

(b) Refunded \$

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$ 2,303,096

A copy of the Corporation Tax Return, together with supporting schedules filed with the U. S. Internal Revenue Service for this period, must be attached and made a part of this return.

Note 1: For South Carolina Corporation Income Tax Purposes, Corporations filing under Federal Sub-Chapter S must file as an ordinary corporation for State purposes and therefore must include a schedule of profit and loss, a balance sheet and other appropriate schedules (depreciation, taxes, etc.)

AS ORIGINALLY FILED

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Income as Shown on Federal Return (Before Loss Carryovers)		\$203,752,611
Additions:		
a. Taxes on or Measured by Income	\$ 13,903,777	
b. Unallowable Contributions	501,590	
c. Depreciation	24,671,908	
d. Interest on tax exempt bonds	1,280	
e. Repair allowance	10,929,044	
f. Amortization of pollution control	6,000,450	
Total Additions	\$56,008,049	
Deductions:		
g. Interest on U. S. Obligations	\$	
h. ESOP credit to qualified pension plan	4,219,809	
i. Wages - job development credit	94,053	
Total Deductions	\$ 4,313,862	
Net Difference		51,694,187
Net Income as Shown on Page 1, Line 1, Part I (or Line 1, Schedule E)		\$255,446,798

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

- Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date December 31, 1978
1. Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes. \$ 785,590,037

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending <u>12/31/78</u>	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):		
Electric	\$1,396,402,648	\$ 420,350,657
Water and transit	3,670,686	1,819,481
Merchandising	7,046,284	2,257,254
Total Operating Revenues	\$1,407,119,618	\$ 424,427,392
Other Receipts, (Itemize):		
Farms and forestry	4,947	
Interest	1,232,559	371,776
Dividends	645,990	
Sale of assets	254,655	110,440
Total Other Receipts	\$ 2,138,151	\$ 482,216
Totals - Note: Enter total on Line 23 Part III Page 1	\$1,409,257,769	\$ 424,909,608

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS**Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION**

	Gross Amounts	Less: Related Expenses	Net Amounts Allocable Directly to S. C. and Other States	Net Amounts Allocable Directly to S. C.	Payroll to Be Excluded from Payroll Factor	Property to Be Excluded from Property Factor
1. Interest received not connected with business	\$ 296,218	\$	\$ 296,218	\$ 2,509	\$	XXXX XX
2. Dividends received	645,991		645,991			XXXX XX
3. Rents						\$
4. Gains or losses on real property	27,430,909		27,430,909	19,030,015		
5. Gains or losses on intangible personal property	64,279,996		64,279,996			
Investment income directly allocated						
TOTAL INCOME DIRECTLY ALLOCATED			92,653,114	XXXX XX		
INCOME DIRECTLY ALLOCATED TO S. C.			XXX XX	19,032,524	XXXX XX	XXXX XX
TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AS ORIGINALLY FILED

**Schedule E -
COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS**

1. Total net income as reconciled (Schedule A, Page 2)	\$ 255,446,798	
2. Less: Income subject to direct allocation to S. C. and other states from Schedule D, Line 7	92,653,114	
3. Total net income subject to apportionment	\$ 162,793,684	
4. Apportionable to S. C. by appropriate ratio from Schedule F, 33.791%		\$ 55,009,614
5. Add: Income subject to direct allocation to S. C. from Schedule D, Line 8		19,032,524
6. Total net income allocable to S. C. (sum of Lines 4 and 5 above)		\$ 74,042,138
7. Less: Allocable portion of net operating loss brought forward from prior years (Schedule B)		
8. Less: allowable Contributions (Do Not Exceed 5% of Line 6 minus Line 7)		113,874
9. Total net income subject to tax. Enter on Line 3 Part I Page 1.		\$ 73,928,264

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1 - (PROPERTY, PAYROLL, SALES) - To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY - (TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	36.377%
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	34.533%
RATIO OF SALES (Attach Schedule)			30.163%
Total of Three Ratios	XXXXXX XX	XXXXXX XX	101.373%
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	33.791%

Schedule F-2 - (GROSS RECEIPTS) - To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$	\$	
Ratio of Gross Receipts	XXXX XX	XXXX XX	

Schedule F-3 - (RATIO FOR PUBLIC SERVICE CORPORATIONS) - To be filled in by corporations, as designated in Section 12-7-640, S. C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		

AS ORIGINALLY FILED

	Charges	Credits
Net Income from Schedule A (Page 2)	\$	\$
Non-Taxable Income:		
(a) Dividends		
(b) Interest		
(c) Schedule attached		
(d) Unallowable Deductions:		
(e) Contributions in Excess of 5% of Net Income		
(f) Taxes on or Measured by Income		
(g) Federal Income Taxes		
(h) Interest		
(i) Life Insurance Premiums		
(j) Dividends Paid		
(k) Surplus Beginning of Year (Balance Sheet)		
Surplus End of Year (Balance Sheet)		
BALANCING TOTALS	\$	\$

Schedule H-TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is February 24, 1964
- The Registered Office of the corporation in the State of South Carolina is See line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S. C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S. C.
Nature of principal business in S. C. Production and sale of electricity 29606
- The corporation's books are in care of W. R. Stimart, Controller
Located 422 South Church Street, Charlotte, N. C. 28242

Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina

- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. OF SHARES	PAR VALUE	CLASS
100,000,000	No par	Common

- The total amount of Stated Capital is:

Total paid in Capital Stock	\$ 1,908,475,170
Total paid in Capital Surplus	\$
The total amount of Stated Capital is	\$ 1,908,475,170

- The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule).

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List attached	All officers can be reached in care of Duke Power Company, P. O. Box 33189, Charlotte, North Carolina 28242. No officer or director owns as much as 1/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service December 31, 1973
Reported to South Carolina? Yes ☒ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.
This statement does not relieve notification requirements of Section 12-7-2330 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

Return Prepared By

9/14/79

Date

George W. Dargatzis

Signature of Officer Authorized to Sign

AS ORIGINALLY FILED

Duke Power Company
Statement Attached To And Made Part Of
1978 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Depreciation CLADR System</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-78	\$ 416,518	\$ 330,649	\$ 85,869
00.120	EDP	71-78	3,211,249	2,961,612	249,637
00.130	Data handling equip.	71-78	349,246	328,919	20,327
00.230	Buses	74	46,884	49,132	(2,248)
49.110	Hydro	71-78	4,748,391	3,668,704	1,079,687
49.120	Nuclear	73-78	33,157,968	25,344,242	7,813,726
49.121	Nuclear fuel	76-78	25,213,344	21,275,363	3,937,981
49.131	Steam	71-78	28,365,348	24,972,093	3,393,255
49.132	Other production	71-78	1,334,159	983,280	350,879
49.141	Transmission	71-78	22,690,297	17,451,862	5,238,435
49.142	Distribution	71-78	27,894,980	25,418,256	2,476,724
49.300	Water	71-78	170,380	142,139	28,241
			<u>\$147,598,764</u>	<u>\$122,926,251</u>	<u>\$24,672,513</u>

Depreciation on Federal return was computed under Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1978.

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
1978 South Carolina Corporation Income Tax Return

1978 Apportionment Ratio

	<u>South Carolina</u>	<u>Total</u>	<u>Ratio</u>
Beginning of period			
Electric	\$1,388,915,279	\$3,751,573,253	
Water	12,793,990	16,476,412	
Transit		525,314	
Materials and supplies	<u>16,772,164</u>	<u>159,702,282</u>	
Total	<u>\$1,418,481,433</u>	<u>\$3,928,277,261</u>	
End of period			
Electric	\$1,492,262,863	\$3,955,045,044	
Water	12,974,606	16,792,196	
Transit		525,314	
Materials and supplies	<u>20,298,021</u>	<u>180,785,908</u>	
Total	<u>\$1,525,535,490</u>	<u>\$4,153,148,462</u>	
Average property	\$1,472,008,462	\$4,040,712,862	
Add: Rental	<u>3,668,168</u>	<u>15,910,080</u>	
Property for ratio	<u>\$1,475,676,630</u>	<u>\$4,056,622,942</u>	36.377%
Payrolls	\$ 93,159,596	\$ 269,624,530	
Less: Officers		<u>2,178,661</u>	
Payroll for ratio	<u>\$ 93,159,596</u>	<u>\$ 267,445,869</u>	34.833%
Sales	<u>\$ 424,799,168</u>	<u>\$1,408,357,124</u>	30.163%
Total of three ratios			101.373%
Average ratio			<u>33.791%</u>

AS ORIGINALLY FILED

South Carolina Tax Commission
 Form 1101-~~FE~~
 The Checks Payable To:
 TAX COMMISSION
 Mail This Return With
 (101-AR in duplicate)
 And Remittance To:
 CORPORATION
 INCOME TAX DIVISION
 S. C. TAX COMMISSION
 Columbia, S. C.

THIS FORM BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA

TENTATIVE CORPORATION TAX RETURN

For Corporations Whose ENTIRE BUSINESS is Within S. C.

Do Not Write In These Spaces	
Indexed	File Number

And
CONDITIONAL EXTENSION

Return for the Period 1978

Return extended to September 15, 1978

Date Corporation Closes Its Books
December 31, 1978

AR to SS YES ☐ NO ☐

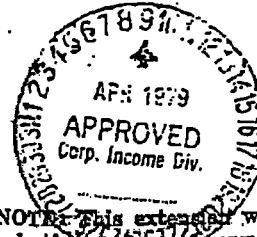
DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

Duke Power Company
 P. O. Box 33189
 Charlotte, North Carolina

RETURN DUE ON OR BEFORE

March 15, 1979



NOTE: This extension will be valid only if the ~~original~~ copy is attached and made a part of the completed return when filed.

56-0205520 4900 20090024
 Employer Identification No. Business Code File Number

COMPUTATION OF ESTIMATED LICENSE FEE

- Total Capital and Paid in Surplus (Item 15 Page 4—End of year) (Include Treasury Stock) \$Final computation
- DEDUCT: Capital Surplus created by, but not incident to, a Reorganization, Consolidation or Merger to be filed on
- Total Capital and Paid in Surplus (after allowable deduction—Item 2) Form 1101-F
- FEE DUE—Line 3 x \$.001, but not less than \$10.00 \$2,060,000

NOTE—FEE DUE ON LINE 4 MUST BE REMITTED WITH THIS RETURN

COMPUTATION OF ESTIMATED INCOME TAX

1. Income Tax Due	\$ 6,120,000
Tax Withheld (Attach 1203) Paid by Declaration \$ 2,200,000	2,200,000
Refund Due (If Line 2 and/or 3 exceeds Line 1, enter difference)	\$
4. Balance Due (If Line 1 exceeds Line 2 and/or 3, enter difference)	\$ 3,920,000
5. Enter payment due with this return (at least 1/4 of Line 1)	\$

NOTE—REMIT 25% OF LINE 1 LESS CREDIT FOR LINE 2

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

1. Estimate of Income Tax for <u>1979</u>	\$ 2,400,000
2. Estimate of Income Tax to be Withheld during year (Nonresident)	
3. Estimated Tax (Line 1 less Line 2)	\$ 2,400,000
4. If an overpayment of Tax is to be applied to this Declaration, enter amount here	
5. Amount to be paid with this Declaration (25% of Line 1 less Line 2)	\$ 600,000
(If Line 4 exceeds Line 3, write "NONE" on Line 5)	\$
Amount Paid With This Return	Total 2,660,000

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and affidavit (reverse side) and the receipt, in duplicate, of the return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1962, as amended, for the underestimation of any tax or fee.

Extension Granted By

Date

South Carolina Tax Commission
 Corporation Income Tax Division

Arnell M. Coker, Sr., Director

AS ORIGINALLY FILED

4199

DES00010559

REQUEST FOR EXTENSION

An extension is requested for ninety (90) days or 184 days for the following reasons: _____

Additional time is required to analyze
and interpret financial statements.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules, has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith, for the taxable period as stated, pursuant to the Code of Laws 1962 as amended and the Regulations issued under authority thereof.

This Return Prepared By

March 17, 1977
Date

[Signature]
Signature of Officer Authorized to Sign

ASSISTANT SECRETARY

INSTRUCTIONS

1. License Fee Computation must be completed and remittance made in full with the Tentative Return.
2. The Income Tax Liability for the period indicated must be stated and at least one fourth (¼) paid with the Tentative Return or paid previously by Declaration of Estimated Income Tax, or by withholding.
3. The Declaration of Estimated Income Tax for the current year should be made on the Tentative Return and the first quarterly payment remitted.
4. Filing of the Tentative Return showing no Income Tax Liability will invalidate, irrespective of prior approval by this office, the extension, if the completed return when filed shows a tax liability.
5. Request for Additional extensions must be submitted in writing on or before the due date of the extended period.



AS ORIGINALLY FILED

4201

DES00010560

**Deloitte
& Touche**

TAXPAYER DUKE POWER COMPANY

INSTRUCTIONS FOR FILING

AMENDED CORPORATION TAX RETURN FOR PUBLIC UTILITIES

STATE OF SOUTH CAROLINA

FOR THE YEAR ENDED

12-31-79

To be signed and dated by	☒ Officer ☐ General Partner
Amount of Tax	Total tax Less: payments and credits Balance due (overpayment) \$(2,004,545) ☐ Payable in full
Overpayment	☒ Refunded to you \$2,004,545 ☐ Credited to your estimated tax \$ ☐ \$ refunded and \$ credited
Draw check to N/A	<i>NOTE: Your social security number or employer identification number should be entered on your remittance.</i>
Mail return and check (if applicable) to	SC DEPARTMENT OF REVENUE COLUMBIA, SC 29214
Return must be mailed on or before	IMMEDIATELY Certified mail recommended, with return receipt. For metered mail, the meter date is not evidence of timely filing.
Special Instructions	

MISCSTATELTRS

South Carolina Tax Commission
Form 1101-U

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

NOT WRITE IN THIS SPACE

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
CORPORATE SECTION
INCOME TAX DIVISION
S. C. TAX COMMISSION
Columbia, S. C. 29214

Return For DEC 31, 1979 INCOME
Period Ending DEC 31, 1980 LICENSE

Consolidated Return? YES ☐ NO ☒ Extension Requested
YES ☒ NO ☐

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY
P O BOX 33357
CHARLOTTE NC

28242

MAR 15, 1980

05502057 32 4500 12 25050024-6

Employer Identification No.

Business Code

File Number

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2)	\$	31,845,182
2. Less: Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$	
3. NET INCOME OF CORPORATION	\$	31,845,182
4. Income Tax Due (64 of Line 3)	\$	1,910,711
5. Tax Withheld (Attach 1203)	\$	
6. Credit from PART III LINE 30	\$	
7. Paid with Tentative Return	\$	3,915,256
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$	2,004,545
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$	
10. Interest Due	\$	
11. Penalty Due	\$	
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$	
13. Application: (If Line 8 reflects refund due)		
(a) Credited To: Estimate \$	License Fee \$	(b) Refunded \$ 2,004,545

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$	
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$	Filed on
16. Estimated Tax (Line 14 Less Line 15)	\$	
17. Installment Due - 1/4 of Line 16	\$	Form 1101-T
18. Credits - (PART I, Line 13 and PART III Line 30)	\$	
19. Paid with Tentative Return	\$	
20. Balance due with this return (If Lines 16 and 19 exceed Line 17 enter "None")	\$	

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$	777,168,735
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$	777,169
23. Total Gross Receipts (Schedule C - Page 2)	\$	448,169,346
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$	1,344,505
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$	2,121,677
26. Interest Due	\$	
27. Penalty Due	\$	
28. Less Amount Paid on Tentative - or from PART I Line 13	\$	2,123,300
29. Balance Due on this Return or Over-Payment Refund	\$	1,623
30. Application (If Line 29 Reflects Refund Due)		
(a) Credited To: Income Tax \$ 1,623	Estimate \$	(b) Refunded \$

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$

A copy of the Corporation Tax Return, together with supporting schedules filed with the U. S. Internal Revenue Service for this period, must be attached and made a part of this return.

Note 1: For South Carolina Corporation Income Tax Purposes, Corporations filing under Federal Sub-Chapter S must file as an ordinary corporation for State purposes and therefore must include a schedule of profit and loss, a balance sheet and other appropriate schedules (depreciation, loan, etc.)

AMENDED

4203

DES00010562

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Income as Shown on Federal Return (Before Loss Carryovers)		\$137,763,566
Additions:		
a. Losses on or Measured by Income	\$	
b. Unallowable Contributions		
c. Depreciation		
d. Interest on tax exempt bonds		
e. Repair allowance		
f. Interest on Power Agency advances		
Total Additions		
Deductions:		
g. Interest on U. S. Obligations	\$	
h. ESOP credit		
i. Targeted jobs credit		
j.		
k.		
Total Deductions	\$	
Net Difference		
Net Income as Shown on Page 1, Line 1, Part I (or Line 1, Schedule E) See Attached Audit Adjustments		\$182,404,940

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date **December 31, 1979**
 1. Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes. **\$ 777,168,735**

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending December 31, 1979	Total System (A)	Intrastate South Carolina (B)
Operating Revenues (Itemize):		
Electric	\$ 1,492,154,882	\$ 443,358,185
Water and transit	3,722,162	1,884,686
Merchandising	8,927,274	2,915,941
Total Operating Revenues	\$ 1,504,804,318	\$ 448,158,812
Other Receipts (Itemize):		
Farms and forestry	1,412	
Interest	1,521,043	2,261
Dividends	641,638	
Sale of assets	169,051	8,273
Total Other Receipts	\$ 2,333,144	\$ 10,534
Totals - Note: Enter total on Line 22 Part III Page 1	\$ 1,507,137,462	\$ 448,169,346

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS**Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION**

	Gross Amounts	Loss-Related Expenses	Net Amounts Allocable Directly to S. C. and Other States	Net Amounts Allocable Directly to S. C.	Portions to be Excluded from Payroll Factor	Portions to be Excluded from Property Factor
1. Interest received not connected with business	\$	\$	\$	\$	\$	XXXX XX
2. Dividends received	641,638		641,638			XXXX XX
3. Rents						\$
4. Gains or losses on real property	169,051		169,051	8,273		
5. Gains or losses on intangible personal property	15,504,692		15,504,692	12,767,177		
6. Investment income directly allocated						
7. TOTAL INCOME DIRECTLY ALLOCATED			\$16,315,381	XXXX XX		
8. NET INCOME DIRECTLY ALLOCATED TO S. C.			XXXX XX	12,795,450	XXXX XX	XXXX XX
9. TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AMENDED

Schedule E -

COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS

Total net income as reconciled (Schedule A, Page 2)	\$ 182,404,940
Less: Income subject to direct allocation to S. C. and other states from Schedule D, Line 7	2,481,061
Total net income subject to apportionment	\$ 184,886,001
Apportionable to S. C. by appropriate ratio from Schedule F 17.2959%	\$ 31,977,698
3. Add: Income subject to direct allocation to S. C. from Schedule D, Line 8	8,273
5. Total net income allocable to S. C. (sum of Lines 4 and 3 above)	\$ 31,985,971
7. Less: Allocable portion of net operating loss brought forward from prior years (Schedule B)	0
8. Less: allowable Contributions (Do Not Exceed 5% of Line 5 minus Line 7)	140,789
9. Total net income subject to tax. Enter on Line 8 Part I Page 1.	\$ 31,985,971

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1-(PROPERTY, PAYROLL, SALES)-To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY-(TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVARAGE PROPERTY (After adding Rental or Lease Value)	XXXXXXXX XX	XXXXXXXX XX	
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXXXX XX	XXXXXXXX XX	
RATIO OF SALES (Attach Schedule)			
Total of Three Ratios	XXXXXXXX XX	XXXXXXXX XX	
Arithmetical Average Ratio	XXXXXXXX XX	XXXXXXXX XX	

Schedule F-2-(GROSS RECEIPTS)-To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$ 448,611,808	\$ 2,593,744,070	
Ratio of Gross Receipts	XXXXXX XX	XXXXXX XX	17.2959%

Schedule F-3-(RATIO FOR PUBLIC SERVICE CORPORATIONS)-To be filled in by corporations, as designated in Section 12-7-640, S. C. Code 15-7 as amended, with operating revenues within the jurisdiction of South Carolina

	Amount	Ratio
Total Within South Carolina		

AMENDED

4205

DES00010564

	Debit	Credit
Net Income from Schedule A (Page 2)	\$	\$
Taxable Income:		
(a) Dividends		
(b) Interest		
(c)		
(d) Schedule Attached		
Unallowable Deductions:		
(e) Contributions in Excess of 5% of Net Income		
(f) Taxes on or Measured by Income		
(g) Federal Income Taxes		
(h) Interest		
(i) Life Insurance Premiums		
(j) Dividends Paid		
(k)		
Surplus Beginning of Year (Balance Sheet)		
Surplus End of Year (Balance Sheet)		
BALANCING TOTALS	\$	\$

Schedule H-TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
- The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S. C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S.C. 29606
Nature of principal business in S. C. Production and sale of electricity
- The corporation's books are in care of Porter A. Hauser, Vice President and Controller
Located 422 South Church Street, Charlotte, North Carolina 28242

If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina

- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. OF SHARES	PAR VALUE	CLASS
100,000,000	No Par	Common

- The total amount of Stated Capital is:

Total paid in Capital Stock \$ _____

Total paid in Capital Surplus \$ _____

The total amount of Stated Capital is \$ _____

- The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule)

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List Attached	All officers can be reached in care of Duke Power Company, P. O. Box 33189, Charlotte, North Carolina 28242
	No officer or director owns as much as 1/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service _____

Reported to South Carolina? Yes ☐ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover. This statement does not relieve notification requirements of Section 12-7-2330 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

Deloitte & Touche LLP

This Return Prepared By:

by: Frank M. Kelly
12/11/2002

Date

AMENDED

Signature of Officer Authorized to Sign

• JUVENILE, SOUTHWARD, 104
0678: (1149)

1574

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356	3357	3358	3359	3360	3361	3362	3363	3364	3365	3366	3367	3368	3369	3370	3371	337

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Author: Southampton
Date: 14/02/2011

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AMENDED

DES00010568

South Carolina Tax Commission
Form 1101 - T

THIS FORM TO BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA

TENTATIVE CORPORATION TAX RETURN

And
CONDITIONAL EXTENSION

DO NOT WRITE IN THIS SPACE

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
INCOME TAX DIVISION
S. C. TAX COMMISSION
COLUMBIA, S. C.

