**Dominion Resources Services, Inc.** Law Department P.O. Box 26532, Richmond, VA 23261

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December 10, 2009

### VIA OVERNIGHT DELIVERY

Ms. Renne Vance, Chief Clerk North Carolina Utilities Commission 430 North Salisbury Street **Dobbs Building** Raleigh, North Carolina 27603-5918

FILED

DEC 1 1 2009

Clerk's Office N.C. Utilities Commission

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Re: Integrated Resource Plan of Dominion North Carolina Power Docket No. E-100, Sub 124

Dear Ms. Vance:

Pursuant to the Commission's October 19, 2009 Order Scheduling Hearings on 2009 Integrated Resource Plans and REPS Compliance Plans and Consolidating Dockets for Decision, Virginia Electric and Power Company d/b/a Dominion North Carolina Power encloses for filing an original and thirty (30) copies of the direct testimony and exhibits of Shannon L. Venable, M. Masood Ahmad, Michael J. Jesensky, and Aaron A. Reed in the above.

Please do not hesitate to contact me if you have any questions.

Horace P. Pavne. Senior Counsel

Enclosures

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Clerk's Office N.C. Utilities Commission

#### DIRECT TESTIMONY OF SHANNON L. VENABLE ON BEHALF OF VIRGINIA ELECTRIC AND POWER COMPANY BEFORE THE NORTH CAROLINA UTILITIES COMMISSION DOCKET NO. E-100, SUB 118 DOCKET NO. E-100, SUB 124

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| 1  | Q. | Please state your name, and business address, and describe your position with           |
|----|----|---|
| 2  |    | Virginia Electric and Power Company.  |
| 3  | Α. | My name is Shannon L. Venable and my business address is 120 Tredegar Street,           |
| 4  |    | Richmond, Virginia 23219. I am the Vice President of Integrated Resource Planning for   |
| 5  |    | Virginia Electric and Power Company d/b/a Dominion North Carolina Power (the            |
| 6  |    | "Company"). I am responsible for the development of initiatives that integrate capacity |
| 7  |    | plans and demand-side resources in support of the Company's regulatory and strategic    |
| 8  |    | initiatives. As part of my duties, I also oversee the Company's peak demand and energy  |
| 9  |    | forecasts over a 15-year period and the analysis of demand-side management ("DSM")      |
| 10 |    | programs. A statement of my background and qualifications is attached as Appendix A.    |
|    | 0  | What is the nurness of your testimony in this propositing?                              |
| 11 | Ų. | what is the purpose of your testimony in this proceeding?                               |
| 12 | Α. | On September 1, 2009, the Company filed its 2009 Integrated Resource Plan ("2009        |
| 13 |    | Plan") in accordance with § 62-2 and § 62-110.1 of the North Carolina General Statutes  |
| 14 |    | and Rule R8-60 of the North Carolina Utilities Commission's ("NCUC" or                  |
| 15 |    | "Commission") Rules. Certain information was not properly labeled as confidential and   |
| 16 |    | therefore replacement pages were filed with the Commission on September 15, 2009.       |
| 17 |    | The 2009 Plan was filed as the Company's annual update to its 2008 Integrated Resource  |
| 18 |    | Plan ("2008 Plan") that was filed on August 29, 2008. The purpose of my testimony is to |

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expound Chapter 1 of the 2009 Plan, provide an overview of the Integrated Resource
Planning ("IRP") process, and discuss the Company's plan for future DSM and
Renewable Energy and Energy Efficiency Portfolio Standard ("REPS") filings. Both the
2008 Plan and the 2009 Plan were prepared under my supervision and direction and are
accurate and complete to the best of my knowledge.

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#### 6 Q. Will the Company present other witnesses in this proceeding?

**7** :

A. Yes. M. Masood Ahmad, Director of Integrated Resource Planning, will present the
Company's load forecast as well as its proposed supply-side resources, as evaluated and
selected in the 2009 Plan. Michael J. Jesensky, Director of Demand-Side Analysis, will
detail the Company's demand-side options including its current, proposed, and future
DSM programs. Aaron A. Reed, Business Development Manager, will discuss the
Company's 2009 REPS Compliance Plan that was filed with the 2009 Plan as NC IRP
Addendum 1 pursuant to Rule R8-67 (b) of the Commission's Rules.