Return for the Period Ending December 31, 1979

Return extended to September 15, 1980

NAME AND ADDRESS

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

Employer Identification No. Business Code File Number
56-0205520 4900 20090024

COMPUTATION OF ESTIMATED INCOME TAX

1. Income Tax Due	• \$	3,926,000
2. Tax withheld \$ Paid by Declaration \$ 2,400,000		2,400,000
3. Estimated Overpayment (If Line 2 exceeds Line 1, enter difference)	\$	
4. Balance Due (If Line 1 exceeds Line 2 and or 3, enter difference)	\$	1,526,000
5. Enter payment due with this return (at least 1/4 of Line 1. Less Credit For Line 2)	\$	

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

6. Estimate of Income Tax for 1980	• \$	4,000,000
7. Estimate of Income Tax to be Withheld during year (Nonresident)		
8. Estimated Tax (Line 6 Less Line 7)	\$	4,000,000
9. Amount to be paid with this Declaration (25% of Line 6 Less Line 7)	\$	1,000,000

COMPUTATION OF ESTIMATED LICENSE FEE

10. Total Capital and Paid in Surplus (End of Year) (Include Treasury Stock)	\$	be filed on Form 1101-U
11. FEE DUE - Line 10 = \$.001, but not less than \$10.00	\$	2,123,300

NOTE - FEE DUE ON LINE 11 MUST BE REMITTED WITH THIS RETURN

REQUEST FOR EXTENSION

An extension is requested for ninety (90) days or 184 days for the following reasons:

Additional time is required to analyze and interpret financial statements.

This Return Prepared By

Date

3-11-80

Signature of Officer Authorized to Sign

Forrest B. Thompson, Asst. Secretary

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and the receipt of this return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1976 as amended, for the underestimation of any tax or fee.

AS ORIGINALLY FILED

SOUTH CAROLINA TAX COMMISSION
INCOME TAX DIVISION
C. H. BROOKS, DIRECTOR

South Carolina Tax Commission
Form 1101-USTATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

NOT WRITE IN THIS SPACE

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
CORPORATE SECTION
INCOME TAX DIVISION
S. C. TAX COMMISSION
Columbia, S. C. 29214Return For DEC 31, 1979 INCOME
Period Ending DEC 31, 1980 LICENSEConsolidated Return? Extension Requested
YES ☐ NO ☒ YES ☒ NO ☐

NAME AND ADDRESS

RETURN DUE ON OR
BEFOREDUKE POWER COMPANY
P O BOX 33155
CHAPLHTE NC

28242

MAR 15, 1980

055020557

32

4900

12

20050024-9

Employer Identification No.

Business Code

File Number

PART I

COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2)	\$	75,161,034
2. Less: Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$	
3. NET INCOME OF CORPORATION	\$	75,161,034
4. Income Tax Due (6% of Line 3)	\$	4,509,662
5. Tax Withheld (Attach 1203)	\$	
6. Credit from PART III LINE 30	\$	
7. Paid with Tentative Return	\$	2,400,000
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$	
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$	2,109,662
10. Interest Due	\$	63,241
11. Penalty Due	\$	
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$	2,172,903
13. Application: (If Line 8 reflects refund due)		

(a) Credited To: Estimate \$

License Fee \$

(b) Refunded \$

PART II

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$	
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$	Filed on
16. Estimated Tax (Line 14 Less Line 15)	\$	
17. Installment Due - 1/4 of Line 16	\$	Form 1101-T
18. Credits - (PART I Line 13 and PART III Line 30)	\$	
19. Paid with Tentative Return	\$	
20. Balance due with this return (If Lines 18 and 19 exceed Line 17 enter "None")	\$	

PART III

COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$	777,168,735
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$	777,169
23. Total Gross Receipts (Schedule C - Page 2)	\$	448,169,346
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$	1,344,508
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$	2,121,677
26. Interest Due	\$	
27. Penalty Due	\$	
28. Less Amount Paid on Tentative - or from PART I Line 13	\$	2,123,300
29. Balance Due on this Return or Over-Payment Refund	\$	1,623
30. Application: (If Line 29 Reflects Refund Due)		
(a) Credited To: Income Tax \$	Estimate \$	(b) Refunded \$

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$ 2,171,280

A copy of the Corporation Tax Return, together with supporting schedules filed with the U. S. Internal Revenue Service for this period, must be attached and made a part of this return.

Note 1: For South Carolina Corporation Income Tax Purposes, Corporations filing under Federal Sub-Chapter S must file as an ordinary corporation for State purposes and therefore must include a schedule of profit and loss, a balance sheet and other appropriate schedules (depreciation, taxes, etc.)

AS ORIGINALLY FILED

Page 2

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Net Income as Shown on Federal Return (Before Loss Carryovers)		\$139,006,257
Additions:		
a. Taxes on or Measured by Income	\$ 9,572,837	
b. Unallowable Contributions	732,370	
c. Depreciation	23,709,351	
d. Interest on tax exempt bonds	1,280	
e. Repair allowance	11,139,058	
f. Interest on Power Agency advances	238,782	
Total Additions	\$45,393,678	
Deductions:		
g. Interest on U. S. Obligations	\$ 1,238,591	
h. ESOP credit	7,069,009	
i. Targeted jobs credit	974	
Total Deductions	\$ 8,308,574	
Net Difference		37,085,104
Net Income as Shown on Page 1, Line 1, Part I (or Line 1, Schedule E)		\$176,091,361

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date	December 31, 1979
1. Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes.	\$ 777,168,735

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending	December 31, 1979	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):			
Electric		\$ 1,492,154,882	\$ 443,358,183
Water and transit		3,722,162	1,884,686
Merchandising		8,927,274	2,915,941
Total Operating Revenues		\$ 1,504,804,318	\$ 448,158,812
Other Receipts, (Itemize):			
Farms and forestry		1,412	
Interest		1,521,043	2,261
Dividends		641,638	
Sale of assets		169,051	8,273
Total Other Receipts		\$ 2,333,144	\$ 10,534
Totals - Note: Enter total on Line 23 Part III Page 1		\$ 1,507,137,462	\$ 448,169,346

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS**Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION**

	Gross Amounts	Less: Related Expenses	Net Amounts Allocable Directly to R. C. and Other States	Net Amounts Allocable Directly to R. C.	Payments to Be Excluded from Payroll Factor	Payments to Be Excluded from Property Factor
1. Interest received not connected with business	\$	\$	\$	\$	\$	XXXX XX
2. Dividends received	641,638		641,638			XXXX XX
3. Rents						\$
4. Gains or losses on real property	169,051		169,051	8,273		
5. Gains or losses on intangible personal property	15,504,692		15,504,692	18,787,177		
Investment income directly allocated						
TOTAL INCOME DIRECTLY ALLOCATED			\$16,315,381	XXXX XX		
INCOME INDIRECTLY ALLOCATED TO S. C.			XXX XX	18,795,450	XXXX XX	XXXX XX
TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AS ORIGINALLY FILED

**Schedule E -
COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS**

1. Total net income as reconciled (Schedule A, Page 2)	\$ 176,091,361	
Less: Income subject to direct allocation to S. C. and other states from Schedule D, Line 7	16,315,381	
Total net income subject to apportionment	\$ 159,775,980	
Apportionable to S. C. by appropriate ratio from Schedule F 35.366 %		\$ 56,506,373
5. Add: Income subject to direct allocation to S. C. from Schedule D, Line 8		18,795,450
6. Total net income allocable to S. C. (sum of Lines 4 and 5 above)		\$ 75,301,823
7. Less: Allocable portion of net operating loss brought forward from prior years (Schedule B)		
8. Less: allowable Contributions (Do Not Exceed 5% of Line 6 minus Line 7)		140,789
9. Total net income subject to tax. Enter on Line 3 Part I Page 1.		\$ 75,161,034

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1 - (PROPERTY, PAYROLL, SALES) - To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY - (TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	36.783 %
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	39.532 %
RATIO OF SALES (Attach Schedule)			29.782 %
Total of Three Ratios	XXXXXX XX	XXXXXX XX	106.097 %
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	35.366 %

Schedule F-2 - (GROSS RECEIPTS) - To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$	\$	
Ratio of Gross Receipts	XXXX XX	XXXX XX	%

Schedule F-3 - (RATIO FOR PUBLIC SERVICE CORPORATIONS) - To be filled in by corporations, as designated in Section 12-7-540, S. C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		

AS ORIGINALLY FILED

4213

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Page 4		Set		File G-ANALYSIS OF SURPLUS ACCO	
		Charges		Credits	
Net Income from Schedule A (Page 2)		\$		\$	
Non-Taxable Income:					
(a) Dividends					
(b) Interest					
(c)					
(d) Schedule Attached					
Unallowable Deductions:					
(e) Contributions in Excess of 3% of Net Income					
(f) Taxes on or Measured by Income					
(g) Federal Income Taxes					
(h) Interest					
(i) Life Insurance Premiums					
(j) Dividends Paid					
(k)					
Surplus Beginning of Year (Balance Sheet)					
Surplus End of Year (Balance Sheet)					
BALANCING TOTALS		\$		\$	

Schedule H-TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
- The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S. C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S.C. 29606
Nature of principal business in S. C. Production and sale of electricity
- The corporation's books are in care of Porter A. Hauser, Vice President and Controller
Located 422 South Church Street, Charlotte, North Carolina 28242

If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina

- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. OF SHARES	PAR VALUE	CLASS
100,000,000	No Par	Common

- The total amount of Stated Capital is:

Total paid in Capital Stock	\$ _____
Total paid in Capital Surplus	\$ _____
The total amount of Stated Capital is	\$ _____

- The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule)

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List Attached	All officers can be reached in care of Duke Power Company, P. O. Box 33189, Charlotte, North Carolina 28242
	No officer or director owns as much as 1/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service _____

Reported to South Carolina? Yes ☐ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.
This statement does not relieve notification requirements of Section 12-7-2330 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules have been examined by me and is to the best of my knowledge and beliefs true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

This Return Prepared By _____

9-15-80.

Date

[Signature]
Signature of Officer Authorized to Sign

AS ORIGINALLY FILED

4214

DES00010573

Jun 17 2001 21:46

P.06

South Carolina Tax Commission
Form 1101 - T

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
Remittance To:
INCOME TAX DIVISION
S. C. TAX COMMISSION
COLUMBIA, S. C.

THIS FORM IS TO BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA
TENTATIVE CORPORATION TAX RETURN

And
CONDITIONAL EXTENSION

DO NOT WRITE IN THIS SPACE

Return for the Period Ending December 31, 1979Return extended to September 15, 1980

NAME AND ADDRESS

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

Employer Identification No. Business Code File Number
56-0205520 4900 20090024

COMPUTATION OF ESTIMATED INCOME TAX

1. Income Tax Due	\$	3,926,000
2. Tax withheld \$ Paid by Declaration	\$ 2,400,000	2,400,000
3. Estimated Overpayment (If Line 2 exceeds Line 1, enter difference)	\$	
4. Balance Due (If Line 1 exceeds Line 2 and or 3, enter difference)	\$	1,526,000
5. Enter payment due with this return (at least 1/4 of Line 1, Less Credit For Line 2)	\$	

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

6. Estimate of Income Tax for 1980	\$	4,000,000
7. Estimate of Income Tax to be Withheld during year (Nonresident)	\$	
8. Estimated Tax (Line 6 Less Line 7)	\$	4,000,000
9. Amount to be paid with this Declaration (25% of Line 6 Less Line 7)	\$	1,000,000

COMPUTATION OF ESTIMATED LICENSE FEE

10. Total Capital and Paid in Surplus (End of Year) (Include Treasury Stock)	\$	Final computation to be filed on Form 1101-U
11. FEE DUE - Line 10 x \$100, but not less than \$10.00	\$	2,123,300

NOTE - FEE DUE ON LINE 11 MUST BE REMITTED WITH THIS RETURN

REQUEST FOR EXTENSION

An extension is requested for ninety (90) days or 184 days for the following reasons:Additional time is required to analyze and interpret financial statements.

This Return Prepared By

Date

Signature of Officer Authorized to Sign

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and the receipt of this return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1976 as amended, for the underestimation of any tax or fee.

SOUTH CAROLINA TAX COMMISSION
INCOME TAX DIVISION
C. H. BROOKS, DIRECTOR

AS ORIGINALLY FILED

(SEE INSTRUCTIONS ON BACK)

Duke Power CompanyStatement Attached To And Made Part Of
1979 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Depreciation CLADR System</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-79	\$ 638,902	\$ 520,632	\$ 118,270
00.120	EDP	71-79	1,653,968	1,663,313	(9,345)
00.130	Data handling equip.	71-79	403,857	385,416	18,441
00.230	Buses	74	33,489	37,572	(4,083)
49.110	Hydro	71-79	4,616,684	3,524,768	1,091,916
49.120	Nuclear	73-79	30,942,611	23,351,302	7,591,309
49.121	Nuclear fuel	76-79	29,517,302	28,108,177	1,409,125
49.131	Steam	70-79	27,912,669	23,503,287	4,409,382
49.132	Other production	71-79	1,253,987	915,214	338,173
49.141	Transmission	71-79	23,750,350	18,105,412	5,644,938
49.142	Distribution	71-79	31,791,487	28,719,981	3,071,506
49.300	Water	71-79	183,403	153,684	29,719
			<u>\$152,698,109</u>	<u>\$128,988,758</u>	<u>\$23,709,351</u>

Depreciation on Federal return was computed under Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1979.

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
1979 South Carolina Corporation Income Tax Return1979 Apportionment Ratio

	<u>South Carolina</u>	<u>Total</u>	<u>Ratio</u>
Beginning of period			
Electric	\$1,492,262,863	\$3,955,045,044	
Water	12,974,606	16,792,196	
Transit		525,314	
Materials and supplies	20,298,021	180,785,908	
Total	<u>\$1,525,535,490</u>	<u>\$4,153,148,462</u>	
End of period			
Electric	\$1,565,564,370	\$4,116,451,138	
Water	13,136,914	17,450,872	
Transit		525,314	
Materials and supplies	21,459,482	194,552,410	
Total	<u>\$1,600,160,766</u>	<u>\$4,328,979,734</u>	
Average property	\$1,562,848,128	\$4,241,064,098	
Add: Rental	3,765,720	18,027,200	
Property for ratio	<u>\$1,566,613,848</u>	<u>\$4,259,091,298</u>	36.783%
Payrolls	\$ 124,766,936	\$ 318,062,639	
Less: Officers		2,449,340	
Payroll for ratio	<u>\$ 124,766,936</u>	<u>\$ 315,613,299</u>	39.532%
Sales	<u>\$ 448,611,808</u>	<u>\$1,506,326,773</u>	29.782%
Total of three ratios			106.097%
Average ratio			<u>35.366%</u>

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesSummary of Income and Deductions

	<u>Per books</u>	<u>Income increase (decrease)</u>	<u>Tax basis</u>
Gross receipts	\$1,504,805,730	\$ (2,871,146)	\$1,501,934,584
Less: Cost of goods sold	<u>660,746,718</u>	<u>50,894,447</u>	<u>609,852,271</u>
Gross profit	\$ 844,059,012	\$ 48,023,301	\$ 892,082,313
Dividends	11,935,082	(11,293,444)	641,638
Other interest	164,730,771	(163,326,306)	1,404,465
Rents			
Royalties			
Net capital gain - Schedule D	(20,708,750)	6,969,178	(13,739,572)
Ordinary gain (loss)			
Form 4797 Part II		10,541,115	10,541,115
Other income	<u>1,156,381</u>	<u>17,821,442</u>	<u>18,977,823</u>
Total income	<u>\$1,001,172,496</u>	<u>\$ (91,264,714)</u>	<u>\$ 909,907,782</u>
Compensation of officers	\$ 2,449,340	\$	\$ 2,449,340
Salaries and wages	39,692,598	974	39,691,624
Repairs	95,782,810	(11,139,058)	106,921,868
Bad debts	3,554,251	79,853	3,474,398
Rents	10,943,203	2,880,222	8,062,981
Taxes	132,935,207	(12,353,290)	145,288,497
Interest	188,281,566		188,281,566
Contributions	723,518	(8,852)	732,370
Amortization	2,838,450		2,838,450
Depreciation	123,809,929	(84,003,260)	207,813,189
Advertising	487,826		487,826
Pension plan	10,723,380	(12,534,967)	23,258,347
Profit sharing	1,675,055	(1,921,208)	3,596,263
Employee benefits	3,689,977	(4,185,366)	7,875,343
Other deductions	<u>108,825,532</u>	<u>78,696,069</u>	<u>30,129,463</u>
Total deductions	<u>\$ 726,412,642</u>	<u>\$ (44,488,883)</u>	<u>\$ 770,901,525</u>
Net income	<u>\$ 274,759,854</u>	<u>\$ (135,753,597)</u>	<u>\$ 139,006,257</u>

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesExplanation of Tax Adjustments

		Income increase (decrease)
Gross receipts -		
Revenue refunds	\$ (4,701,450)	
Amount due from meters read but unbilled at Jan. 1, 1976, to be included in income over a ten-year period	1,064,511	
Increase in amount due from meters read but not billed for 1979	765,793	\$ (2,871,146)
Cost of goods sold -		
To adjust coal expense consistently with method adopted in prior years as a result of Internal Revenue Service audit	\$ (6,472,537)	
To decrease nuclear fuel expense by book expense of burned fuel on which tax depreciation is claimed	57,366,984	50,894,447
Dividends -		
To eliminate increases in equity of subsidiaries included in income		(11,293,444)
Other interest -		
Interest charged to construction	\$(163,086,244)	
Interest on obligations of:		
State of North Carolina	(1,280)	
North Carolina Power Agency	(238,782)	(163,326,306)
Capital gain net income -		
Book write down of assets	\$ 25,827,438	
Sale of Catawba contract rights	(16,112,501)	
Excess of Catawba gain reported in 1978	(2,711,250)	
Sale of enrichment services	(34,509)	6,969,178
Ordinary gain (loss) -		
Construction profit	\$ 14,225,619	
Expenses deducted elsewhere on return (labor overheads)	3,595,823	17,821,442
Other income -		
Loss on Catawba initial core sale	\$ (106,247)	
Gain on sale of yellowcake	10,647,362	10,541,115

(Continued)

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Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesExplanation of Tax Adjustments

		Income increase (decrease)
Salaries and wages -		
Reduce salaries and wages by targeted jobs credit apportionable to Duke		\$ 974
Repairs -		
Repair allowance computed under 1.167(a)(11)		(11,139,058)
Bad debts -		
To adjust expense to amount allowable as determined on bad debts schedule		79,853
Rents -		
To adjust rents by amounts paid on leases of facilities -		
Hydro	\$ 23,559	
Other production	3,087,321	
Buildings	<u>(230,658)</u>	\$ 2,880,222
Taxes -		
To decrease taxes to amount allowable per taxes schedule		(12,353,290)
Contributions -		
Excess of fair market over book value of assets donated		(8,852)
Depreciation -		
To increase expense to amount allowable as determined on depreciation schedule		(84,003,260)
Pension and other qualified plans -		
Pension plan costs capitalized per books	\$(12,487,363)	
Add: Excess of tax expense over book expense	<u>(47,604)</u>	(12,534,967)
Stock purchase plan costs capitalized	\$ (1,904,128)	
ESOP credit reductions applicable to shares previously distributed	<u>(17,080)</u>	(1,921,208)

(Continued)

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Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Explanation of Tax Adjustments

Income
increase
(decrease)

Other employee benefits -

Life and medical insurance premiums and
other employee benefits capitalized
per books

\$ (4,185,366)

Other deductions -

Investment tax credit	\$ 36,508,674
Provision for deferred income tax	40,707,815
Intercompany profits	807,654
Injuries and damages reserve	(74,751)
Civic, political and related expenditures	13,535
Rate proceedings expense	25,785
Cost of dismantling and removing assets	(2,758,071)
Software - self developed	(544,415)
Acquisition adjustments	495,596
Insurance reserve	1,890,854
Amortization of Booz-Allen study	71,472
Storm Damage	1,986,156
Medical and dental insurance	(439,615)
Penalties	5,380

78,696,069

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesCost of Goods Sold and/or Operations

Fuel	\$538,507,217
Purchased power	(17,254,043)
Steam operating	25,350,836
Nuclear operating	25,846,694
Hydro operating	3,713,784
Combustion turbine	250,388
Transmission lines	7,020,530
Distribution lines	19,157,270
Water	837,519
Transit	366,916
Merchandising	6,055,160
Total	<u>\$609,852,271</u>

Dividends

Martin County Coal Corp.	\$640,000
J. P. Stevens & Company, Inc.	303
Graham Industrial Development Corp.	900
Mt. Airy Development Corp.	120
Dan River Mills, Inc.	165
Yadkinville Industrial Development Corp.	50
North Elkin Realty	30
Spector Industries	70
Total	<u>\$641,638</u>

AS ORIGINALLY FILED

Form **4797**
Department of the Treasury
Internal Revenue Service

Supplemental Schedule of Gains and Losses
(Includes Gains and Losses From Sales or Exchanges of Assets
Used in a Trade or Business and Involuntary Conversions)
To be filed with Form 1040, 1041, 1065, 1120, etc.—See Separate Instructions

1979

Name(s) as shown on return

Duke Power Company

Identifying number as shown on page 1
of your tax return

56-0205520

Part I Sales or Exchanges of Property Used in Trade or Business, and Involuntary Conversions (Section 1231)

Caution: If you sold property on which you claimed the investment credit, you may be liable for recapture of that credit. See Form 4255 for additional information.

SECTION A—Involuntary Conversions Due to Casualty and Theft (See Instruction F)

a. Kind of property (if necessary, attach additional descriptive details not shown below)	b. Date acquired (mo., day, yr.)	c. Date sold (mo., day, yr.)	d. Gross sales price less expense of sale	e. Depreciation allowed (or allowable) since acquisition	f. Cost or other basis, and cost of subsequent improvements (if not purchased, attach explanation)	g. Gain or loss (d plus e less f)
1						

2 Gain, if any, from line 25, Part III on back of this form attributable to casualty and theft

3 Combine the amounts on lines 1 and 2. Enter here, and on the appropriate line as follows

(a) For all except partnership returns:

(1) If line 3 is zero or a gain, enter that amount on line 4, column g.

(2) If line 3 is a loss, enter the loss on line 7.

(b) For partnership returns: Enter the amount shown on line 3 above, on Schedule K (Form 1065), line 7.

SECTION B—Sales or Exchanges of Property Used in Trade or Business and Certain Involuntary Conversions (Not Reportable in Section A) (See Instruction F)

4						

5 Gain, if any, from line 25, Part III on back of this form attributable to other than casualty and theft

6 Combine the amounts on lines 4 and 5. Enter here, and on the appropriate line as follows

(a) For all except partnership returns:

(1) If line 6 is a gain, enter the gain as a long-term capital gain on Schedule D (Form 1040, 1120, etc.) that is being filed. See instruction F.

(2) If line 6 is zero or a loss, enter that amount on line 8.

(b) For partnership returns: Enter the amount shown on line 6 above, on Schedule K (Form 1065), line 8.

Part II Ordinary Gains and Losses

a. Kind of property (if necessary, attach additional descriptive details not shown below)	b. Date acquired (mo., day, yr.)	c. Date sold (mo., day, yr.)	d. Gross sales price less expense of sale	e. Depreciation allowed (or allowable) since acquisition	f. Cost or other basis, and cost of subsequent improvements (if not purchased, attach explanation)	g. Gain or loss (d plus e less f)
7 Amount, if any, from line 3(a)(2)						
8 Amount, if any, from line 6(a)(2)						
9 Gain, if any, from line 24, Part III on back of this form						
10 Other ordinary gains and losses:						
Catawba initial core	Var.	1979				(106,247)
Yellowcake	Var.	1979	20,825,000		10,177,638	10,647,362

11 Combine amounts on lines 7 through 10. Enter here, and on the appropriate line as follows

(a) For all except individual returns: Enter the gain or (loss) shown on line 11, on the line provided for on the return (Form 1120, etc.) being filed. See instruction G for specific line reference.

(b) For individual returns:

(1) If the gain or (loss) on line 11, includes losses that are to be treated as an itemized deduction on Schedule A (Form 1040) (see instruction G), enter the total of the loss(es) here. Include that amount on Schedule A (Form 1040), line 29 and identify as "loss from Form 4797, line 11(b)(1)".

(2) Redetermine the gain or (loss) on line 11, excluding the loss (if any) entered on line 11(b)(1). Enter here and on Form 1040, line 16

Form 4797 (1979)

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Form 4797 (1997)

Page 2

Part III Gain From Disposition of Property Under Sections 1245, 1250, 1251, 1252, 1254, 1255—Assets Held More Than One Year (See Separate Instructions)
 Note: For livestock, see section 1231(b)(3) or instruction A for a longer holding period.
 Skip lines 20 and 21 if there are no dispositions of farm property or farmland, or if this form is filed by a partnership.

12 Description of sections 1245, 1250, 1251, 1252, 1254, and 1255 property:	Date acquired (mo., day, yr.)	Date sold (mo., day, yr.)
(A) Fixtures		
(B)		
(C)		
(D)		

Relate lines 12(A) through 12(D) to these columns >>>	Property (A)	Property (B)	Property (C)	Property (D)
13 Gross sales price less expense of sale	17,000			
14 Cost or other basis	0			
15 Depreciation (or depletion) allowed (or allowable)	17,000			
16 Adjusted basis, subtract line 15 from line 14	0			
17 Total gain, subtract line 15 from line 13	17,000			
18 If section 1245 property:				
(a) Depreciation allowed (or allowable) after applicable data (see instructions)	0			
(b) Enter smaller of line 17 or 18(a)	0			
19 If section 1250 property:				
(a) Additional depreciation after 12/31/75 (see instructions)				
(b) Applicable percentage times the smaller of line 17 or line 19(a) (see instruction H.4)				
(c) Subtract line 19(a) from line 17. (If line 17 is not more than line 19(a), skip lines 19(d) through 19(h). Enter the amount from line 19(b) on line 19(i))				
(d) Additional depreciation after 12/31/69 and before 1/1/76				
(e) Applicable percentage times the smaller of line 18(c) or 19(d) (see instruction H.4)				
(f) Subtract line 19(d) from line 18(c). (If line 18(c) is not more than line 19(d), skip lines 19(e) and 19(h). Combine the amounts on lines 19(b) and 19(e) on line 19(i))				
(g) Additional depreciation after 12/31/63 and before 1/1/70				
(h) Applicable percentage times the smaller of line 19(f) or 19(g) (see instruction H.4)				
(i) Add lines 19(b), 19(f), and 19(h)				
20 If section 1251 property:				
(a) If farmland, enter soil, water, and land clearing expenses for current year and the four preceding years				
(b) If farm property other than land, subtract line 18(b) from line 17; if farmland, enter smaller of line 17 or 20(a) (see instruction H.5)				
(c) Excess deductions account (see instruction H.5)				
(d) Enter smaller of line 20(b) or 20(c)				
21 If section 1252 property:				
(a) Soil, water, and land clearing expenses made after 12/31/69				
(b) Amount from line 20(d), if none enter a zero				
(c) Subtract line 21(b) from line 21(a). (If line 21(b) is more than line 21(a), enter zero.)				
(d) Line 21(c) times applicable percentage (see instruction H.5)				
(e) Subtract line 21(d) from line 17				
(f) Enter smaller of line 21(e) or 21(c)				
22 If section 1254 or 1255 property:				
(a) Intangible drilling and development costs deducted after 12/31/75 or ordinary income under section 1255 (see instruction H.6)				
(b) Enter smaller of line 17 or 22(a)				

Summary of Part III Gains (Complete Property columns (A) through (D) through line 22(b) before going to line 23)	
23 Total gains for all properties (add columns (A) through (D), line 17)	17,000
24 Add columns (A) through (D), lines 18(b), 19(f), 20(d), 21(f), and 22(b). Enter here and on Part II, line 9	0
25 Subtract line 24 from line 23. Enter the portion attributable to casualty and theft on Part I, line 2; enter the portion attributable to other than casualty and theft on Part I, line 5	17,000

U.S. GOVERNMENT PRINTING OFFICE: 1997-11-12 23-68723-9

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DUKE POWER COMPANY
SCHEDULE E - COMPENSATION OF OFFICERS
YEAR ENDED DECEMBER 31, 1979

<u>1. Name of Officer</u>	<u>2. Social Security Number</u>	<u>3. Title</u>	<u>7. Amount of Compensation</u>
Carl Horn, Jr.	245-14-2680	Chairman of the Board	\$ 188,312
W. S. Lee	240-36-5316	President	134,032
D. W. Booth	416-20-6316	Exec. Vice President	105,798
W. H. Grigg	242-44-5627	Sr. Vice President	94,165
A. C. Thies	245-01-6211	Sr. Vice President	94,165
W. H. Owen	247-36-0637	Sr. Vice President	86,478
J. D. Ricks	242-26-3282	Sr. Vice President	79,099
S. C. Griffith, Jr.	248-58-8700	VP & General Counsel	74,800
R. L. Dick, Jr.	245-24-1815	Vice President	70,065
L. C. Dail	245-20-5042	Vice President	67,640
J. W. Lewis	246-10-0990	Vice President	66,937
F. A. Jenkins	237-10-4350	Vice President	66,084
W. O. Parker, Jr.	245-24-8853	Vice President	59,114
T. M. Patrick, Jr.	251-01-1787	Vice President	56,811
W. R. Stimart	338-24-9601	Vice President	55,393
H. L. Cranford	243-32-5629	Vice President	54,085
J. G. Mann	251-14-4865	Vice President	53,942
K. A. Arledge	237-18-9841	Vice President	53,539
S. T. Lattimore	245-40-6973	Vice President	51,553
D. H. Denton, Jr.	157-26-5779	Vice President	51,469
T. C. Berry	249-42-7898	Vice President	51,313
P. H. Mann, Jr.	244-40-5836	Vice President	49,650
J. S. Major, Jr.	250-03-6157	Vice President	49,109
E. N. Hedgepeth, Jr.	237-36-3038	Vice President	48,803
M. T. Hatley, Jr.	238-22-2342	Vice President	46,637
P. A. Hauser	238-12-6429	Vice President	44,733
R. R. Pierce	243-03-7836	Vice President	42,137
J. W. White	244-26-0593	Vice President	40,746
E. B. Shuler	322-22-2307	Asst. Vice President	35,118
C. J. Sherrill	243-34-7687	Asst. Vice President	46,822
R. J. Ashmore	242-20-6779	Asst. Vice President	41,209
R. C. Ranson	239-62-1573	Treasurer	45,466
W. B. Shannon	239-26-6449	Asst. Treasurer	33,383
E. C. Sites	241-50-3394	Asst. Controller	36,110
R. W. Holmes	306-44-3330	Asst. Controller	34,038
K. C. Stonebraker	220-40-0340	Asst. Controller	15,776
G. W. Ferguson, Jr.	249-44-6175	Secretary	66,617
L. F. Camp, Jr.	245-52-1261	Asst. Secretary	47,557
J. C. Goodman, Jr.	241-05-8136	Asst. Secretary	33,611
Dorothea B. Stroupe	246-05-0600	Asst. Secretary	22,024
R. A. Overcash, Jr.	241-20-9427	Chairman, Fin. Comm.	17,500
Howard Holderness	239-09-0240	V. Chairman, Fin. Comm.	17,500
Total			<u>\$2,449,340</u>

Item 4. 100% of time devoted to business.

Items 5 and 6. No officer owned more than 1/100 of 1% of outstanding shares.

Officers are reimbursed for actual expenses incurred on behalf of the company.
Details are in the taxpayer's files.

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesBad Debts

Tax-basis reserve at December 31, 1979:

Loss experience

<u>Year</u>	<u>Year-end customer receivables</u>	<u>Net write-off</u>
1974	\$ 65,697,904	\$ 2,188,559
1975	72,159,083	3,479,681
1976	75,306,077	3,697,548
1977	93,111,501	3,841,629
1978	98,578,060	3,277,422
	<u>\$404,852,625</u>	<u>\$16,484,839</u>

Loss ratio

4.072

Customer accounts at December 31, 1979

\$110,088,601

Tax-basis reserve

4,482,808

1979 tax deductions:

Tax-basis reserve -

December 31, 1979, as computed above

\$ 4,482,808

December 31, 1978, per 1978 return

4,039,729

Amount of tax deduction -

Increase in reserve balance

\$ 443,079

Net write-offs during 1979

2,957,860

Net 1979 write-offs of merchandising receivables

73,289

1979 tax deduction

\$ 3,474,228

1979 schedule M adjustment:

Tax deduction, as above

\$ 3,474,228

Expense charged per books

3,554,081

Schedule M adjustment - income increase

\$ 79,853

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

	<u>Taxes</u>		
	<u>Per books</u>	<u>Expense increase (decrease)</u>	<u>Tax basis</u>
North Carolina:			
Property	\$16,568,908	\$ 5,413,546 (1) (656,995) (6)	\$ 21,325,459
City license	90,693		90,693
City chain store	4,660		4,660
City bus drivers permits	348		348
Durham bus license	6,064		6,064
Franchise	62,349,842	278,107 (3)	62,627,949
Intangibles	49,966		49,966
Industrial Commission	105,186		105,186
Unemployment	373,688	729,300 (1)	1,102,988
Income	4,633,765	429,410 (5)	5,063,175
Total North Carolina	<u>\$84,183,122</u>	<u>\$ 6,193,368</u>	<u>\$90,376,490</u>
South Carolina:			
Property	\$14,109,312	\$	\$14,109,312
City license	2,807,264		2,807,264
Franchise	2,060,349		2,060,349
Kilowatt hour	5,102,534		5,102,534
Public Service Commission	504,491		504,491
Greenwood sales	1,074		1,074
Industrial Commission	36,246		36,246
Chain store license	3,557		3,557
Bus license	24		24
Unemployment	619,753	576,253 (1)	1,196,006
Income	4,282,942	226,720 (5)	4,509,662
Total South Carolina	<u>\$29,527,546</u>	<u>\$ 802,973</u>	<u>\$30,330,519</u>

(Continued)

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesTaxes

	<u>Per books</u>	<u>Expense increase (decrease)</u>	<u>Tax basis</u>
Federal:			
Income	\$ 10,593,447	\$(10,593,447) (2)	\$
Social Security	8,190,997	10,781,856 (1)	18,972,853
Highway use	62,266		62,266
Gasoline tax refund	(12,810)	(25,666) (4)	(38,476)
Federal unemployment	382,907	488,085 (4)	870,992
Total Federal	\$ 19,216,807	\$ 650,828	\$ 19,867,635
Other Taxes:			
State use taxes	\$	\$ 4,706,121	\$ 4,706,121
California property	5,499		5,499
Georgia property	268		268
Tennessee property	1,119		1,119
Virginia property	846		846
Total other taxes	\$ 7,732	\$ 4,706,121	\$ 4,713,853
Total all taxes	\$132,935,207	\$12,353,290	\$145,288,497

Explanation of adjustments:

1. To increase tax expense by amounts capitalized.
2. To eliminate Federal income tax as a deduction.
3. To convert cash-basis book charge to accrual basis.
4. To decrease taxes by Federal gasoline tax refund.
5. To adjust state income taxes to actual liability.
6. To increase income due to protested and unpaid property tax assessments.

AS ORIGINALLY FILED

Duke P Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Donations

	<u>Total</u>	<u>Allocable to N. C.</u>	<u>North Carolina</u>		<u>South Carolina</u>
			<u>Apportionable</u>	<u>Unallowable</u>	
Colleges and universities	\$236,313	\$173,294	\$ 63,019		\$ 57,329
United Funds	169,950	128,675	41,275		41,275
Boy & Girl Scouts	4,402	4,402			
Junior Achievement	16,398	12,598	3,800		3,800
Y.M.C.A. & Y.W.C.A.	74,041	69,291	4,750		4,750
American Red Cross	2,050	2,050			
N. C. Museum of Art Foundation - Raleigh	1,000	1,000			
The N. C. Academy of Science, Inc.	250	250			
Atomic Industrial Forum, Inc. - Washington, D.C.	25,200		25,200		
N. C. Council on Economic Education	10,000	10,000			
S. C. Council on Economic Education	1,000		1,000		1,000
Salisbury-Rowan Chamber of Commerce	300	300			
National Bureau of Economic Research - N.Y.C.	200		200		
N. C. Agribusiness Council	2,000	2,000			
National Fire Protection Association - Boston	150		150		
Sounds of America - Charlotte	500	500			
Durham Merchants Association	800	800			
Urban-Greenville Fine Arts Series	100		100		100
Worsyth County Arts Council	3,000	3,000			
S. C. State Employees' Association	100		100		100
United Arts Council of Greensboro	3,000	3,000			
Weatherspoon Gallery Association - Greensboro	500	500			
Arts & Science Council - Charlotte	12,204	12,204			
High Point Arts Council	100	100			
Festival in the Park - Charlotte	660	660			
N. C. Department of Natural & Economic Resources	259	259			
Greenville Symphony Association	500		500		500
Salvation Army Development Fund - Burlington	1,500	1,500			
N. C. Museum of Life & Science	1,000	1,000			
Greenville County Art Association	1,100		1,100		1,100
Chester Merchants and Credit Association	125		125		125

(Continued)

AS ORIGINALLY FILED

4230

DES00010589

Duke P Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Donations

	<u>Total</u>	<u>Allocable to N. C.</u>	<u>North Carolina</u>		<u>South Carolina</u>
			<u>Apportionable</u>	<u>Unallowable</u>	
Lancaster Co. Society for Historical Preserv., Inc.	\$ 100	\$	\$ 100		\$ 100
Orsyth Mental Health - Amos Cottage, Inc.	375	375			
Thomasville Salvation Army Building Fund	2,500	2,500			
St. Francis Community Hospital - Greenville	100		100		100
S. C. Press Association	400		400		400
Greensboro Chamber of Commerce	200	200			
Brevard Music Center - Spartanburg	2,400		1,400		2,400
N. C. Home Builders Association	5,000	5,000			
Historic Preservation Fund of N. C., Inc.	500	500			
N. C. Museum of Art - Greensboro	10,000	10,000			
U. S. Open Jumping Championship - Charlotte	500	500			
Dial-A-Teacher, Inc. - Charlotte	1,000	1,000			
University for Young Americans - Cleveland, Ohio	550		550		
Charlotte Opera Association, Inc.	2,400	2,400			
Centerville Fire Department - Anderson	100		100		100
Spirit Square Performance Fund - Charlotte	10,000	10,000			
Lancaster County Educational Foundation	5,000		5,000		5,000
Anderson Community Theatre	500		500		500
Lethal Volunteer Fire Dept. - Clover	200		200		200
Hocksville-Davie Chamber of Commerce	1,667	1,667			
Anderson Salvation Army Development Fund	2,000		2,000		2,000
N. C. Association of Assessing Officers	100	100			
N. C. Association of Broadcasters	1,800	1,800			
Hospice at Charlotte, Inc.	2,000	2,000			
Charlotte Nature Museum	300	300			
Greater Greenville Chamber of Commerce	1,150		1,150		1,150
Kendriversville Rescue Squad, Inc.	100	100			
Baseball Stadium Lighting Comm. - Bessemer City	300	300			
National Municipal League - Winston-Salem	100	100			
Durham Arts Fund	1,000	1,000			
Charlotte-Mecklenburg Hospital Authority	3,000	3,000			
S. C. Wildlife Federation	250		250		250