#### 14 Q. Please provide some background on the Company.

A. The Company currently serves approximately 2.4 million electric customers in Virginia
 and North Carolina. The Company's electric service area covers approximately 30,000
 square miles in Virginia and North Carolina.

The Company's regulated electric portfolio consists of 18,245 megawatts ("MW") of generation capacity, including 1,776 MW of non-utility generation ("NUG") and over 6,000 miles of transmission lines in Virginia, North Carolina, and West Virginia at voltages ranging from 69 kilovolts ("kV") to 500 kV. In May 2005, the Company became a member of PJM Interconnection, LLC ("PJM"), a regional transmission

organization that is the operator of the wholesale electric grid in the Mid-Atlantic region
 of the United States. As a result, the Company transferred operational control of its
 transmission assets to PJM.

The Company has a diverse mix of generating resources consisting of Company-owned nuclear, fossil, hydro, pumped storage, and biomass facilities. Additionally, the Company purchases capacity and energy from NUGs and the PJM market. The Company's strategy to reduce dependence on volatile market purchases while maintaining a diverse mix of fuels and DSM programs is a fundamental focus of the 2009 Plan.

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#### Q. Please briefly explain the Company's IRP process.

The Company's IRP process enables the Company to balance additional generating U Α. capacity from both renewable and traditional resources, DSM programs, and market 12 purchases, in order to meet the forecast of peak demand and energy sales, in addition to a 13 reserve margin required to support reliability. Currently, the Company optimizes supply-14 and demand-side resources with market purchases to determine a strategy that offers 15 reliable service at reasonable prices to customers. The overall goal of the IRP process is 16 to identify the optimal mix of all resources, including supply-side and demand-side 17 options, for meeting the Company's and its customers' near-term and long-term energy 18 19 needs in an efficient and reliable manner at the lowest reasonable cost.

# Q. Please discuss what changes have occurred since the Company's 2007 Integrated Resource Plan was approved by the NCUC.

On November 30, 2007, the Company filed its 2007 Integrated Resource Plan under then Α. 1 existing legislation and corresponding rules of the Commission. In 2007, the North 2 Carolina General Assembly passed, and the Governor signed, Senate Law 2007-397, 3 commonly referred to as Senate Bill 3. In response, the Commission amended Rules R8-4 60 and R8-61, which, among other things, modified the requirements for utilities filing 5 integrated resource plans. The new rules require electric utilities to file biennial 6 integrated resource plans as well as annual updates of these plans. Additionally, the new 7 legislation requires an extended planning horizon of 15 years, further detail regarding 8 9 DSM programs, and the inclusion of REPS compliance plans as part of its Integrated Resource Plan filing, among other new requirements. 10

In response to these legislative changes in North Carolina as well as new IRP legislation in Virginia, the Company established an IRP department in late 2007 to evaluate the best mix of supply- and demand-side resources needed to meet projected customer load. The department's responsibility is to integrate generation options, transmission planning, and demand-side options to meet long-range projected customer energy requirements.

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#### What are the Plan's overall objectives?

A. The Company's 2009 Plan represents Dominion North Carolina Power's commitment to
meeting future demand effectively through a balanced portfolio approach while also
providing the flexibility needed to respond to uncertainties brought on by changes in
market conditions and customer demand. The 2009 Plan was developed to meet rising
customer demand for electricity providing a mix of resources necessary to meet future
needs in an efficient and reliable manner at the lowest reasonable cost including
provisions to achieve policy goals from individual state legislatures. The Plan proposes

to achieve these objectives by expanding the Company's electric generation capacity and increasing its DSM programs, including energy efficiency, demand response, and peak shaving programs.

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#### 0. Please describe the Company's 2009 Plan.

Α. The 2009 Plan is a long-term planning document providing a 15-year forecast of 5 projected load and the manner in which that load will be met. The current 2009 Plan 6 addresses the 2010 to 2024 timeframe ("Planning Period"). The 2009 Plan is based on 7 8 the Company's current assumptions regarding load growth, commodity price projections, and DSM program penetrations, as well as many other regulatory and market 9 developments throughout the Planning Period. The Company's 2009 filing includes 10 chapters on load forecasting, existing supply- and demand-side resources, plan 11 requirements and constraints, and future supply- and demand-side resources. In addition, 12 a Short-Term Action Plan ("STAP") was included to review the Company's specific 13 actions being taken within the next five years (2010 - 2014). The Company's REPS 14 Compliance Plan was attached as Addendum 1 to the 2009 Plan. The 2009 Plan was 15 prepared on a system basis, specifically, the Dominion Load Serving Entity ("DOM 16 LSE"), and represents the Company's service territories in the Commonwealth of 17 Virginia and North Carolina as part of PJM. 18

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#### How did the Company develop its Plan?