(Continued)

AS ORIGINALLY FILED

4231

DES00010590

Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Donations

	<u>Total</u>	<u>North Carolina</u>			<u>South Carolina</u>
		<u>Allocable to N. C.</u>	<u>Apportionable</u>	<u>Unallowable</u>	
Tobacco History Corporation - Durham	\$ 1,000	\$ 1,000	\$		\$
Friends of the Coast - Columbia	250		250		250
S. C. Auditors, Treasurers & Tax Collectors Assoc.	250		250		250
Comm. for Economic Development - Boston	500		500		
Greater Rock Hill Chamber of Commerce	1,000		1,000		1,000
Director Division of Forest Resources - Raleigh	750	750			
Catawba County Chamber of Commerce	293	293			
Inst. of Nuclear Power Operations - Palo Alto, Cal.	25,000		25,000		
United Way of Spartanburg Co. - Luncheon Fund	100		100		100
Soc. for Advancement of Fission Energy - Columbia	200		200		200
Americans for Energy Independence - Washington, D.C.	6,000		6,000		
Science Fair - Charlotte	743	743			
American Nuclear Society - LaGrange Park, Ill.	2,000		2,000		
The Guild of Charlotte Artists	200	200			
N. C. Outward Bound Program	340	340			
S. C. State Commission of Forestry	826		826		826
ASME Student Section - Clemson University	100		100		100
Thomasville Community Concert Association	100	100			
Furniture Market Development - High Point	100	100			
American Cancer Society - Charlotte	250	250			
Bass Research Foundation - Starkville, Miss.	1,000		1,000		
N. C. Museum of History Associates, Inc.	200	200			
N. C. Symphony	1,500	1,500			
Mooresville - South Iredell Cancer Fund	100	100			
United Sports Council - King, N. C.	250	250			
Juvenile Diabetes Foundation - Charlotte	250	250			
Salvation Army Camp Walter Johnson - Charlotte	8,334	8,334			
Elkin Rescue Squad	150	150			
American Nat'l. Standards Institute Inc. - N.Y.C.	1,000		1,000		
United Way Luncheon Pool Fund - Gastonia	100	100			
Greater Durham Chamber of Commerce	750	750			
N. C. Agricultural Foundation, Inc.	500	500			

(Continued)

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AS ORIGINAL FILED

DES00010591

Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

	<u>Donations</u>				<u>South Carolina</u>
	<u>Total</u>	<u>Allocable to N. C.</u>	<u>North Carolina</u>		
			<u>Apportionable</u>	<u>Unallowable</u>	
Southeastern Legal Foundation, Inc. - Atlanta	\$ 5,000	\$	\$ 5,000		\$
C. Edwards Endowment for Excellence					
Science & Technology - Clemson	8,333		8,333		8,333
Lancaster County Educational Foundation	5,000		5,000		5,000
N. C. Student Academy of Science	300	300			
Lions Charitable Promotions - Camp Dogwood	1,000	1,000			
PINSCA Volunteer Fire Department - Charlotte	125	125			
Durham - Duke Program	800	800			
Forsyth Home Economic Extension Office	100	100			
National Urban League of Charlotte	5,000	5,000			
Wilmore School Cafeteria - Charlotte	144	144			
Western N. C. Development Association	200	200			
Thomasville Sr. High School Band	150	150			
Discover Upcounty Carolina Assoc. - Greenville	1,000		1,000		1,000
N. C. Jaycees	1,731	1,731			
Orange Cardiovascular Foundation, Inc.	500	500			
Spartanburg County Art Association	200		200		200
American Heart Assoc. - Char.-Meck. Chapter, Inc.	1,000	1,000			
Madison-Mayodan Activity Bus Fund	500	500			
Foothills Arts Council - Elkin	100	100			
Sherwood Elementary School - Gastonia	100	100			
Planned Parenthood of Greater Charlotte	1,100	1,100			
Celebrate Charlotte	200	200			
Governor's Conference on Mental Health - Raleigh	2,000	2,000			
Town of Walhalla, S. C.	500		500		500
Keep N. C. Beautiful, Inc.	500	500			
Belmont Chamber of Commerce	100	100			
Salisbury Holiday Decorations Committee	150	150			
Charles Lea Center - Spartanburg	250		250		250
Northwest N. C. Development Association	300	300			
Old Salem - Winston-Salem	5,000	5,000			

(Continued)

AS ORIGINALLY FILED

4233

DES00010592

Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Donations

	<u>Total</u>	<u>Allocable to N. C.</u>	<u>North Carolina</u>		<u>South Carolina</u>
			<u>Apportionable</u>	<u>Unallowable</u>	
Value of J. P. Stevens Common Stock in excess of book value	\$ 8,852	\$ 8,852	\$		\$
Miscellaneous items under \$100	<u>3,705</u>	<u>3,204</u>	<u>501</u>		<u>501</u>
Total current year donation	\$732,370	\$519,291	\$213,079		\$140,789
Carryovers from loss years					
Total	<u>\$732,370</u>	<u>\$519,291</u>	<u>\$213,079</u>		<u>\$140,789</u>

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AS ORIGINAL FILE

DES00010593

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Instructions

(Section references are to the Internal Revenue Code unless otherwise specified.)

Note: Information on Class Life Asset Depreciation Range (CLADR) System and the limitation of straight line depreciation method for certain boilers fueled by oil or gas is contained in Publication 534, Depreciation.

Purpose of Form.—This form is for use by individuals, estates, trusts, partnerships, and corporations to report depreciation expense claimed on their return.

Reasonable Allowance.—You may de-

duct a reasonable allowance for the exhaustion, wear and tear, and obsolescence of property used in a trade or business, or held to produce income. You may not take the allowance for stock in trade, inventories, land, personal assets or any property (including the allowable basis of any property) acquired with certain cost sharing payments described in section 126. To figure the allowance, write off the cost or other basis to be recovered over the expected useful life of the property.

Depreciation begins when the asset is placed in service and ends when it is retired from service. To figure the depreciation basis for personal property other than

livestock, you do not have to take into account salvage value that is less than 10% of its cost or other basis. If the salvage value is more than 10%, take only the amount over 10% into account. These rules apply to property with a useful life of 3 or more years.

Depreciation Methods.—The methods of depreciation under section 167(b) are the following:

Straight Line Method.—To figure the depreciation on property for each year, divide its cost or other basis by its remaining useful life. Adjust its cost or other basis by

(Continued on back)

Form 4562 (1979)

AS ORIGINALLY FILED

4235

DES00010594

Form **4832**Department of the Treasury
Internal Revenue Service**Class Life Asset
Depreciation Range (CLADR) System**▶ See instructions on back.
▶ Attach this form to your return.**1979**Name(s) as shown on return (if consolidated return, indicate name and identifying number of electing company)
Duke Power CompanyIdentifying number
55-0205520

Note: By filing this form you elect, consent, and agree to apply the provisions of section 1.167(a)-11 of the regulations.

Part I Election Questions

	Yes	No
A Did you exclude under the special 10 percent used property rule property first placed in service this taxable year?		☒
B Did you exclude any other eligible property for which an election was not required or permitted? (See instructions).	☒	
C Did you allocate the unadjusted basis of a special vintage account in this taxable year?		☒
If "Yes," attach a statement showing the computation and allotted basis amount.		
D Did you change the depreciation method for any vintage account this taxable year?	☒	
If "Yes," attach a statement showing the account and the computation of allowable depreciation under the new method.		
E Did you elect to compute depreciation on a composite guideline class basis in accordance with Revenue Procedure 64-21 for electric or gas utility property under section 1.167(a)-11(b)(4)(ii)?		☒
If "Yes," attach a statement showing the computation.		
F Did you elect the repair allowance this taxable year?	☒	
G Check first-year convention adopted this taxable year:		
☒ Half-year	☐ Modified half-year	

Part II Asset Guideline Class Summary (See instructions)

a. Asset guideline class	b. Current year's additions	c. Cost or other basis of property in service at end of year	d. CLADR depreciation on this year's additions (Do not include first-year depreciation under section 179)	e. Total CLADR depreciation this year (Do not include first-year depreciation under section 179)	f. Reserve for depreciation at end of year (Do not include first-year depreciation under section 179)
00.110	1,534,206	4,750,472	194,276	638,902	2,291,215
00.120	1,131,788	11,545,051	161,684	1,653,968	11,278,813
00.130	686,942	2,647,202	98,135	403,857	1,664,577
00.230	-0-	525,314	-0-	33,489	441,593
49.110	129,608	111,533,211	3,241	4,616,684	34,682,963
49.120	8,483,368	387,255,068	530,211	30,942,611	226,036,375
49.121	8,388,330	154,356,676	1,677,666	29,517,302	99,561,613
49.130	2,997,465	433,408,686	133,221	29,166,056	190,652,045
49.140	101,823,264	869,860,734	4,238,868	55,541,837	295,911,421
49.300	572,865	4,912,493	14,322	183,403	1,141,406
Totals	125,767,836		7,051,624		863,662,021
Totals. Enter totals from columns a and e on appropriate lines of depreciation schedule of your tax return.		1,981,172,907		152,698,109	
Total additional first-year depreciation. Enter here and include on additional first-year depreciation line of depreciation schedule in tax return.					

Form 4832 (1979)

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Form 4832 Class Life (ADR) System For 1979

The depreciation method of the accounts and vintages listed below was changed from double declining balance to the sum of the years digits method. The depreciation on the new method was computed by depreciating the unrecovered basis over the remaining life.

<u>GLC</u>	<u>Vintage</u>
00.110	1977
00.120	1977
00.130	1977
49.110	1977
49.120	1977
49.130	1977
49.140	1977

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesClass Life System Depreciation

<u>Asset Guideline Class</u>	<u>Unadjusted Basis Year Ending 1979</u>	<u>Salvage Value</u>	<u>Current Year Depreciation</u>	<u>Depreciation Reserve Balance Year Ending 1979</u>
00.110	\$ 2,224,629	\$	\$ 106,457	\$ 2,082,769
00.120	4,467,581		-0-	4,467,581
00.130	1,078,994		12,032	1,078,994
49.110	99,953,790	841,711	1,977,481	69,051,090
49.130	534,409,118	5,937,357	19,685,179	397,300,038
49.140	917,500,937	11,015,681	27,730,175	545,931,877
49.30	11,420,459	53,992	231,827	4,263,058
65.41	12,489,401	207,662	284,366	5,892,762
Total	<u>\$1,583,544,909</u>	<u>\$18,056,403</u>	<u>\$50,027,517</u>	<u>\$1,030,068,169</u>

Section 167(a)12 Election

Taxpayer elects to compute depreciation on the Class Life System for the Tax Year 1979 in accordance with Section 1.167(a)12 of the regulations.

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Other Deductions

Electric	\$ (392,226)
Administrative and general	27,576,144
Water	62,387
Transit	178,861
Merchandising	1,006,968
Other income deductions	1,695,754
Farms & forestry	1,575
	<u>\$30,129,463</u>

Election Pursuant to Section 46(d) of the Code

Duke Power Company has elected to include in qualified investment an amount equal to its qualified progress expenditures. Such expenditures are reflected in the investment credit amounts shown for Duke Power Company in this return.

AS ORIGINALLY FILED

Duke Power Company

**Statement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates**

Balance Sheets

	<u>Beginning of taxable year</u>		<u>End of taxable year</u>	
	<u>Amount</u>	<u>Total</u>	<u>Amount</u>	<u>Total</u>
Assets				
Cash	\$	\$ 37,794,398	\$	\$ 4,833,408
Notes and accounts receivable	123,203,091		146,880,766	
(a) Less allowance for bad debts	<u>3,607,680</u>	119,595,411	<u>4,130,609</u>	142,750,157
Inventories		183,647,597		198,688,977
Other current assets		1,353,427		1,528,859
Other investments		51,363,274		51,352,273
Buildings and other fixed assets	\$5,816,560,467		\$6,635,952,815	
(b) Less accumulated depreciation	<u>1,244,085,086</u>	4,572,475,381	<u>1,404,247,638</u>	5,231,705,177
Other assets		34,426,903		59,000,316
Total assets		<u>\$5,000,656,391</u>		<u>\$5,689,859,167</u>
Liabilities and capital				
Accounts payable		\$ 112,568,409		\$ 90,995,388
Debt payable in less than 1 year		149,106,865		122,333,155
Other current liabilities		132,305,240		135,985,612
Debt payable in 1 year or more		1,974,208,658		2,341,854,460
Other liabilities		457,819,173		562,068,034
Capital stock				
(a) Preferred stock	\$ 637,446,700		\$ 678,606,200	
(b) Common stock	<u>1,271,028,470</u>	1,908,475,170	<u>1,414,791,342</u>	2,093,397,542
Earned surplus and undivided profits		266,172,876		343,224,976
Total liabilities and capital		<u>\$5,000,656,391</u>		<u>\$5,689,859,167</u>

AS ORIGINALLY FILED

4240

DES00010699

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesOther Current Assets

	<u>Beginning of taxable year</u>	<u>End of taxable year</u>
Prepayments	\$ 1,352,894	\$ 1,528,326
Interest receivable	533	533
Total other current assets	<u>\$ 1,353,427</u>	<u>\$ 1,528,859</u>

Deferred Debits

Accumulated deferred income taxes	\$16,035,170	\$39,652,532
Extraordinary property losses	3,972,312	1,986,156
Unamortized debt discount and expenses	11,925,378	13,635,184
Preliminary survey and investigation charges	51,865	54,188
Clearing accounts	(38,519)	1,308,893
Other deferred debits	<u>2,480,697</u>	<u>2,363,363</u>
Total deferred debits	<u>\$34,426,903</u>	<u>\$59,000,316</u>

AS ORIGINALLY FILED

4241

DES00010600

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesOther Investments

	<u>Beginning of taxable year</u>	<u>End of taxable year</u>
<u>Investments in associated companies</u>		
Wateree Power Company	\$ 1,007,527	\$ 1,000
Hill-Power Supply Company	4,305,887	4,670,670
Crescent Land & Timber Corp.	32,000,365	35,998,149
Eastover Land Company	2,495,084	2,409,879
Eastover Mining Company	7,623,150	8,910,356
Western Fuel, Inc.	500	500
Advances to:		
Crescent Land & Timber Corp.		
Eastover Land Company	1,552,388	4,470,096
Eastover Mining Company	(24,141)	
Hill-Power Supply Company		
Reserve for Investment in		
Subsidiaries	<u>(6,356,880)</u>	<u>(13,916,880)</u>
Total investment in associated companies	<u>\$42,603,880</u>	<u>\$42,543,770</u>
<u>Other investments</u>		
J. P. Stevens and Company	\$ 5,176	\$ 643
The Business Development Corporation of North Carolina	100,000	100,000
The Business Development Corporation of South Carolina	80,000	80,000
Investment in Area Development Corporation Funds		
Martin County Coal Corp.	8,000,000	8,000,000
Town of Davidson purchase with Duke Power bonds	488,649	484,474
Other:		
Stocks	31,569	69,643
Bonds	54,000	49,000
Promissory Note		24,743
Total other investments	<u>\$ 8,759,394</u>	<u>\$ 8,808,503</u>
Total	<u>\$51,363,274</u>	<u>\$51,352,273</u>

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesOther Current Liabilities

	<u>Beginning of</u> <u>taxable year</u>	<u>End of</u> <u>taxable year</u>
Debt payable currently	\$	\$
Customer deposits	5,198,322	5,744,245
Taxes accrued	68,993,307	42,371,704
Interest accrued	53,365,816	55,501,063
Advances from associated companies		24,131,708
Other current and accrued liabilities	<u>4,747,795</u>	<u>8,236,892</u>
Total other current liabilities	<u>\$132,305,240</u>	<u>\$135,985,612</u>

Deferred Credits

Federal investment tax credit	\$111,661,234	\$162,944,458
Other deferred credits	9,460,851	8,289,291
Reserve for injuries and damages	2,023,777	1,949,026
Contributions in aid of construction		381,302,727
Deferred income taxes	329,092,786	7,582,532
Property insurance reserve	<u>5,580,525</u>	
Total deferred credits	<u>\$457,819,173</u>	<u>\$562,068,034</u>

AS ORIGINALLY FILED

Duke Power CompanyStatement Attached To And Made Part Of
Consolidated 1979 U. S. Corporation Income Tax
Return Of Duke Power Company And AffiliatesAnalysis of Earned Surplus Per Books

Balance at beginning of year		\$246,993,992
Undistributed earnings of subsidiaries		19,178,884
Net income per books		<u>274,759,854</u>
Total		\$540,932,730
Less:		
Cash dividends on preferred stock	\$ 52,561,696	
Cash dividends on common stock	141,035,158	
Capital stock expense	<u>4,110,900</u>	<u>197,707,754</u>
Balance at end of year		<u>\$343,224,976</u>

AS ORIGINALLY FILED

Jun 17 2001 21:50

P.19

Form **4136**Department of the Treasury
Internal Revenue Service**Computation of Credit for Federal Tax on
Gasoline, Special Fuels, and Lubricating Oil**

▶ Attach this form to your income tax return.

1979

23

Name (as shown on your income tax return)

Duke Power Company

Social security or employer identification number

56-0205520

Part I

Type of Business Use	Gasoline, Diesel Fuel and Special Motor Fuels			Lubricating Oil		
	Number of Gallons Used (A)	Rate of Tax (B)	Multiply Column (A) by Column (B) (C)	Number of Gallons Used (D)	Rate of Tax (E)	Multiply Column (D) by Column (E) (F)
1 Nonhighway:						
a Farm (for farming purposes)		.02				
		.04			.06	
b Commercial fishing vessel (See instructions C.4. and D.2.(c)):						
(i) Gasoline		.02				
(ii) Diesel fuel or special fuels		.02				
c Other (specify) <u>Utility</u>	59,205	.04	3,416		.06	
operations	55,806	.02			.06	
2 Intercity, local, and school buses (See instruction C.3.)	541,967	.04	21,679	9,513	.06	571
3 Aircraft					.06	
4 Totals			25,095			\$ 571

Part II

Type of Business Use	Aviation Fuels			
	Fuels Other Than Gasoline (Example: Jet Fuel) Number of Gallons Used (A)	Gasoline Number of Gallons Used (B)	Rate of Tax (C)	Multiply Column (A) or (B) by Column (C) (D)
5 a Farm (for farming purposes) (Aerial applicators see instruction C.1.)			.07	\$
			.04	
			.07	
			.04	
b Aviation (applies only to commercial use as defined in instruction D.2.(d))			.07	
			.07	
6 Total				\$
7 Total income tax credit claimed. (Add line 4, columns (C) and (F) and line 6, column (D).) (See instruction B.)				\$ 25,666

*** Tax Rate (per gallon used)**

Type of Use	Gasoline (Nonaviation Use)	Diesel Fuel and Special Motor Fuel	Aviation Fuel Gasoline
Form (farming purposes)	4¢	2¢ or 4¢ whichever paid	4¢ or 7¢ whichever paid
Other	2¢	2¢ or 4¢ whichever paid	
Aviation (applies only to commercial use as defined in instruction D.2.(d))			4¢ or 7¢ whichever paid

Instructions

(Section references are to the Internal Revenue Code unless otherwise specified)

After December 31, 1978, gasoline, special fuels, and lubricating oil used for non-business, off-highway purposes (such as lawnmowers, snowmobiles, etc.) are not eligible for credit or refund.

Form 843 for Quarterly Tax Refund.—You may want to file a claim for a tax refund instead of a credit. To do so you must be able to claim at least \$1,000 a quarter for any fuel category or lubricating oil. Use Form 843, Claim, for filing.

File for any of the first three quarters of your tax year before the end of the next quarter. Show separate computations for a claim on gasoline, special fuels, and lubricating oils. Don't include gasoline or special fuels used on a farm for farming purposes. You may claim a credit only, not a refund, for tax paid on such fuel.

You may use Form 4136 as a worksheet to show your computations, and attach it to your Form 843.

Don't include on Form 4136 the credit you claim on Form 843 for any of the first three quarters of your tax year.

A. Purpose of Form 4136.—You must file this form if you claim credit for Federal excise tax on certain kinds of fuel.

These include gasoline, special fuels, and lubricating oil as defined in instructions C, D, and E.

An individual, estate, trust, or corporation may file this form, but a partnership may not. However, when a partnership files Form 1065, U.S. Partnership Return of Income, it must include a statement showing:

- How many gallons of the fuels are allocated to each partner.
- The types of use, as shown in this form.

B. Year to include the Credit Resulting from Business Use of Fuel or Oil.—When you claim a credit or refund, you must include it in your gross income to the extent it resulted in a reduction of your income (Continued on back)

Form 4136 (1979)

AS ORIGINALLY FILED

4245

PAGE 10

DES00010604

5884
Department of the Treasury
Internal Revenue Service

Jobs Credit
Attach to your tax return.

1979

Name
Duke Power Company

Identifying number as shown on page 1 of your tax return
56-0205520

Important.—The taxpayer's wage and salary deduction must be reduced by the credit on line 9 if the taxpayer elects to claim this credit. (See instruction G.)

If you are an electing small business corporation, partnership, estate, or trust which apportions the credit to shareholders, partners, or beneficiaries, complete only lines 1 through 9.

If you are an individual shareholder, partner, beneficiary, or patron, who receives a jobs credit(s) from a small business corporation, partnership, estate, trust, or section 1381(a) cooperative, and have no other jobs credit, skip lines 1 through 9; enter your apportioned credit(s) on line 10, 11, 12, or 13 and complete the balance of the form as applicable.

If you are an individual who receives more than one jobs credit, see instruction for line 9.

Notes: If you are a member of a group of trades or businesses that are under common control or an estate or trust that apportions the jobs credit between itself and its beneficiaries, please see instruction H (2) and the instruction for line 9 before completing the form.

Part I Jobs Credit

1 Complete the schedule below for qualified first-year wages (limited to \$6,000 for each employee) paid or incurred during the tax year to employees who are certified as members of a targeted group (see instructions D and E):

(a) Targeted group	(b) Number of employees within each group	(c) Total qualified first-year wages paid or incurred per group
Targeted group A		
Targeted group B		
Targeted group C		
Targeted group D		
Targeted group E		
Targeted group F	1	1,948
Targeted group G		
2 Total—Add the amounts in columns (b) and (c)	1	1,948

3 Enter 30% of the total FUTA wages paid during the 1979 calendar year (see instructions)
4 Enter the smaller of line 2, column (c), or line 3

5 Complete the schedule below for qualified second-year wages (limited to \$6,000 for each employee) paid or incurred during the tax year to employees who are certified as members of a targeted group (see instructions D and E):

(a) Targeted group	(b) Number of employees within each group	(c) Total qualified second-year wages paid or incurred per group
Targeted group A		
Targeted group B		
Targeted group C		
Targeted group D		
Targeted group E		
Targeted group F		
Targeted group G		
6 Total—Add the amounts in columns (b) and (c)		

7 Enter 50% of line 6 (see instruction I for special limits)
8 Enter 25% of line 6, column (c) (see instruction I for special limits)

9 Current year jobs credit—Add lines 7 and 8. Enter here and include on Schedule C (Form 1040), line 31 (D); Form 1120, line 13b, page 1; or the corresponding appropriate line on other returns (see instruction G for details). (Members of a group of trades or businesses under common control, electing small business corporations, partnerships, estates and trusts, see instruction for line 9.)

10 Shareholder's current year jobs credit from Schedule K-1 (Form 1120S)
11 Partner's current year jobs credit from Schedule K-1 (Form 1065)
12 Beneficiary's current year jobs credit from Schedule K-1 (Form 1041)
13 Patron's jobs credit—Enter credit allocated from cooperative (see instruction J)
14 Total jobs credit for current year—Add lines 9 through 13
15 Carryback and carryover of unused credit(s) other than shareholder's, partner's, or beneficiary's unused credit(s) entered on line 22, 23, or 24

Form 5884 (1979)

AS ORIGINALLY FILED

4246

DES00010605

Part III Tax Liability Limitation

16 a Individuals—Enter amount from Form 1040, line 37, page 2	16	974
b Estates and trusts—Enter amount from Form 1041, line 27, page 1		
c Corporations—Enter amount from Schedule J (Form 1120), line 3, page 2		
17 a Credit for the elderly (individuals only)	17a	
b Foreign tax credit	17b	
c Investment credit	17c	
d WIN credit	17d	
e Credit for political contributions (individuals only)	17e	
f Credit for child and dependent care expenses (individuals only)	17f	
g Possessions corporation tax credit (corporations only)	17g	
h Tax on lump-sum distributions from Form 4972 or Form 5544	17h	
i Section 72(m)(5) penalty tax (individuals only)	17i	
j Total—Add lines 17a through 17i	17j	
18 Subtract line 17j from line 16	18	
19 Tax liability limitation for line 14—Enter 90% of line 18	19	
20 Allowed current year jobs credit—Enter smaller of line 14 or line 19. If line 14 does not contain an entry, enter zero. (Section 1381(s) type cooperatives, see instruction J.)	20	
21 Tax liability limitation for lines 22, 23, and 24—Subtract line 20 from line 19 (all filers other than shareholders, partners and beneficiaries to which lines 22, 23, or 24, apply, are to skip lines 22 through 25; enter zero on line 26; and complete lines 27 through 29 as applicable)	21	
22 Enter shareholder's unused carryover credit from tax years beginning prior to 1-1-79	22	
23 Enter partner's unused carryover credit from tax years beginning prior to 1-1-79	23	
24 Enter beneficiary's unused carryover credit from tax years beginning prior to 1-1-79	24	
25 Lines 22, 23 and 24 limits:		
a Enter the smallest of line 21, 22, or the amount figured by using the formula in the line 25 instruction	25a	
b Enter the smallest of line 21, 23, or the amount figured by using the formula in the line 25 instruction	25b	
c Enter the smallest of line 21, 24, or the amount figured by using the formula in the line 25 instruction	25c	
26 Total allowed unused carryover credit(s) from tax years beginning prior to 1-1-79 for shareholders, partners, and beneficiaries—Add lines 25a through 25c. If zero, enter zero. Do not enter more than line 21	26	
27 Tax liability limitation for line 15—Subtract line 26 from line 21	27	
28 Total allowed unused credit from line 15—Enter the smaller of line 27 or line 15	28	
29 Total allowed jobs credit from all sources—Add lines 20, 26, and 28. Enter here and on Form 1040, line 44; Schedule J (Form 1120), line 4(d), page 3; or the appropriate line on other returns	29	

Consolidated
limitation
applies

DISBURSEMENT REQUEST

FIELD USE ONLY		☐ Check if Exception On Back		Dept. or Location		G. O. USE ONLY		Audited BY		MP USE ONLY						
Payable To:	South Carolina Tax Commission					Invoice Number.				P. O. No.						
	Corporation Income Tax Division					Vender Number				Ven. No.						
	Columbia, South Carolina 29214					Adjust Code	Pay Code	Field Exempt	G. O. Exempt	Comm.	E. U.					
If other than above)						Exception Description				Date Inv. Rec'd.	Mo	Day	Yr			
and Check To:						FIELD OR G. O. USE										
Approved By	March 10, 1980					Invoice Date	0	3	1	0	8	0	Receipt Date	Mo	Day	Yr
State A. and	1980 South Carolina license fee					Due Date	0	3	1	7	8	0	☐	FPC/1000 Cd.		
Description	Portion of 1980 estimated income tax					Gross Amount							F.O.B.			
						Net Amount	, 3 , 1 , 2 , 3 , 3 , 0 , 0 , 0 , 0 /						DELIVERED SHIP POINT	()	CHARLOTTE FRT ALLOWED	()
Received By						Remittance Narrative							PAID STAMP			
Date Received						FPC/1000 Description										
Transp. Cost						FPC/1000 Description										

4248

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DES00010607

DISBURSEMENT REQUEST

FIELD USE ONLY		G. O. USE ONLY		MP USE ONLY	
☐ Check If Exception On Back		Dept. or Location		Audited BY	
Payable To: South Carolina Tax Commission		Invoice Number		P. O. No.	
Corporate Income Tax Division		Vendor Number		Ven. No.	
P. O. Box 125		Adjust Code		Comm.	
Columbia, South Carolina 29214		Pay Code		E. U.	
(If other than above)		Field Excep'n		Date Inv. Rec'd.	
Send Check To:		G. O. Excep'n		Mo Day	
Approved By		Exception Description		TERMS	
September 5, 1980		FIELD OR G. O. USE		RESP. No.	
Description		Invoice Date		PRICE	
1979 income tax, interest		Mo Day Yr		F.O.B.	
Portion of 1980 estimated tax		Due Date		DELIVERED () CHARLOTTE ()	
Received By		Mo Day Yr		SHIP POINT () FAT ALLOWED ()	
Date Received		FPC/1000 Cd.		PAID STAMP	
Transp. Cost		Gross Amount		Net Amount	
Remittance Narrative		Description		Description	
FPC/1000 Description		FPC/1000 Description		FPC/1000 Description	

[illegible]

Carolina Tax Commission
Form 1101-TE

Make Checks Payable To:
S. C. TAX COMMISSION
Mail This Return With
(1101-AR in duplicate)
And Remittance To:
CORPORATION
INCOME TAX DIVISION
S. C. TAX COMMISSION
Columbia, S. C.

THIS FORM IS TO BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA

TENTATIVE CORPORATION TAX RETURN

For Corporations Whose ENTIRE BUSINESS is Within S. C.

Do Not Write In These Spaces

Indexed File Number

AR to SS YES ☐ NO ☐

And CONDITIONAL EXTENSION

Return for the Period 1978

Return extended to September 15, 1978

Date Corporation Closes Its Books
December 31, 1978

DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina

RETURN DUE ON OR
BEFORE

March 15, 1979

NOTE: This extension will be valid
only if the approved copy is attached
and made a part of the completed
return when filed.

56-0105520
Employer Identification No.

4900
Business Code

20090024
File Number

COMPUTATION OF ESTIMATED LICENSE FEE

1. Total Capital and Paid in Surplus (Item 15 Page 4—End of year) (Include Treasury Stock) \$ Final computation
 2. DEDUCT: Capital Surplus created by, but not incident to, a Reorganization, Consolidation or Merger \$ to be filed on
 3. Total Capital and Paid in Surplus (after allowable deduction-Item 2) \$ Form 1101-0
 4. FEE DUE—Line 3 x \$.001, but not less than \$10.00 \$ 2,060,000
- NOTE—FEE DUE ON LINE 4 MUST BE REMITTED WITH THIS RETURN

COMPUTATION OF ESTIMATED INCOME TAX

Income Tax Due		\$ 6,120,000
Tax Withheld (Attach 1203)	Paid by Declaration \$ 2,200,000	2,200,000
Refund Due (If Line 2 and/or 3 exceeds Line 1, enter difference)		\$
Balance Due (If Line 1 exceeds Line 2 and/or 3, enter difference)		\$ 3,920,000
5. Enter payment due with this return (at least 1/4 of Line 1)		\$

NOTE—REMIT 25% OF LINE 1 LESS CREDIT FOR LINE 2

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

1. Estimate of Income Tax for <u>1979</u>	\$ 2,400,000
2. Estimate of Income Tax to be Withheld during year (Nonresident)	
3. Estimated Tax (Line 1 less Line 2)	\$ 2,400,000
4. If an overpayment of Tax is to be applied to this Declaration, enter amount here	
5. Amount to be paid with this Declaration (25% of Line 1 less Line 2) (If Line 4 exceeds Line 3, write "NONE" on Line 5)	\$ 600,000
Amount Paid With This Return	Total 2,660,000

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and affidavit (reverse side) and the receipt, in duplicate, of the return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1962, as amended, for the underestimation of any tax or fee.

Extension Granted By

Date _____

South Carolina Tax Commission
Corporation Income Tax Division

Arnell M. Coker, Sr., Director

AS ORIGINALLY FILED

DUKE POWER COMPANY

TAX DEPARTMENT

POST OFFICE BOX 33169

CHARLOTTE, N. C. 28242

AREA CODE 704

WILSON R. TAYLOR
MANAGER, INCOME TAXES
TELEPHONE 373-4206

JOE L. WALLACE
MANAGER, PROPERTY TAXES
TELEPHONE 373-4203

LARRY C. AUTEN
SENIOR TAX ANALYST
TELEPHONE 373-8376

September 15, 1980

DUNCAN LENNON
TAX COUNSEL
TELEPHONE 373-4509

EDWARD M. MARSH, JR.
ASSISTANT TAX COUNSEL
TELEPHONE 373-7200

South Carolina Tax Commission
P. O. Box 125
Columbia, South Carolina 29214

Gentlemen:

Attached is the 1979 South Carolina income tax return for
Duke Power Company and a check in the amount of \$3,426,280.

The payment should be allocated as follows:

1979 income tax and interest	\$2,171,280
1980 estimated income tax	1,255,000
	\$ 3,426,280

Very truly yours,

Edward M. Marsh, Jr.

EMMJr/ce

Enclosures

AS ORIGINALLY FILED

4251

DES00010610

DUKE POWER COMPANY
TAX DEPARTMENT

POST OFFICE BOX 33189
CHARLOTTE, N. C. 28242
AREA CODE 704

WILSON R. TAYLOR
MANAGER, INCOME TAXES
TELEPHONE 373-4206
JOE L. WALLACE
MANAGER, PROPERTY TAXES
TELEPHONE 373-4203
LARRY C. AUTEN
SENIOR TAX ANALYST
TELEPHONE 373-6376

September 15, 1980

DUNCAN LENNON
TAX COUNSEL
TELEPHONE 373-4308
EDWARD M. MARSH, JR.
ASSISTANT TAX COUNSEL
TELEPHONE 373-7208

North Carolina Department of Revenue
P. O. Box 25000
Raleigh, North Carolina 27640

Gentlemen:

Attached is the 1979 North Carolina income tax return for
Duke Power Company and a check in the amount of \$2,672,706.

The payment should be allocated as follows:

1979 income tax and interest	\$1,422,706
1980 estimated income tax	1,250,000
	\$2,672,706

Very truly yours,

Edward M. Marsh, Jr.

EMMJr/ce

Attachments

AS ORIGINALLY FILED

4252

DES00010611

FIELD USE ONLY ☐ Check If Exception On Back Payable To: <u>South Carolina Tax Commission</u> <u>Corporation Income Tax Division</u> <u>Columbia, South Carolina 29214</u> (If other than above) Send Check To: _____ Approved By: _____ Date: <u>March 13, 1979</u> Description: <u>1979 license fee</u> <u>Portion of 1979 estimated income tax</u> Received By: _____ Date Received: _____ Transp. Cost: _____	G. O. USE ONLY Audited BY: _____ Invoice Number: _____ Vendor Number: _____ Adjust Code: ☐ Pay Code: ☐ Field Excep: ☐ G. O. Excep: ☐ Exception Description: _____ FIELD OR G. O. USE Invoice Date: <u>031379</u> Receipt Date: _____ Mo Day Yr Mo Day Yr Due Date: <u>031579</u> ☐ FPG/1099-Gd. _____ Mo Day Yr Gross Amount: _____ Net Amount: <u>26600000</u> Remittance Narrative: _____ FPG/1099 Description: _____ FPG/1099 Description: _____	MP USE ONLY P. O. No. _____ Ven. No. _____ Comm. _____ E. U. _____ Date Inv. Rec'd. _____ Mo Day Yr TERMS REG. No. PRI F.O.B. _____ DELIVERED SHIP POINT () CHARLOTTE FRY ALLOWED () PAID STAMP _____

[illegible]

CE 3-13-79

DISBURSEMENT REQUEST

FIELD USE ONLY ☐ Check if Exception On Back				G. O. USE ONLY Audited BY _____				MP USE ONLY			
Payable To: <u>South Carolina Tax Commission</u> <u>Corporation Income Tax Division</u> <u>Columbia, South Carolina 29214</u> (If other than above) Send Check To: _____				Invoice Number: _____ Vendor Number: _____ Adjust Code: ☐ Pay Code: ☐ Field Excpn: ☐ G. O. Excpn: ☐ Exception Description: _____				P. O. No.: _____ Ven. No.: _____ Comm.: _____ E. U.: _____ Date Inv. Rec'd.: _____ Mo: _____ Day: _____			
Approved By: _____ Date Approved: <u>March 13, 1979</u> Description: <u>1979 license fee</u> <u>Portion of 1979 estimated income tax</u>				FIELD OR G. O. USE Invoice Date: <u>03/13/79</u> Mo: _____ Day: _____ Yr: _____ Receipt Date: _____ Mo: _____ Day: _____ Yr: _____ Due Date: <u>03/15/79</u> Mo: _____ Day: _____ Yr: _____ ☐ FPC/1099-Cd. _____ Gross Amount: _____ Net Amount: <u>2,660,000.00</u>				TERMS: _____ RESP. No.: _____ PRI: _____ F.O.D.: _____ DELIVERED () CHARLOTTE () SHIP POINT () FNT ALLOWED () PAID STAMP			
Received By: _____ Date Received: _____ Transp. Cost: _____				Remittance Narrative: _____ FPC/1099 Description: _____ FPC/1099 Description: _____							

1. NO.	LOC. NO.	WORK ORDER	ACCOUNT OR CLOSING	PROP. UNIT NO.	SRCE. CODE	STATE CODE	TAX CODE	CNTY. CODE	WORK ORDER QTY	WORK ORDER OR EXPENSE DESCRIPTION	DISTRIBUTION AMOUNT	BLANK P. O. N.
193			236 47		90					1979 license fee	2,060,000 00	
193			236 97		90					1979 estimated income tax	600,000 00	
										CE 3-13-79		

4254

AS ORIGINALLY FILED

DES00010613

AS ORIGINALLY FILED

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b. Return Insured Policy No.

4255

DES00010614

**Deloitte
& Touche**

TAXPAYER DUKE POWER COMPANY

INSTRUCTIONS FOR FILING

AMENDED CORPORATION TAX RETURN FOR PUBLIC UTILITIES

STATE OF SOUTH CAROLINA

FOR THE YEAR ENDED

12-31-80

To be signed and dated by	☒ Officer ☐ General Partner
Amount of Tax	Total tax Less: payments and credits Balance due (overpayment) \$(712,254) ☐ Payable in full
Overpayment	☒ Refunded to you \$712,254 ☐ Credited to your estimated tax \$ ☐ \$ refunded and \$ credited
Draw check to N/A	NOTE: Your social security number or employer identification number should be entered on your remittance.
Mail return and check (if applicable) to	SC DEPARTMENT OF REVENUE COLUMBIA, SC 29214
Return must be mailed on or before	IMMEDIATELY Certified mail recommended, with return receipt. For metered mail, the meter date is not evidence of timely filing.
Special Instructions	

MISCSTATELTRS



South Carolina Tax Commission
Form 1101-J

Make Checks Payable To:
S.C. TAX COMMISSION
Mail This Return With
Remittance To:
S.C. TAX COMMISSION
P.O. BOX 125
Columbia, S.C. 29214

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

Return For DEC 31, 1980 INCOME
Period Ending DEC 31, 1981 LICENSE

Consolidated Return? Extension Requested
YES ☐ NO ☒ YES ☒ NO ☐

DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY
P O BOX 33189
CHARLOTTE NC

28242

MAR 15, 1981

County is South Carolina where property
is located See Attachment

560205520 32 4900 12 20C90024-9
Employer Identification No. Business Code File Number

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2 or Schedule E, Line 6)		\$ 11,678,760
2. Less: Qualified Energy Conservation Deduction (Schedule G)		\$
Loss Carry-Over Brought Forward (ATTACH SCHEDULE)		\$
Allowable Contributions (See Instructions)		\$
3. NET INCOME OF CORPORATION		\$ 11,678,760
4. Income Tax Due (6% of Line 3)		\$ 700,726
5. Tax Withheld	Paid by Declaration	\$
6. Credit from PART III LINE 30		\$
7. Paid with Tentative Return		\$ 1,412,979
Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)		\$ 712,254
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)		\$
10. Interest Due		\$
11. Penalty Due		\$
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)		
13. Application: (If Line 8 reflects refund due)		
(a) Credited To: Estimate \$	License Fee \$	(b) Refunded \$ 712,254

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax		\$
15. Estimate of Income Tax to be Withheld during year (Nonresident)		\$
16. Estimated Tax (Line 14 Less Line 15)		\$
17. Installment Due - 1/4 of Line 16		\$
18. Credits - (PART I, Line 13 and Part IV Line 30)	\$	
19. Paid with Tentative Return	\$	
20. Balance due with this return (If lines 18 and 19 exceed Line 17 enter "None")		\$

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$ 782,846,151	
22. Tax Due - One (1) mill on each dollar shown by Item 21		\$ 782,846
23. Total Gross Receipts (Schedule C - Page 2)	\$ 510,638,664	
24. Tax Due - Three (3) mills on each dollar shown in Item 23		\$ 1,531,916
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00		\$ 2,314,762
26. Interest Due		
Penalty Due		
Less Amount Paid on Tentative - or from PART I Line 13		2,315,000
29. Balance Due on this Return or Over-Payment		\$ (236)
30. Application (If Line 29 Reflects Refund Due)		
(a) Credited To: Income Tax \$	Estimate \$	(b) Refunded \$ 238

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$

A copy of this Corporation Tax Return, together with the schedules filed with it, must be kept for three years and made a part of this return.