Α. First, the Company developed its load forecast as adopted by Company Witness M. 20 Masood Ahmad. Once the forecast was established, The Company's objective in 21 developing the 2009 Plan was to identify the mix of resources necessary to meet future 22 23 energy needs in an efficient and reliable manner at the lowest reasonable cost. The

Company followed its comprehensive IRP process that gave preference to options that offer reasonable costs and contain an acceptable level of risk, maintain or increase the level of customer service, and provide reliable generation and infrastructure to meet customers' needs. The process included various planning groups within the Company who provided input and insight into evaluating all possible options including existing generation, DSM programs, and new traditional and alternative resources to meet the growing demand in the Company's service territory.

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The Company used the Strategist model ("Strategist"), a computer modeling and resource optimization tool, to systematically evaluate various combinations of supply- and demand-side options to determine how the Company's resource requirements could be met. Based on projected capacity needs, energy needs, and the resources available to meet them, the Company developed a set of five alternative plans that represented possible future paths considering the current regulatory and business environments. Among the alternatives, one was selected as the preferred Plan ("Preferred Plan").

Q. Please elaborate on how these alternative plans were developed and the Preferred
 Plan was chosen.

A. The Company developed alternative plans that represent possible future paths considering
the current regulatory and business environments including: 1) a base plan, 2) a no
demand-side resources plan, 3) a no nuclear expansion plan, 4) a no renewable plan, and
5) a federal renewable plan. The Company assessed the alternative plans using various
sensitivities and scenarios to understand how possible futures may impact the relative
costs of the supply- and demand-side resources included in each alternative plan. Each
alternative plan was designed to test different resource strategies available to the

Company over the Planning Period. After analyzing these alternative plans, the Company
 identified the single option that provided the lowest reasonable cost plan most
 consistently given these potential future conditions. This single plan was then selected as
 the Preferred Plan.

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#### Please elaborate on Preferred Plan.

A. The Preferred Plan represents the single plan that performed the best, most consistently,
throughout the IRP process and contains the preferred mix of supply- and demand-side
options to meet expected future resource needs. Additionally, the Preferred Plan provides
the lowest reasonable cost plan for the Company given considerations of these scenarios
and sensitivities.

In addition to existing generation, the 2009 Plan relies upon:

- Proposed and future DSM programs reaching approximately 950 MW by 2024;
- Potential renewable resources of approximately 300 MW;
- Generation resources under construction of approximately 1,200 MW by 2024;
- Generation resources under development of approximately 1,900 MW by 2024;
- Additional conventional resources of approximately 4,500 MW that will continue
   to be studied as the resource need is established; and
- 18 PJM market purchases and NUG capacity under contract.

To meet the projected electric customer demand and the reserve requirement in the Planning Period, the Company will need additional resources that total approximately 8,900 MW, consisting of a mix of supply-side resources totaling approximately 7,900 MW of capacity and nearly 950 MW of demand-side resources by 2024.

Q. What demand-side and renewable resources has the Company relied upon in its 2009 Plan?

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A. The Company believes that cost-effective DSM and renewable resources should be
considered as viable resources in meeting customers' needs. The Company has included
a capacity of up to 950 MW of DSM resources as part of its 2009 Plan. More
specifically, the Company plans to file a portfolio of DSM programs in North Carolina in
the second quarter of 2010. With regard to renewables, the Company filed its REPS
Compliance Plan as an addendum to the 2009 Plan. Additionally, the Company filed its
REPS Compliance Report in November 2009.

10 Q. Please summarize the Company's 2009 Plan.

Α. 11 The Company's 2009 Plan represents Dominion North Carolina Power's commitment to 12 meet it customers' electrical needs over the next 15 years and allows flexibility to 13 respond to uncertainties brought on by changes in market conditions, including those caused by changes in federal and state law and customer demand. The Company is 14 committed to meeting future demand effectively through a balanced portfolio, which 15 includes a combination of new traditional and renewable generation facilities as well as 16 17 energy efficiency and DSM programs that provide a reliable supply of energy at the lowest reasonable cost to customers. 18

19 Q. Does this conclude your testimony?

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20 A. Yes, it does.