AMENDED

Revenue Service for this period

4258

DES00010616

Schedule E -
COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS

1. Total net income as reconciled (Schedule A, Page 2)	\$ 67,504,522	
2. Less: Income subject to direct allocation to S.C. and other states from Schedule D, Line 7	722,190	
Total net income subject to apportionment	\$ 66,782,332	
3. Apportionable to S.C. by appropriate ratio from Schedule F 17.4595%		\$ 11,659,861
5. Add: Income subject to direct allocation to S.C. from Schedule D, Line 8		18,899
6. Total net income allocable to S.C. (sum of Lines 4 and 5 above) Enter on Line 1, Page 1		\$ 11,678,760

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1-(PROPERTY, PAYROLL, SALES)-To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY-(TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	
RATIO OF SALES (Attach Schedule)			
Total of Three Ratios	XXXXXX XX	XXXXXX XX	
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	

Schedule F-2-(GROSS RECEIPTS)- To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$ 510,619,765	\$ 2,924,598,746	
Ratio of Gross Receipts	XXXX XX	XXXX XX	17.4595%

July F-3-(RATIO FOR PUBLIC SERVICE CORPORATIONS)-To be filled in by corporations, as designated in Section 12-7-640, S.C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		
Total for System		
Ratio (South Carolina - Total System)		

AMENDED

4260

DES00010618

Schedule G - COMPUTATION OF QUALIFIED ENERGY CONSERVATION DEDUCTION

1. Deduction Earned in Previous Years	\$
2. Less: Deduction Allowed in Previous Years	\$
3. Balance Brought Forward To This Year	\$
4. Additional Deduction:	
Expenditure \$ _____ X 25% \$ _____	
5. Maximum Allowed (\$1,000 Less Line 1)	\$
6. Amount Allowable	\$
7. Amount Allowed This Year	\$
8. Balance Carried Forward	\$

Schedule H - TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
- The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S.C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S.C. 29606
Nature of principal business in S.C. Production and sale of electricity
Corporation's books are in care of Porter A. Hauser, Vice President and Controller
located 422 South Church Street, Charlotte, North Carolina 28242
- If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina _____
- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. of SHARES	PAR VALUE	CLASS
100,000,000	No par	Common
- The total amount of Stated Capital is:

Total paid in Capital Stock	\$ _____
Total paid in Capital Surplus	\$ _____
The total amount of Stated Capital is	\$ _____
- The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule).

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List Attached	All officers can be reached in care of
	Duke Power Company, P. O. Box 33189,
	Charlotte, North Carolina 28242
	No officer or director owns as much as
	3/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service _____
Reported to South Carolina Yes ☐ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.
This statement does not relieve notification requirements of Section 12-7-2230 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

DELOITTE & TOUCHE LLP

This Return Prepared By

by: Dant M. Oshes
12/11/200212/12/2002
Date

AMENDED

4261

Signature of Officer Authorized to Sign

DES00010619

Duke Power Company

Statement Attached To And Made Part Of
1980 South Carolina Corporation Income Tax Return

Counties in South Carolina where property is located:

Abbeville
Aiken
Anderson
Cherokee
Chester
Fairfield

Greenville
Greenwood
Kershaw
Lancaster
Laurens

Lexington
McCormick
Newberry
Oconee
Pickens

Richland
Saluda
Spartanburg
Union
York

AMENDED

Day Power Company
 Case # 1000000
 Period 1970-1980

AUDITOR: EDWARD WILSON
 DATE: 11/20/80

ALLOCATED PER
 OVERVIEWER ALLOCATIONS PER SA
 OVERVIEWER ALLOCATIONS PER RETURN
 SC ADJUST ADJUSTMENTS
 INTEREST APPOINTMENT ON SC ADJUST
 CAPLOUS MYRAN PERIOD
 REAL PROPERTIES INVESTMENT
 DEVELOPMENT ON SC ADJUSTMENTS

OVERVIEWER ALLOCATIONS AS ADJUSTED

SC ALLOCATIONS PER EV + SCAD
 SC ALLOCATIONS PER RETURN
 SC ADJUST ADJUSTMENTS
 REAL PROPERTIES INVESTMENT
 DEVELOPMENT ON SC ADJUSTMENTS

SC ALLOCATIONS AS ADJUSTED

AUDIT OF: SOUTH AFRICA		DATE: 1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		2743		2744		2745		2746		2747		2748		2749		2750		2751		2752		2753		2754		2755		2756		2757		2758		2759		2760		2761		2762		2763		2764		2765		2766		2767		2768		2769		2770		2771		2772		2773		2774		2775		2776		2777		2778		2779		2780		2781		2782		2783		2784		2785		2786		2787		2788		2789		2790		2791		2792		2793		2794		2795		2796		2797		2798		2799		2800		2801		2802		2803		2804		2805		2806		2807		2808		2809		2810		2811		2812		2813		2814		2815		2816		2817		2818		2819		2820		2821		2822		2823		2824		2825		2826		2827		2828		2829		2830		2831		2832		2833		2834		2835		2836		2837		2838		2839		2840		2841		2842		2843		2844		2845		2846		2847		2848		2849		2850		2851		2852		2853		2854		2855		2856		2857		2858		2859		2860		2861		2862		2863		2864		2865		2866		2867		2868		2869		2870		2871		2872		2873		2874		2875		2876		2877		2878		2879		2880		2881		2882		2883		2884		2885		2886		2887		2888		2889		2890		2891		2892		2893		2894		2895		2896		2897		2898		2899		2900		2901		2902		2903		2904		2905		2906		2907		2908		2909		2910		2911		2912		2913		2914		2915		2916		2917		2918		2919		2920		2921		2922		2923		2924		2925		2926		2927		2928		2929		2930		2931		2932		2933		2934		2935		2936		2937		2938		2939		2940		2941		2942		2943		2944		2945		2946		2947		2948		2949		2950		2951		2952		2953		2954		2955		2956		2957		2958		2959		2960		2961		2962		2963		2964		2965		2966		2967		2968		2969		2970		2971		2972		2973		2974		2975		2976		2977		2978		2979		2980	

Author: Scott A. Wilson
Date: 8/20/94

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993

	2019,1979	1980,1981	1982,1983	1984,1985	1986,1987	1987,1988	1988,1989	1989,1990	1990,1991	1991,1992	1992,1993	1993,1994	1994,1995	1995,1996	1996,1997	1997,1998	1998,1999	1999,2000	2000,2001	2001,2002	2002,2003	2003,2004	2004,2005	2005,2006	2006,2007	2007,2008	2008,2009	2009,2010	2010,2011	2011,2012	2012,2013	2013,2014	2014,2015	2015,2016	2016,2017	2017,2018	2018,2019	2019,2020	2020,2021	2021,2022	2022,2023	2023,2024	2024,2025	2025,2026	2026,2027	2027,2028	2028,2029	2029,2030	2030,2031	2031,2032	2032,2033	2033,2034	2034,2035	2035,2036	2036,2037	2037,2038	2038,2039	2039,2040	2040,2041	2041,2042	2042,2043	2043,2044	2044,2045	2045,2046	2046,2047	2047,2048	2048,2049	2049,2050	2050,2051	2051,2052	2052,2053	2053,2054	2054,2055	2055,2056	2056,2057	2057,2058	2058,2059	2059,2060	2060,2061	2061,2062	2062,2063	2063,2064	2064,2065	2065,2066	2066,2067	2067,2068	2068,2069	2069,2070	2070,2071	2071,2072	2072,2073	2073,2074	2074,2075	2075,2076	2076,2077	2077,2078	2078,2079	2079,2080	2080,2081	2081,2082	2082,2083	2083,2084	2084,2085	2085,2086	2086,2087	2087,2088	2088,2089	2089,2090	2090,2091	2091,2092	2092,2093	2093,2094	2094,2095	2095,2096	2096,2097	2097,2098	2098,2099	2099,2100	2100,2101	2101,2102	2102,2103	2103,2104	2104,2105	2105,2106	2106,2107	2107,2108	2108,2109	2109,2110	2110,2111	2111,2112	2112,2113	2113,2114	2114,2115	2115,2116	2116,2117	2117,2118	2118,2119	2119,2120	2120,2121	2121,2122	2122,2123	2123,2124	2124,2125	2125,2126	2126,2127	2127,2128	2128,2129	2129,2130	2130,2131	2131,2132	2132,2133	2133,2134	2134,2135	2135,2136	2136,2137	2137,2138	2138,2139	2139,2140	2140,2141	2141,2142	2142,2143	2143,2144	2144,2145	2145,2146	2146,2147	2147,2148	2148,2149	2149,2150	2150,2151	2151,2152	2152,2153	2153,2154	2154,2155	2155,2156	2156,2157	2157,2158	2158,2159	2159,2160	2160,2161	2161,2162	2162,2163	2163,2164	2164,2165	2165,2166	2166,2167	2167,2168	2168,2169	2169,2170	2170,2171	2171,2172	2172,2173	2173,2174	2174,2175	2175,2176	2176,2177	2177,2178	2178,2179	2179,2180	2180,2181	2181,2182	2182,2183	2183,2184	2184,2185	2185,2186	2186,2187	2187,2188	2188,2189	2189,2190	2190,2191	2191,2192	2192,2193	2193,2194	2194,2195	2195,2196	2196,2197	2197,2198	2198,2199	2199,2200	2200,2201	2201,2202	2202,2203	2203,2204	2204,2205	2205,2206	2206,2207	2207,2208	2208,2209	2209,2210	2210,2211	2211,2212	2212,2213	2213,2214	2214,2215	2215,2216	2216,2217	2217,2218	2218,2219	2219,2220	2220,2221	2221,2222	2222,2223	2223,2224	2224,2225	2225,2226	2226,2227	2227,2228	2228,2229	2229,2230	2230,2231	2231,2232	2232,2233	2233,2234	2234,2235	2235,2236	2236,2237	2237,2238	2238,2239	2239,2240	2240,2241	2241,2242	2242,2243	2243,2244	2244,2245	2245,2246	2246,2247	2247,2248	2248,2249	2249,2250	2250,2251	2251,2252	2252,2253	2253,2254	2254,2255	2255,2256	2256,2257	2257,2258	2258,2259	2259,2260	2260,2261	2261,2262	2262,2263	2263,2264	2264,2265	2265,2266	2266,2267	2267,2268	2268,2269	2269,2270	2270,2271	2271,2272	2272,2273	2273

२६१६५

4265

DES00010623

South Carolina Tax Commission
Form 1101-U

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

DO NOT WRITE IN THIS SPACE

Make Checks Payable To:
S.C. TAX COMMISSION
Mail This Return With
Remittance To:
S.C. TAX COMMISSION
P.O. BOX 125
Columbia, S.C. 29214

Return For DEC 31, 1980 INCOME
Period Ending DEC 31, 1981 LICENSE

Consolidated Return? Extension Requested
YES ☐ NO ☒ YES ☒ NO ☐

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY
P O BOX 33189
CHARLOTTE NC

28242

MAR 15, 1981

560205520 32 4900 12 20C90024-9
Employer Identification No. Business Code File Number

County is South Carolina where property
is located See Attachment

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2 or Schedule E, Line 6)	S	30,073,073
2. Less: Qualified Energy Conservation Deduction (Schedule G)	• S	
Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	S	
Allowable Contributions (See Instructions)	S	
3. NET INCOME OF CORPORATION	• S	30,073,073
4. Income Tax Due (6% of Line 3)	• S	1,804,384
5. Tax Withheld	S	4,510,000
6. Credit from PART III LINE 30	S	
7. Paid with Tentative Return	S	4,510,000
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	S	2,705,616
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	S	
10. Interest Due	S	
11. Penalty Due	S	
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)		
13. Application: (If Line 8 reflects refund due)		
(a) Credited To: Estimate S 800,000 License Fee S (b) Refunded S 1,905,616		

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	S	
15. Estimate of Income Tax to be Withheld during year (Nonresident)	S	
16. Estimated Tax (Line 14 Less Line 15)	• S	
17. Installment Due - 1/4 of Line 16	S	
18. Credits - (PART I, Line 13 and Part III Line 30)	S	
19. Paid with Tentative Return	S	
20. Balance due with this return (If lines 18 and 19 exceed Line 17 enter "None")	S	

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	S 782,846,151	
22. Tax Due - One (1) mill on each dollar shown by Item 21	S	782,846
23. Total Gross Receipts (Schedule C - Page 2)	S 510,638,664	
24. Tax Due - Three (3) mills on each dollar shown in Item 23	S	1,531,916
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	• S	2,314,762
26. Interest Due		
27. Penalty Due		
28. Less Amount Paid on Tentative - or from PART I Line 13		2,315,000
29. Balance Due on this Return or Over-Payment	S	(238)
30. Application (If Line 29 Reflects Refund Due)		
(a) Credited To: Income Tax S Estimate S (b) Refunded S 238		

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

S

A copy of the Corporation Tax Return, together with supporting schedules filed with the U.S. Internal Revenue Service for this period must be attached and made a part of this return.

AS ORIGINALLY FILED

Part A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Net Income as Shown On Federal Return (Before Loss Carryovers)		\$122,798,737
Adjustments:		
Additions on or Measured by Income	\$ 6,915,037	
All Contributions (Domestic Corporations)		
Unallowable Contributions (Multistate Corporations)	753,008	
Interest on tax exempt bonds	1,280	
Interest on power agency advances	312,401	
Total Additions	\$ 7,981,726	
Deductions:		
Interest on U.S. Obligations	\$ 378,060	
ESOP Credit	7,242,637	
Targeted jobs credit	263,891	
Depreciation	36,877,320	
Total Deductions	\$44,761,908	
Net Difference		(36,780,182)
Net Income as Shown on Page 1, Line 1 Part I (or Line 1, Schedule E)		\$86,018,555

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date December 31, 1980
Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes. \$ 782,846,151

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending <u>December 31, 1980</u>	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):		
Electric	\$ 1,682,396,233	\$ 504,654,631
Water and transit	4,215,091	2,311,894
Merchandising	10,672,737	3,296,588
Total Operating Revenues.....	\$ 1,697,284,061	\$ 510,263,113
Other Receipts, (Itemize):		
Farms and forestry	1,500	
Interest	1,186,328	356,652
Dividends	641,827	
Sale of assets	80,363	18,899
Total Other Receipts.....	\$ 1,910,018	\$ 375,551
Totals - Note: Enter total on Line 23 Part III Page 1.....	\$ 1,699,194,079	\$ 510,638,664

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS

Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION

	Gross Amounts	Less: Related Expenses	Net Amounts Allocable Directly to S.C. and Other States	Net Amounts Allocable Directly to S.C.	Payroll to Be Excluded from Payroll Factor	Property to Be Excluded from Property Factor
1. Interest received not connected with business	\$	\$	\$	\$	\$	XXXX XX
2. Dividends received	641,827		641,827			XXXX XX
3. Rents						\$
4. or losses on real property	80,363		80,363	18,899		
5. or losses on intangible personal property						
6. Investment income directly allocated						
TOTAL INCOME DIRECTLY ALLOCATED			\$ 722,190	XXXX XX		
INCOME DIRECTLY ALLOCATED TO S.C.			XXX XX	18,899	XXXX XX	XXXX XX
TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AS ORIGINALLY FILED

Schedule E -
COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS

1. Total net income as reconciled (Schedule A, Page 2)	\$ 86,018,555	
2. Less: Income subject to direct allocation to S.C. and other states from Schedule D, Line 7	722,190	
Total net income subject to apportionment	\$ 85,296,365	
4. Apportionable to S.C. by appropriate ratio from Schedule F	35.235%	\$ 30,054,174
5. Add: Income subject to direct allocation to S.C. from Schedule D, Line 8		18,899
6. Total net income allocable to S.C. (sum of Lines 4 and 5 above) Enter on Line 1, Page 1		\$ 30,073,073

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1-(PROPERTY, PAYROLL, SALES)-To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY-(TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	37.312 %
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	38.329 %
RATIO OF SALES (Attach Schedule)			30.063 %
Total of Three Ratios	XXXXXX XX	XXXXXX XX	105.704 %
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	35.235 %

Schedule F-2-(GROSS RECEIPTS)- To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$	\$	
Ratio of Gross Receipts	XXXX XX	XXXX XX	%

Schedule F-3-(RATIO FOR PUBLIC SERVICE CORPORATIONS)-To be filled in by corporations, as designated in Section 12-7-640, S.C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		
Total for System		
Ratio (South Carolina ÷ Total System)		%

AS ORIGINALLY FILED

Schedule G - COMPUTATION OF QUALIFIED ENERGY CONSERVATION DEDUCTION

1. Deduction Earned in Previous Years	\$
2. Less: Deduction Allowed in Previous Years	\$
3. Balance Brought Forward To This Year	\$
4. Additional Deduction:	
Expenditure \$ _____ X 25% \$ _____	
5. Maximum Allowed (\$1,000 Less Line 1)	\$
6. Amount Allowable	\$
7. Amount Allowed This Year	\$
8. Balance Carried Forward	\$

Schedule H - TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
- The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S.C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, S.C. 29606
Nature of principal business in S.C. Production and sale of electricity
The corporation's books are in care of Porter A. Hauser, Vice President and Controller
Located 422 South Church Street, Charlotte, North Carolina 28242
- If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina _____
- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. of SHARES	PAR VALUE	CLASS
100,000,000	No par	Common

10. The total amount of Stated Capital is:

Total paid in Capital Stock	\$ _____
Total paid in Capital Surplus	\$ _____
The total amount of Stated Capital is	\$ _____

11. The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule).

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List Attached	All officers can be reached in care of
	Duke Power Company, P. O. Box 33189,
	Charlotte, North Carolina 28242
	No officer or director owns as much as
	3/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service _____
Reported to South Carolina Yes ☐ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.
This statement does not relieve notification requirements of Section 12-7-2230 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

This Return Prepared By _____

Date _____

Signature of Officer Authorized to Sign _____

AS ORIGINALLY FILED

4269

DES00010627

South Carolina Tax Commission
Form 1101 - T

Make checks Payable To:
S.C. TAX COMMISSION
Mail This Return With
Remittance To:
INCOME TAX DIVISION
S.C. TAX COMMISSION
COLUMBIA, S.C.