#### BACKGROUND AND QUALIFICATIONS OF SHANNON L. VENABLE

I graduated from Michigan State University in June of 1982 with a Bachelor of Science degree in Electrical Engineering and a minor in Biomedical Engineering. I am a member of the Society of Women Engineers, United Way's Women's Leadership Council, and the Eta Kappa Nu Society. Additionally, I became the Vice Chairman of the South Eastern Electric Exchange ("SEE") IRP Task team in 2009 and served as Secretary in 2008.

I joined Virginia Electric and Power Company in July of 1982 as an engineer in Transmission and Distribution Construction and Operations. I have held various management positions in Metering and Energy Services supporting End Use Studies and Measurement & Verifications of DSM programs, Energy Information and Telecommunications, and Energy Efficiency before being promoted to Director of IT Telecommunications in 1998. From 1999 to 2007, I held director-level leadership positions in Customer Services, Business Excellence, Electric Transmission, IT Enterprise Services, and other strategy-based assignments. Additionally, I was one of the initial deployment champions for Six Sigma at Virginia Electric and Power Company and am a certified Master Black Belt in Six Sigma. I am currently Vice President of Integrated Resource Planning in the Regulation and Integrated Planning organization of Virginia Electric and Power Company. I am responsible for the development of corporate-level initiatives that integrate capacity plans, transmission plans, and conservation and load management in support of the Company's regulatory and strategic initiatives.

In January of 1996, I gave a presentation on Strategic Partnering to Enable Energy Management and Customer Information Capabilities at the Utility Information Technology, System Strategies, and Customer Satisfaction Symposium. In 1992, I was on the Edison Electric Institute's ("EEI") editorial team for the 1992 publication of the Handbook for Electricity Metering and was the Company's representative to EEI's Metering Subcommittee from 1992 to 1994. In September 2008, I presented "Uncertainty Surrounding Potential Carbon Legislation" at the Marcus Evans Integrated Resource Planning Conference.

I have previously testified before the Virginia State Corporation Commission.



#### DIRECT TESTIMONY OF M. MASOOD AHMAD ON BEHALF OF VIRGINIA ELECTRIC AND POWER COMPANY BEFORE THE NORTH CAROLINA UTILITIES COMMISSION DOCKET NO. E-100, SUB 118 DOCKET NO. E-100, SUB 124

# Q. Please state your name, business address, and position with Virginia Electric and Power Company.

My name is M. Masood Ahmad, and my business address is 120 Tredegar Street, 3 Α. Richmond, Virginia 23219. I am the Director of Integrated Resource Planning for 4 5 Virginia Electric and Power Company d/b/a Dominion North Carolina Power 6 ("DNCP" or the "Company"). I am responsible for facilitating the Integrated Resource Planning ("IRP") process including the development of an annual load 7 forecast, the optimization of supply- and demand-side resources, and evaluation 8 9 of transmission interconnection options. A statement of my background and 10 qualifications is attached as Appendix A.

11 Q. What is the purpose of your testimony in this proceeding?

A. On September 1, 2009, the Company filed its 2009 Integrated Resource Plan
("2009 Plan") with the North Carolina Public Utilities Commission ("NCUC") as
an update to its previously filed 2008 Integrated Resource Plan. The purpose of
my testimony is to adopt Chapter 2, Chapter 3 excluding Section 3.4 subsections,
Chapter 4, Chapter 5 excluding Section 5.2 subsections, Chapter 6, the portions of
Chapter 7 that discuss supply-side resources, and the corresponding appendices as

| 1  |    | presented in the 2009 Plan. These chapters and sections were prepared under my    |
|----|----|---|
| 2  |    | supervision and direction.  |
| 3  | Q. | During the course of your testimony, will you introduce an exhibit?               |
| 4  | Α. | Yes. Exhibit MMA-1, consisting of Schedules 1 through 4, was prepared under       |
| 5  |    | my supervision and is accurate and complete to the best of my knowledge and       |
| 6  |    | belief.   |
| 7  | Q. | Since the 2009 Plan was submitted, do you have any corrections to that            |
| 8  |    | filing?   |
| 9  | Α. | Yes. Since the submission, the Company has identified and seeks to correct a      |
| 10 |    | number of items within the 2009 Plan and its associated appendices.               |
| 11 | Q. | Do any of the corrections have a material impact on the planning or analysis      |
| 12 |    | that was conducted in the creation of the 2009 Plan?                              |
| 13 | Α. | No. The corrections are minor in nature and have no impact on the 2009 Plan or    |
| 14 |    | the corresponding analysis that was required. I will identify the corrections and |
| 15 |    | provide a brief description of changes that were made to reflect appropriate      |
| 16 |    | values.   |
| 17 | Q. | What are the corrections?   |
| 18 | А. | On page 3-3 of the 2009 Plan, the last sentence of the second paragraph states    |
| 19 |    | "over 400 gigawatt hours ('GWh') of generation;" however, it should read "over    |
| 20 |    | 1.000 gigawatt hours ('GWh') of generation." On page 3-4, Figure 3.1.1.3, Net     |
| 21 |    | Summer Capacity of Natural Gas Turbines Owned is represented as 2.543 MW          |

| 1  | but should reflect 2.428 MW and the Net Summer Capacity of Owned Light Fuel                                |
|----|--|
| 2  | Oil resources is represented as $237$ MW, but should read $352$ MW. In this                                |
| 3  | instance, two peaking units were incorrectly classified for reporting purposes                             |
| 4  | based on their primary fuel; however, they are represented correctly in the                                |
| 5  | analysis. The reclassification has no impact on the totals presented in the table.                         |
| 6  | On page 3-5, the first line refers to "Appendices 3A, 3C, 3D, and 3E" but should                           |
| 7  | read "Appendices 3A, <u>3B</u> , 3C, 3D, and 3E" because Appendix 3B contains                              |
| 8  | information about contracted NUGs.   |
| 9  | On page 7-5, Figure 7.2.3, the Surry 1 Uprate effective in 2010 reports a 56 MW                            |
| 10 | value, but should reflect 63 MW, the Surry 2 Uprate effective in 2011 is reported                          |
| 11 | as <u>42</u> MW but should reflect <u>49</u> MW, and the North Anna 1 Uprate effective in                  |
| 12 | 2012 is reported as $\underline{47}$ MW but should reflect $\underline{43}$ MW. These values are correctly |
| 13 | reported in Appendix 3I on page AP-31.   |
| 14 | On page AP-4, Appendix 2C, the Company found an error in the method used to                                |
| 15 | allocate sales from the system level to the North Carolina jurisdictional sales                            |
| 16 | level. This error resulted in changes to the Commercial and Public Authority                               |
| 17 | columns of this Appendix. I have attached an updated version of Appendix 2C                                |
| 18 | from the 2009 Plan as Exhibit MMA-1, Schedule 2. As a result of finding this                               |
| 19 | allocation error, there were related impacts to the Virginia sales forecasts in                            |
| 20 | Appendix 2B on page AP-3. I have attached an updated Appendix 2B as Exhibit                                |
| 21 | MMA-1, Schedule 1. The 2009 Plan was based on system-level numbers;  |
| 22 | therefore, there was no overall impact to the conclusions of the Plan due to this                          |
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| 1  | error. On page AP-8, Appendix 2G (Schedule 5), the "Adjusted Winter Peak" row       |
|----|---|
| 2  | was corrected to reflect the winter value for North Carolina Electric Membership    |
| 3  | Cooperatives ("NCEMC") rather than a summer value that was inserted into the        |
| 4  | spreadsheet. The values now reflect the MW associated with the load shape used      |
| 5  | in modeling NCEMC. I have attached the corrected Appendix 2G as Exhibit             |
| 6  | MMA-1, Schedule 3. On page AP-9, Appendix 2H (Schedule 1) reflects a similar        |
| 7  | correction and has no impact on the analysis. An updated version of Appendix        |
| 8  | 2H is attached as Exhibit MMA-1, Schedule 4.  |
|    |   |
| 9  | On page AP-10, Appendix 2I (Schedule 6) contains two invalid values for the         |
| 10 | 2009 MW and Percent of Load and have been updated to 3,122 MW and 18.7%             |
| 11 | respectively. Also, DSM in 2012 was not included in the "Reserve Margin"            |
| 12 | calculation but should have been; the resulting value is 9.5%. Finally, the         |
| 13 | "Winter Reserve Margin" for all years was calculated using the maximum              |
| 14 | capacity value rather than the seasonal capacity value in January. For example,     |
| 15 | new units are generally scheduled to enter service in June, but annual winter peak  |
| 16 | occurs in January; therefore the capacity was included prior to installation in the |
| 17 | unit's first year of service. The Company is a summer peaking utility for           |
| 18 | planning purposes and winter values are used for reporting purposes only. These     |
| 19 | modifications have no impact on the analysis and a corrected Appendix 21 has        |
| 20 | been attached to this document as Exhibit MMA-1, Schedule 5. On page AP-116,        |
| 21 | Appendix 6E (Schedule 4), the "Winter" row was updated to reflect the same          |
| 22 | corrections in Appendix 21. Also in this appendix, the "Capacity Sale" row was      |