THIS FORM TO BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA
TENTATIVE CORPORATION TAX RETURN

And
CONDITIONAL EXTENSION

Return for the Period Ending 1980
Return extended to September 15, 1981

DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

Employer Identification No. 56-0205520 Business Code 4900 File Number 20090024

COMPUTATION OF ESTIMATED INCOME TAX

1. Income Tax Due	• \$ 3,160,000
2. Tax withheld S Paid by Declaration S 4,510,000	
3. Estimated Overpayment (If Line 2 exceeds Line 1, enter difference)	\$ 1,350,000
4. Balance Due (If Line 1 exceeds Line 2 and or 3, enter difference)	\$
5. Enter payment due with this return (at least 1/4 of Line 1, Less Credit For Line 2)	\$

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

6. Estimate of Income Tax for 1981	• \$ 3,200,000
7. Estimate of Income Tax to be Withheld during year (Nonresident)	
8. Estimated Tax (Line 6 Less Line 7)	\$ 3,200,000
9. Amount to be paid with this Declaration (25% of Line 6 Less Line 7)	\$ 800,000

COMPUTATION OF ESTIMATED LICENSE FEE

10. Total Capital and Paid in Surplus (End of Year) (Include Treasury Stock)	Final computation to be \$ filed on Form 1101-U
11. FEE DUE - Line 10 X S.001, but not less than \$10.00	\$ 2,315,000

NOTE - FEE DUE ON LINE 11 MUST BE REMITTED WITH THIS RETURN

REQUEST FOR EXTENSION

An extension is requested for ninety (90) days or 184 days for the following reasons:

Additional time is required to analyze and interpret financial statements.

This Return Prepared By

3-11-81
Date

Carolyn R. Owens, Assistant Secretary
Signature of Officer Authorized to Sign

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and the receipt of this return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1976 as amended, for the underestimation of any tax or fee.

SOUTH CAROLINA TAX COMMISSION
INCOME TAX DIVISION

(SEE INSTRUCTIONS ON BACK) AS ORIGINALLY FILED

4270

DES00010628

Duke Power Company
Statement Attached To And Made Part Of
1980 South Carolina Corporation Income Tax Return

Counties in South Carolina where property is located:

Abbeville
Aiken
Anderson
Cherokee
Chester
Fairfield

Greenville
Greenwood
Kershaw
Lancaster
Laurens

Lexington
McCormick
Newberry
Oconee
Pickens

Richland
Saluda
Spartanburg
Union
York

AS ORIGINALLY FILED

Duke Power Company
Statement Attached To And Made Part Of
1980 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Depreciation CLADR System</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-80	\$ 885,237	\$ 1,104,095	\$ (218,858)
00.120	EDP	71-80	1,147,623	2,049,183	(901,560)
00.130	Data handling equip.	71-80	442,043	534,133	(92,090)
00.230	Buses	74	46,884	91,581	(44,697)
49.110	Hydro	71-80	4,533,923	4,920,702	(386,779)
49.120	Nuclear	73-80	31,705,415	38,714,016	(7,008,601)
49.121	Nuclear fuel	76-80	32,864,982	40,255,590	(7,390,608)
49.131	Steam	70-80	26,643,168	34,601,343	(7,958,175)
49.132	Other production	71-80	1,188,397	1,498,828	(310,431)
49.141	Transmission	71-80	24,387,650	27,398,601	(3,010,951)
49.142	Distribution	71-80	35,549,974	45,068,903	(9,518,929)
49.300	Water	71-80	200,289	235,930	(35,641)
			<u>\$159,595,585</u>	<u>\$196,472,905</u>	<u>\$(36,877,320)</u>

Depreciation on Federal return was computed under Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1980.

AS ORIGINALLY FILED

Duke Power Company
Statement Attached To And Made Part Of
1980 South Carolina Corporation Income Tax Return

1980 Apportionment Ratio

	<u>South Carolina</u>	<u>Total</u>	<u>Ratio</u>
Beginning of period			
Electric	\$1,565,564,370	\$4,116,451,138	
Water	13,136,914	17,450,872	
Transit		525,314	
Materials and supplies	21,459,482	194,552,410	
Total	<u>\$1,600,160,766</u>	<u>\$4,328,979,734</u>	
End of period			
Electric	\$1,715,100,996	\$4,409,089,476	
Water	12,495,837	16,962,034	
Transit		525,314	
Materials and supplies	24,573,349	206,305,664	
Total	<u>\$1,752,170,182</u>	<u>\$4,632,882,488</u>	
Average property	\$1,676,165,474	\$4,480,931,111	
Add: Rental	4,188,280	22,567,912	
Property for ratio	<u>\$1,680,353,754</u>	<u>\$4,503,499,023</u>	37.312%
Payrolls	\$ 143,972,527	\$ 378,610,650	
Less: Officers		2,982,935	
Payroll for ratio	<u>\$ 143,972,527</u>	<u>\$ 375,627,715</u>	38.329%
Sales	<u>\$ 510,619,765</u>	<u>\$1,698,471,889</u>	30.063%
Total of three ratios			105.704%
Average ratio			<u>35.235%</u>

AS ORIGINALLY FILED

22

**Deloitte
& Touche**

TAXPAYER DUKE POWER COMPANY

INSTRUCTIONS FOR FILING

AMENDED CORPORATION TAX RETURN FOR PUBLIC UTILITIES

STATE OF SOUTH CAROLINA

FOR THE YEAR ENDED

12-31-81

To be signed and dated by	☒ Officer ☐ General Partner
Amount of Tax	Total tax Less: payments and credits Balance due (overpayment) \$(1,874,164) ☐ Payable in full
Overpayment	☒ Refunded to you \$1,874,164 ☐ Credited to your estimated tax \$ ☐ \$ refunded and \$ credited
Draw check to N/A	<i>NOTE: Your social security number or employer identification number should be entered on your remittance.</i>
Mail return and check (if applicable) to	SC DEPARTMENT OF REVENUE COLUMBIA, SC 29214
Return must be mailed on or before	IMMEDIATELY Certified mail recommended, with return receipt. For metered mail, the meter date is not evidence of timely filing.
Special Instructions	

MISCSTATELTRS



South Carolina Tax Commission
Form 1101-U

Make Checks Payable To:
C. TAX COMMISSION
Mail This Return With
Remittance To:
S.C. TAX COMMISSION
P.O. BOX 126
Columbia, S.C. 29214

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

Return For DEC 31, 1981 INCOME
Period Ending DEC 31, 1982 LICENSE

Consolidated Return? Extension Requested
YES ☐ NO ☒ YES ☒ NO ☐

DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY
P O BOX 33189
CHARLOTTE NC

28242

MAR 15, 1982

560205520 32 4900 12 20090024-9
Employer Identification No. Business Code File Number

County is South Carolina where property
is located See Attachment

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2 or Schedule E, Line 6)	\$ 37,354,843
2. Less: Qualified Energy Conservation Deduction (Schedule G)	\$
Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$
Allowable Contributions (See Instructions)	\$
3. NET INCOME OF CORPORATION	\$ 37,354,843
4. Income Tax Due (5% of Line 3)	\$ 2,241,291
5. Tax Withheld	\$
Paid by Declaration	\$
6. Credit from PART III LINE 30	\$
7. Paid with Tentative Return	\$ 4,115,455
Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$ 1,874,164
Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$
10. Interest Due	\$
11. Penalty Due	\$
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$
13. Application: (If Line 8 reflects refund due)	\$
(a) Credited To: Estimate \$	License Fee \$
(b) Refunded \$ 1,874,164	

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$
16. Estimated Tax (Line 14 Less Line 15)	\$
17. Installment Due - 1/4 of Line 16	\$
18. Credits - (PART I, Line 13 and Part III Line 30)	\$
19. Paid with Tentative Return	\$
20. Balance due with this return (If line 18 and 19 exceed Line 17 enter "None")	\$

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$ 790,476,190
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$ 790,476
23. Total Gross Receipts (Schedule C - Page 2)	\$ 598,528,989
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$ 1,795,587
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$ 2,586,063
26. Interest Due	\$
27. Penalty Due	\$
28. Amount Paid on Tentative - or from PART I Line 13	\$ 2,586,064
29. Balance Due on this Return or Over-Payment	\$ (1)
30. Application (If Line 29 Reflects Refund Due)	\$
(a) Credited To: Income Tax \$	Estimate \$
(b) Refunded \$	

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$

A copy of the Corporation's return, together with supporting documents, must be filed with the U.S. Internal Revenue Service for this period, must be attached.

AMENDED

4276

DES00010633

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Income as Shown On Federal Return (Before Loss Carryovers)		\$200,644.723
Adjustments:		
Adjustments on or Measured by Income	\$	
All Contributions (Domestic Corporations)		
Unallowable Contributions (Multistate Corporations)		
Interest on tax exempt bonds		
Interest on power agency advances		
Total Additions	\$	
Deductions:		
Interest on U.S. Obligations	\$	
Depreciation		
Targeted jobs (150,793) & fuel tax (25,372) credits		
Repair allowance		
Excess of Federal income on asset retirements		
Total Deductions over S.C.	\$	
Net Difference		
Net Income as Shown on Page 1, Line 1 Part I (or Line 1, Schedule E)		

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date	December 31, 1981
Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes.	\$790,476.190

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):		
Operating Revenues	\$1,907,976.139	\$ 584,838.234
Operating Revenues	4,753.603	2,473.361
Operating Revenues	14,562.607	4,959.165
Total Operating Revenues	\$1,927,292.349	\$ 592,270.760
Other Receipts, (Itemize):		
Other Receipts	7,960	
Other Receipts	20,366.475	6,258.618
Other Receipts	642.947	
Other Receipts	39,326	(1,989)
Total Other Receipts	\$ 21,056.703	\$ 6,256.629
Totals - Note: Enter total on Line 23 Part III Page 1.	\$1,948,349.052	\$ 598,527.389

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS

Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION

	Gross Amount	Less: Related Expenses	Net Amounts Available Directly to S.C. and Other States	Net Amounts Available Directly to S.C.	Payments to be Included from Payor's Return	Amounts to be Included from Payor's Return
Interest received not connected with business	\$	\$	\$	\$	\$	XXXX XX
Dividends received	642,942		642,942			XXXX XX
Rents						\$
Gains or losses on real property	382,001		382,001	340,686		
Gains or losses on intangible personal property						
Investment income directly allocated						
TOTAL INCOME DIRECTLY ALLOCATED			\$1,024,943	XXXX XX		
INCOME DIRECTLY ALLOCATED TO S.C.			XXXX XX	\$340,686	XXXX XX	XXXX XX
TOTALS TO AFFORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AMENDED

SCHEDULE C - **COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS**

1. Total net income as reconciled (Schedule A, Page 2)	\$ 200,644,723
2. Less: Income subject to direct allocation to S.C. and other states from Schedule D, Line 7	13,818,288
3. Total net income subject to apportionment	\$ 186,826,435
4. Apportionable to S.C. by appropriate ratio from Schedule F-1, 17.8407%	\$ 33,331,144
Add: Income subject to direct allocation to S.C. from Schedule D, Line 8	4,023,699
Total net income allocable to S.C. (sum of Lines 4 and 5 above) Enter on Line 1, Page 1	\$ 37,354,843

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1-(PROPERTY, PAYROLL SALES)-To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY-(TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Age of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
Ratio of Average Property (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
Ratio of Payrolls	XXXXXX XX	XXXXXX XX	
Ratio of Sales (At Risk Schedule)			
Total of Three Ratios	XXXXXX XX	XXXXXX XX	
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	

Schedule F-2-(GROSS RECEIPTS)- To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$ 598,528,989	\$ 3,354,860,313	
Ratio of Gross Receipts	XXXXXX	XXXX XX	17.8407%

Schedule F-3-(RATIO FOR PUBLIC SERVICE CORPORATIONS)-To be filled in by corporations, as designated in Section 12-7-640, S.C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		
Total for System		
Ratio (South Carolina - Total System)		

AMENDED

Schedule G - COMPUTATION OF QUALIFIED ENERGY CONSERVATION DEDUCTION

Deduction Earned in Previous Years	\$
Less: Deduction Allowed in Previous Years	\$
3. Balance Brought Forward To This Year	\$
4. Additional Deduction:	
Expenditure \$ _____ X 25%	\$ _____
5. Maximum Allowed (\$1,000 Less Line 1)	\$
6. Amount Allowable	\$
7. Amount Allowed This Year	\$
8. Balance Carried Forward	\$

Schedule H - TO BE COMPLETED BY ALL CORPORATIONS

- Incorporated under the Laws of the State of North Carolina on 11/27/63
- If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
- The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
- Was the name of the corporation changed during the year? No Give old name _____
- Location of Principal office in S.C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, SC 29606
Nature of principal business in S.C. Production and sale of electricity
- The corporation's books are in care of Norman Morrow, Controller
located 422 South Church Street, Charlotte, North Carolina 28242
- If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina _____
- If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
- The Authorized Capital Stock by Shares, Par Value and Class is as follows:

<u>NO. of SHARES</u>	<u>PAR VALUE</u>	<u>CLASS</u>
150,000,000	No par	Common

- The total amount of Stated Capital is:
Total paid in Capital Stock \$ _____
Total paid in Capital Surplus \$ _____
The total amount of Stated Capital is \$ _____
- The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (if additional space necessary attach separate schedule).

<u>NAME AND PERCENTAGE OF STOCK HELD</u>	<u>ADDRESS AND OFFICE</u>
<u>List Attached</u>	<u>All officers can be reached in care of</u>
	<u>Duke Power Company, P. O. Box 33189,</u>
	<u>Charlotte, North Carolina 28242.</u>
	<u>No officer or director owns as much as</u>
	<u>3/100 of 1% of the outstanding stock.</u>

What years were corporate tax returns last adjusted by the Internal Revenue Service 1978
Reported to South Carolina Yes ☒ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.
This statement does not relieve notification requirements of Section 12-7-2230 Code of Laws of 1976, as amended.

AFFIDAVIT

the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

This Return Prepared By
by: Earl M. Ladd
12/11/2002

12/12/2002
Date

Signature of Officer Authorized to Sign

se1

AMENDED

4279

DES00010636

Duke Power Company

Statement Attached To And Made Part Of
1981 South Carolina Corporation Income Tax Return

Counties in South Carolina where property is located:

Abbeville
Aiken
Anderson
Cherokee
Chester
Fairfield

Greenville
Greenwood
Kershaw
Lancaster
Laurens

McCormick
Newberry
Oconee
Pickens

Saluda
Spartanburg
Union
York

AMENDED

EVERYWHERE ALLOCATIONS PER 1
EVERYWHERE ALLOCATIONS PER 2
IS ALLOC ADJUSTMENT
INTEREST APPOINTMENT ON IS ALLOC
CANNOT BE TAKEN PER 2, 3
OR 4, 5, 6, 7, 8, 9, 10, 11, 12
DISALLOWED IN IS ALLOC 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

OVER-ALLERIE ALLOCATIONS AS ADJUSTED

IS ALLOCATIONS PERMITTED
IS ALLOCATIONS OF DEFENSE
- MUST ADJUSTMENTS:
- IS PROPOSED-CASEWORKERS
- OFFICE CAPABLE ALLOCATIONS

IF ALLOCATIONS ARE ADJUSTED

AUDITOR: SOUTHWESTERN
DATE: 11/20/94

AUDITOR'S SOUTHERN DEVELOPMENT OFFICE - 11/2/59		1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	

AMENDED

DES00010639

Auditor: Southwestern
Date: 11/22/88

[illegible]

14901

AMENDED

DES00010640

South Carolina Tax Commission
Form 1101-U

Make Checks Payable To:
S.C. TAX COMMISSION
Mail This Return With
Remittance To:
S.C. TAX COMMISSION
P.O. BOX 125
Columbia, S.C. 29214

STATE OF SOUTH CAROLINA
CORPORATION TAX RETURN
FOR PUBLIC UTILITIES

DO NOT WRITE IN THIS SPACE

Return For DEC 31, 1981 INCOME
Period Ending DEC 31, 1982 LICENSE

Consolidated Return? Extension Requested
YES ☐ NO ☒ YES ☒ NO ☐

NAME AND ADDRESS

RETURN DUE ON OR
BEFORE

DUKE POWER COMPANY:
P O BOX 33189
CHARLOTTE NC

28242

MAR 15, 1982

County is South Carolina where property
is located See Attachment

560205520 32 4900 12 20090024-9
Employer Identification No. Business Code File Number

PART I COMPUTATION OF INCOME TAX LIABILITY

1. Total net income as Reconciled (Schedule A, Page 2 or Schedule E, Line 6)	\$	55,682,912
2. Less: Qualified Energy Conservation Deduction (Schedule G)	\$	
Loss Carry-Over Brought Forward (ATTACH SCHEDULE)	\$	
Allowable Contributions (See Instructions)	\$	
3. NET INCOME OF CORPORATION	\$	55,682,912
4. Income Tax Due (6% of Line 3)	\$	3,340,975
5. Tax Withheld	\$	3,200,000
6. Credit from PART III LINE 30	\$	1
7. Paid with Tentative Return	\$	
8. Refund Due (If Lines 5, 6, 7 exceeds Line 4 enter difference)	\$	
9. Balance Due (If Line 4 exceeds Lines 5, 6, 7 enter difference)	\$	140,974
10. Interest Due	\$	4,229
11. Penalty Due	\$	
12. Total Income Tax Due (Line 9 plus 10 and 11 if applicable)	\$	145,203
13. Application: (If Line 8 reflects refund due)		

(a) Credited To: Estimate \$

License Fee \$

(b) Refunded \$

PART II CORPORATION DECLARATION OF ESTIMATED INCOME TAX

14. Estimate of Income Tax	\$	
15. Estimate of Income Tax to be Withheld during year (Nonresident)	\$	
16. Estimated Tax (Line 14 Less Line 15)	\$	
17. Installment Due - 1/4 of Line 16	\$	
18. Credits - (PART I, Line 13 and Part III Line 30)	\$	
19. Paid with Tentative Return	\$	
20. Balance due with this return (If lines 18 and 19 exceed Line 17 enter "None")	\$	

PART III COMPUTATION OF LICENSE FEE LIABILITY

21. Total value of the property (Schedule B - Page 2)	\$	790,476,190
22. Tax Due - One (1) mill on each dollar shown by Item 21	\$	790,476
23. Total Gross Receipts (Schedule C - Page 2)	\$	598,528,989
24. Tax Due - Three (3) mills on each dollar shown in Item 23	\$	1,795,587
25. Total Tax Due - Item 22 plus Item 24 but not less than \$10.00	\$	2,586,063
26. Interest Due		
27. Penalty Due		
28. Less Amount Paid on Tentative - or from PART I Line 13		2,586,064
29. Balance Due on this Return or Over-Payment	\$	(1)
30. Application (If Line 29 Reflects Refund Due)		

(a) Credited To: Income Tax \$ 1

Estimate \$

(b) Refunded \$

TOTAL AMOUNT DUE (Lines 12, 20 and 29)

\$ 145,203

A copy of the Corporation's Return, together with supporting documents, must be filed with the U.S. Internal Revenue Service for this period, must be attached as originally filed.

Schedule A - RECONCILIATION OF NET INCOME AS SHOWN ON FEDERAL RETURN WITH STATE NET INCOME

Income as Shown On Federal Return (Before Loss Carryovers)		\$189,539,232
Additions:		
a. Losses on or Measured by Income	\$ 11,562,646	
b. All Contributions (Domestic Corporations)		
c. Unallowable Contributions (Multistate Corporations)	600,710	
d. Interest on tax exempt bonds	1,280	
e. Interest on power agency advances	50,842	
f.		
Total Additions	\$12,215,478	
Deductions:		
g. Interest on U.S. Obligations	\$ 2,814,189	
h. Depreciation	17,115,310	
i. Targeted jobs (150,793) & fuel tax (25,372) credits	176,165	
j. Repair allowance	17,967,591	
k. Excess of Federal income on asset retirements	2,522,756	
Total Deductions over S.C.	\$40,596,011	
Net Difference		(28,380,533)
Net Income as Shown on Page 1, Line 1 Part I (or Line 1, Schedule E)		\$161,158,699

Schedule B - TO BE COMPLETED BY ALL CORPORATIONS

Value of Property Owned and Used in the Conduct of the Business For the Year Ending Date	December 31, 1981
1. Fair Market Value of Property Owned and Used in the Conduct of Business in South Carolina as Determined By South Carolina Tax Commission for Property Tax Purposes.	\$790,476,190

Schedule C - TO BE COMPLETED BY ALL CORPORATIONS

Statement of Gross Receipts for Year Ending	December 31, 1981	Total System (A)	Intrastate South Carolina (B)
Operating Revenues, (Itemize):			
Electric	\$1,907,976,139	\$ 584,838,234	
Water and transit	4,753,603	2,473,361	
Merchandising	14,562,607	4,959,165	
Total Operating Revenues.....	\$1,927,292,349	\$ 592,270,760	
Other Receipts, (Itemize):			
Farms and forestry	7,960		
Interest	20,366,475	6,258,618	
Dividends	642,942		
Sale of assets	39,326	(1,989)	
Total Other Receipts	\$ 21,056,703	\$ 6,256,629	
Totals - Note: Enter total on Line 23 Part III Page 1.....	\$1,948,349,052	\$ 598,527,389	

SCHEDULES D, E, F ARE TO BE COMPLETED BY MULTISTATE CORPORATIONS**Schedule D - INCOME SUBJECT TO DIRECT ALLOCATION**

	Gross Amounts	Less: Related Expenses	Net Amounts Allocable Directly to S.C. and Other States	Net Amounts Allocable Directly to S.C.	Payroll to Be Excluded from Payroll Factor	Property to Be Excluded from Property Factor
1. Interest received not connected with business	\$	\$	\$	\$	\$	XXXX XX
2. Dividends received	642,942		642,942			XXXX XX
3. Rents						\$
4. Gains or losses on real property	382,001		382,001	340,686		
5. Gains or losses on intangible personal property						
6. Investment income directly allocated						
7. TOTAL INCOME DIRECTLY ALLOCATED			\$1,024,943	XXXX XX		
8. INCOME DIRECTLY ALLOCATED TO S.C.			XXXX XX	\$340,686	XXXX XX	XXXX XX
TOTALS TO APPORTIONMENT FACTORS			XXXX XX	XXXX XX	\$	\$

AS ORIGINALLY FILED

Schedule E -

COMPUTATION OF TAXABLE INCOME FOR CORPORATIONS CLAIMING MULTISTATE OPERATIONS

1. Total net income as reconciled (Schedule A, Page 2)	\$ 161,158,699
2. Less: Income subject to direct allocation to S.C. and other states from Schedule D, Line 7	1,024,943
3. Total net income subject to apportionment	\$ 160,133,756
4. Apportionable to S.C. by appropriate ratio from Schedule F 34.560%	\$ 55,342,226
5. Add: Income subject to direct allocation to S.C. from Schedule D, Line 8	340,686
6. Total net income allocable to S.C. (sum of Lines 4 and 5 above) Enter on Line 1, Page 1	\$ 55,682,912

COMPUTATION OF APPORTIONMENT RATIO

Schedule F-1-(PROPERTY, PAYROLL, SALES)-To be filled in by a corporation claiming multistate operations and whose principal profits or income are derived from either manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

PROPERTY-(TANGIBLE PROPERTY USED IN TRADE OR BUSINESS)	In South Carolina	Total	Ratio
Beginning of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at Beginning of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Beginning Property (For Ratio)	\$	\$	
End of Period			
Realty: Land	\$	\$	
Buildings			
Personal: Machinery and Equipment			
Inventories			
Other Property			
Total Cost at End of Period	\$	\$	
Exclusions (See Instructions)			
Cost of Ending Property (For Ratio)	\$	\$	
Average of Beginning and End of Periods	\$	\$	
Add: Rental or Lease Value (See Instructions)			
Total	\$	\$	
RATIO OF AVERAGE PROPERTY (After adding Rental or Lease Value)	XXXXXX XX	XXXXXX XX	34.431%
Payrolls (Total)	\$	\$	
Less: Officers with Company Wide Authority			
Payrolls for Income Allocated Separately			
Payrolls Net	\$	\$	
RATIO OF PAYROLLS	XXXXXX XX	XXXXXX XX	38.528%
RATIO OF SALES (Attach Schedule)			30.720%
Total of Three Ratios	XXXXXX XX	XXXXXX XX	103.679%
Arithmetical Average Ratio	XXXXXX XX	XXXXXX XX	34.560%

Schedule F-2-(GROSS RECEIPTS)- To be filled in by a corporation claiming multistate operations, if principal profits or income are derived from sources other than manufacturing, producing, collecting, buying, assembling, processing or selling, distributing or dealing in tangible personal property within South Carolina.

	In South Carolina	Total	Ratio
Total Gross Receipts	\$	\$	
Less: Exclusion (See Instructions)			
Gross Receipts (For Ratio)	\$	\$	
Ratio of Gross Receipts	XXXX XX	XXXX XX	

Schedule F-3-(RATIO FOR PUBLIC SERVICE CORPORATIONS)-To be filled in by corporations, as designated in Section 12-7-840, S.C. Code 1976 as amended, with operating revenues within the jurisdiction of South Carolina.

	Amount	Ratio
Total Within South Carolina		
Total for System		
Ratio (South Carolina + Total System)		

AS ORIGINALLY FILED

Schedule G - COMPUTATION OF QUALIFIED ENERGY CONSERVATION DEDUCTION

Deduction Earned in Previous Years	S
Less: Deduction Allowed in Previous Years	S
3. Balance Brought Forward To This Year	S
4. Additional Deduction:	
Expenditure \$ _____ X 25%	S _____
5. Maximum Allowed (\$1,000 Less Line 1)	S
6. Amount Allowable	S
7. Amount Allowed This Year	S
8. Balance Carried Forward	S

Schedule H - TO BE COMPLETED BY ALL CORPORATIONS

1. Incorporated under the Laws of the State of North Carolina on 11/27/63
2. If Foreign corporations, the date qualified to do business in the State of South Carolina is 2/24/64
3. The Registered Office of the corporation in the State of South Carolina is see line 5 in the city of Greenville and Registered Agent at such address is T. C. Berry
4. Was the name of the corporation changed during the year? No Give old name _____
5. Location of Principal office in S.C. Suite 700, Green Gate Park, Woods Lake Road, Greenville, SC 29606
Nature of principal business in S.C. Production and sale of electricity
The corporation's books are in care of Norman Morrow, Controller
located 422 South Church Street, Charlotte, North Carolina 28242
7. If Foreign corporation, have all changes in structure since the filing of the last Annual Report been reported to the Secretary of State, South Carolina _____

8. If filing consolidated or have affiliated corporations, attach schedule listing name, address and affiliation of all corporations.
9. The Authorized Capital Stock by Shares, Par Value and Class is as follows:

NO. of SHARES	PAR VALUE	CLASS
150,000,000	No par	Common

10. The total amount of Stated Capital is:

Total paid in Capital Stock	\$ _____
Total paid in Capital Surplus	\$ _____
The total amount of Stated Capital is	\$ _____

11. The Names of the Officers and Directors and Percentage of Stock Ownership in the Corporation are: (If additional space necessary attach separate schedule).

NAME AND PERCENTAGE OF STOCK HELD	ADDRESS AND OFFICE
List Attached	All officers can be reached in care of
	Duke Power Company, P. O. Box 33189,
	Charlotte, North Carolina 28242.
	No officer or director owns as much as
	3/100 of 1% of the outstanding stock.

What years were corporate tax returns last adjusted by the Internal Revenue Service 1978

Reported to South Carolina Yes ☒ No ☐ If answer is No, please furnish copies of reports or adjustments made, under separate cover.

This statement does not relieve notification requirements of Section 12-7-2230 Code of Laws of 1976, as amended.

AFFIDAVIT

I, the undersigned, principal officer of the corporation for which this return is made, declare that this return including accompanying statements and schedules has been examined by me and is to the best of my knowledge and belief a true and complete return made in good faith for the taxable period as stated, pursuant to the Code of Laws of 1976 as amended and the Regulations issued under authority thereof.

This Return Prepared By

September 14, 1982

Date

Gorge W. Ferguson Jr.
Signature of Officer Authorized to Sign

AS ORIGINALLY FILED

Vice President & Deputy General Counsel

South Carolina Tax Commission
Form 1101 - T

Make checks Payable To:
S.C. TAX COMMISSION
All This Return With
Remittance To:
INCOME TAX DIVISION
S.C. TAX COMMISSION
COLUMBIA, S.C.

THIS FORM TO BE USED ONLY WHEN FILING A TENTATIVE RETURN
STATE OF SOUTH CAROLINA
TENTATIVE CORPORATION TAX RETURN

And
CONDITIONAL EXTENSION

Return for the Period Ending 1981
Return extended to September 15, 1982

DO NOT WRITE IN THIS SPACE

NAME AND ADDRESS

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242

56-0205520 4900 20090024
Employer Identification No. Business Code File Number

COMPUTATION OF ESTIMATED INCOME TAX

1. Income Tax Due	• \$	3,200,000
2. Tax withheld \$ Paid by Declaration \$		3,200,000
3. Estimated Overpayment (If Line 2 exceeds Line 1, enter difference)	\$	
4. Balance Due (If Line 1 exceeds Line 2 and or 3, enter difference)	\$	None
5. Enter payment due with this return (at least 1/4 of Line 1, Less Credit For Line 2)	\$	

CORPORATION DECLARATION OF ESTIMATED INCOME TAX

6. Estimate of Income Tax for 1982	• \$	3,200,000
7. Estimate of Income Tax to be Withheld during year (Nonresident)		
8. Estimated Tax (Line 6 Less Line 7)	\$	3,200,000
9. Amount to be paid with this Declaration (25% of Line 6 Less Line 7)	\$	800,000

COMPUTATION OF ESTIMATED LICENSE FEE

10. Total Capital and Paid in Surplus (End of Year) (Include Treasury Stock)	Final computation to be
11. FEE DUE - Line 10 X \$5.001, but not less than \$10.00	\$ filed on Form 1101-U
	\$ 2,586,064

NOTE - FEE DUE ON LINE 11 MUST BE REMITTED WITH THIS RETURN

REQUEST FOR EXTENSION

An extension is requested for ninety (90) days or 184 days for the following reasons:

Additional time is needed to analyze and interpret financial statements.

This Return Prepared By

Date

Signature of Officer Authorized to Sign

IMPORTANT

This extension is granted in accordance with your request and is conditional upon completion of the request and the receipt of this return together with a remittance for the total tax liability shown above by the due date of the return for the period indicated and is subject to the penalty provisions of the South Carolina Code of Laws of 1976 as amended, for the underestimation of any tax or fee.

SOUTH CAROLINA TAX COMMISSION
INCOME TAX DIVISION

(SEE INSTRUCTIONS ON BACK)

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
1981 South Carolina Corporation Income Tax Return

Counties in South Carolina where property is located:

Abbeville
Aiken
Anderson
Cherokee
Chester
Fairfield

Greenville
Greenwood
Kershaw
Lancaster
Laurens

McCormick
Newberry
Oconee
Pickens

Saluda
Spartanburg
Union
York

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
1981 South Carolina Corporation Income Tax Return

GLC	Function	Vintages	Federal CLADR & ACRS Tax Depreciation	S.C. Tax Depreciation	Income increase (decrease)
			1,132,301	1,186,378	(54,077)
00.110	Furniture & fixtures	71-81	\$ ~~1,081,520~~	\$ ~~1,136,418~~	\$ ~~(54,898)~~
			545,340	566,463	(21,123)
00.120	EDP	71-81	~~624,185~~	~~635,434~~	~~(11,249)~~
			177,595	212,087	(34,492)
00.130	Data handling equip.	71-81	491,172	501,075	(9,903)
			123,372	125,698	(2,326)
00.230	Buses	74-81	~~23,442~~	~~30,527~~	~~(7,085)~~
			534,101	354,028	178,073
49.005	Other general plant	81	~~570,523~~	~~380,349~~	~~190,174~~
~~49.011~~	~~Easements~~	~~81~~	~~0~~	33,361	(33,361)
~~49.012~~	~~Relocation costs~~	~~81~~	~~0~~	3,114	(3,114)
			4,413,663		(379,512)
49.110	Hydro	71-81	~~4,429,686~~	4,793,175	~~(363,485)~~
49.118	Hydro-structures	81	13,347	2,447	10,900
			67,626,081	67,881,400	1,744,681
49.120	Nuclear	73-81	~~70,864,251~~	~~68,017,427~~	~~2,846,824~~
			47,344,849	50,760,365	(3,415,516)
49.121	Nuclear fuel	76-81	~~43,780,368~~	~~45,827,749~~	~~(2,127,381)~~
49.128	Nuclear-structures	81	242,957	1,090,839	(847,882)
			25,786,925	33,164,479	(7,377,554)
49.131	Steam	70-81	~~25,786,926~~	~~33,164,514~~	~~(7,377,588)~~
				1,410,003	(288,204)
49.132	Other production	71-81	1,121,799	~~1,410,004~~	~~(288,205)~~
			26,212,316	28,532,905	(2,320,589)
49.141	Transmission	71-81	~~26,212,317~~	~~28,532,934~~	~~(2,320,617)~~
			41,149,176	49,103,121	(7,953,945)
49.142	Distribution	71-81	~~42,047,557~~	~~49,103,159~~	~~(7,055,602)~~
49.150	Combustion turbines	81	324	253	71
			326,242	301,285	24,957
49.300	Water	71-81	~~326,241~~	~~301,286~~	~~24,955~~
			490,961	137,007	353,954
65.000	Structures	81	~~493,383~~	~~138,858~~	~~354,525~~
			219,787,521	240,125,048	(20,337,527)
			<u>\$218,030,118</u>	<u>\$235,102,983</u>	<u>\$17,072,865</u>

Depreciation on the Federal return was computed using Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1980. After 1980, depreciation was computed using Section 168 Accelerated Cost Recovery System.

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
1981 South Carolina Corporation Income Tax Return

<u>GLC</u>	<u>Function</u>	<u>Vintages</u>	<u>Federal CLADR & ACRS Tax Depreciation</u>	<u>S.C. Tax Depreciation</u>	<u>Income increase (decrease)</u>
00.110	Furniture & fixtures	71-81	\$ 1,081,520	\$ 1,136,418	\$ (54,898)
00.120	EDP	71-81	624,105	635,494	(11,389)
00.130	Data handling equip.	71-81	491,172	501,075	(9,903)
00.230	Buses	74	23,442	30,527	(7,085)
49.005	Other general plant	81	570,523	380,349	190,174
49.011	Easements	81	-0-	33,361	(33,361)
49.012	Relocation costs	81	-0-	3,114	(3,114)
49.110	Hydro	71-81	4,429,686	4,793,175	(363,489)
49.118	Hydro-structures	81	13,347	2,447	10,900
49.120	Nuclear	73-81	70,864,251	68,017,427	2,846,824
49.121	Nuclear fuel	76-81	43,700,368	45,827,749	(2,127,381)
49.128	Nuclear-structures	81	242,957	1,090,839	(847,882)
49.131	Steam	70-81	25,786,926	33,164,514	(7,377,588)
49.132	Other production	71-81	1,121,799	1,410,004	(288,205)
49.141	Transmission	71-81	26,212,317	28,532,934	(2,320,617)
49.142	Distribution	71-81	42,047,557	49,103,159	(7,055,602)
49.150	Combustion turbines	81	324	253	71
49.300	Water	71-81	326,241	301,286	24,955
65.000	Structures	81	493,583	138,858	354,725
			<u>\$218,030,118</u>	<u>\$235,102,983</u>	<u>\$ (17,072,865)</u>

Depreciation on the Federal return was computed using Section 1.167(a)(11) Class Life Asset Depreciation Range for additions made in 1971 through 1980. After 1980, depreciation was computed using Section 168 Accelerated Cost Recovery System.

AS ORIGINALLY FILED

Duke Power Company
Statement Attached To And Made Part Of
1981 South Carolina Corporation Income Tax Return

1981 Apportionment Ratio

	<u>South Carolina</u>	<u>Total</u>	<u>Ratio</u>
Beginning of period			
Electric	\$1,715,100,996	\$4,409,089,476	
Water	12,495,837	16,962,034	
Transit		525,314	
Materials and supplies	24,573,349	206,305,664	
Total	<u>\$1,752,170,182</u>	<u>\$4,632,882,488</u>	
End of period			
Electric	\$1,840,182,094	\$5,652,611,643	
Water	12,691,590	19,646,409	
Transit	568,817	2,974,176	
Materials and supplies	26,652,925	210,852,066	
Total	<u>\$1,880,095,426</u>	<u>\$5,886,084,294</u>	
Average property	\$1,816,132,804	\$5,259,483,391	
Add: Rental	3,860,920	26,489,824	
Property for ratio	<u>\$1,819,993,724</u>	<u>\$5,285,973,215</u>	34.431%
Payrolls	\$ 165,730,896	\$ 433,651,200	
Less: Officers		3,490,045	
Payroll for ratio	<u>\$ 165,730,896</u>	<u>\$ 430,161,155</u>	38.528%
Sales	<u>\$ 598,528,989</u>	<u>\$1,948,347,937</u>	30.720%
Total of three ratios			
Average ratio			<u>34.560%</u>

AS ORIGINALLY FILED

Duke Power Company
Statement Attached To And Made Part Of
Consolidated 1981 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Summary of Income and Deductions

	<u>Per books</u>	<u>Income increase (decrease)</u>	<u>Tax basis</u>
Gross receipts	\$1,927,324,140	\$ 28,856,742	\$1,956,180,882
Less: Cost of goods sold	951,925,456	68,278,073	883,647,383
Gross profit	\$ 975,398,684	\$ 97,134,815	\$1,072,533,499
Dividends	16,116,084	(15,473,142)	642,942
Interest on Federal obligations	2,814,189		2,814,189
Other interest	239,459,147	(223,587,377)	15,871,770
Rents			
Royalties			
Net capital gain - Schedule D	33,393,227	77,912,630	111,305,857
Ordinary gain (loss)			
Form 4797 Part II	9,374,634	(6,610,133)	2,764,501
Other income	13,719,372	(12,118,925)	1,600,447
Total income	<u>\$1,290,275,337</u>	<u>\$ (82,742,132)</u>	<u>\$1,207,533,205</u>
Compensation of officers	\$ 3,490,045	\$	\$ 3,490,045
Salaries and wages	56,832,602	150,793	56,681,809
Repairs	133,313,845	(1)	133,313,846
Bad debts	4,184,307	(626,795)	4,811,102
Rents	3,440,885	(389,288)	3,830,173
Taxes	164,038,937	(17,024,182)	181,063,119
Interest	255,812,159		255,812,159
Contributions	788,494		788,494
Amortization	5,070,560	4,086,543	984,017
Depreciation	139,784,497	(124,341,817)	264,126,314
Advertising	1,131,808		1,131,808
Pension plan	15,563,874	(25,007,778)	40,571,652
Profit sharing	2,440,204	(2,734,692)	5,174,896
Employee benefits	9,047,970	(8,448,359)	17,496,329
Other deductions	159,084,170	110,365,960	48,718,210
Total deductions	<u>\$ 954,024,357</u>	<u>\$ (63,969,616)</u>	<u>\$1,017,993,973</u>
Net income	<u>\$ 336,250,980</u>	<u>\$ (146,711,748)</u>	<u>\$ 189,539,232</u>

AS ORIGINALLY FILED

Duke Power Company

Statement Attached To And Made Part Of
Consolidated 1981 U. S. Corporation Income Tax
Return Of Duke Power Company And Affiliates

Explanation of Tax Adjustments

		Income increase (decrease)
Gross receipts -		
Revenue refunds	\$ 16,817,534	
Amount due from meters read but unbilled at Jan. 1, 1976, to be included in income over a ten-year period	1,064,511	
Increase in amount due from meters read but not billed for 1981	<u>10,974,697</u>	\$ 28,856,742
Cost of goods sold -		
To adjust coal expense consistently with method adopted in prior years as a result of Internal Revenue Service audit	\$ (4,516,449)	
To decrease nuclear fuel expense by book expense of burned fuel on which tax depreciation is claimed	<u>72,794,522</u>	68,278,073
Dividends -		
To eliminate increases in equity of subsidiaries included in income		(15,473,142)
Other interest -		
Interest charged to construction	\$(221,906,861)	
Interest on obligations of:		
State of North Carolina	(1,280)	
North Carolina Power Agency	(50,842)	
Amortization of recorded discount on notes	<u>(1,628,394)</u>	(223,587,377)
Capital gain net income -		
Reversal of book gain on sale of assets (tax proceeds added to reserve)	\$ (908,142)	
Cost escalation on 1980 sale of U ₃ O ₈	(27,597)	
Gain on sale of partial interest in nuclear plant	77,506,342	
Gain on sale of U ₃ O ₈	3,431,745	
Loss on disposition of enrichment services	(2,187,875)	
Gain on disposition of depreciable property	<u>98,157</u>	77,912,630
Ordinary gain (loss) -		
Reversal of book gain on 1979 sale of U ₃ O ₈	\$ (2,028,640)	
Reversal of Peter White reserve amortization	(5,119,722)	
Reversal of coal reserve accrual adjustment	(336,272)	

(Continued)

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