| 4 | Q. | With the inclusion of these corrections to the 2009 Plan, does this conclude     |
|---|----|--|
| 3 |    | as Exhibit MMA-1, Schedule 6.  |
| 2 |    | changes have no impact on the analysis. I have attached a corrected Appendix 6E  |
| 1 |    | included in the "Winter" section to reflect a consistent modeling construct. The |

- Q.
- your prefiled direct testimony in this proceeding? 5
- 6 Α. Yes, it does.

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#### BACKGROUND AND QUALIFICATIONS OF M. MASOOD AHMAD

I graduated from the University of Engineering and Technology in Lahore, Pakistan in 1986 with a Bachelor of Science degree in Electrical Engineering. I then continued my education at the Georgia Institute of Technology where I completed my Master of Science in Electrical Engineering in 1990 and also my Doctor of Philosophy in Electrical Engineering in 1993.

Between 1993 and 2002, I held various positions at different power companies including Manager of Market Analysis at Mirant Corporation, an IPP and subsidiary of Southern Company. During this time, I worked in the areas of utility planning, privatization, and generation development/acquisition. I joined Dominion Resources in May of 2002 as a Manager, Pricing and Structuring. I have held other management positions in Business Planning and Market Analysis where my responsibilities included asset evaluation, transaction analysis, and commodity price projections. I am currently the Director of Integrated Resource Planning in the Regulation and Integrated Planning organization of Virginia Electric and Power Company and I have been in this role since 2007. My responsibilities include long-term load forecasting, marginal cost development, determination of transmission impacts on generation and demand-side management plans, and the development of the Integrated Resource Plan for Virginia Electric and Power Company.

In conjunction with the positions I have held with Virginia Electric and Power Company, I have nearly 20 years of experience in the electric utility industry. In the past, I have taught courses on utility planning and the United States electric market in Spain, Austria, and the United Kingdom. Additionally, I have given presentations at both the United States Energy Association and Marcus Evans Conferences.



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### CORRECTED APPENDIX 2B - VIRGINIA SALES BY CUSTOMER CLASS (DOM LSE) (GWH)

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| Year | Residential | Commercial         | Industrial | Public<br>Authority | Street and<br>Traffic<br>Lighting | Sales For<br>Resale | Total   |
|------|-------------|--------------------|------------|---------------------|-----------------------------------|---------------------|---------|
| 1999 | 22,726      | 21,108             | 9,824      | 8,598               | 265                               | 3,212               | 65,733  |
| 2000 | 23,939      | 22,21 <del>9</del> | 10,150     | 8,767               | 271                               | 3,233               | 68,579  |
| 2001 | 23,516      | 22,838             | 9,402      | 8,864               | 273                               | 2,677               | 67,570  |
| 2002 | 25,673      | 23,559             | 9,239      | 9,165               | 278                               | 2,337               | 70,251  |
| 2003 | 25,822      | 23,993             | 8,961      | 9,303               | 272                               | 1,996               | 70,347  |
| 2004 | 26,771      | 25,109             | 9,051      | 9,652               | 275                               | 2,087               | 72,945  |
| 2005 | 28,359      | 26,243             | 8,621      | 9,976               | 272                               | 1,651               | 75,122  |
| 2006 | 27,067      | 26,303             | 8,404      | 9,903               | 274                               | 1,754               | 73,705  |
| 2007 | 28,890      | 27,606             | 8,359      | 10,519              | 274                               | 1,906               | 77,554  |
| 2008 | 28,100      | 27,679             | 8,064      | 10,391              | 273                               | 1,877               | 76,384  |
| 2009 | 28,234      | 26,928             | 7,950      | 10,113              | 279                               | 1,834               | 75,338  |
| 2010 | 28,724      | 27,613             | 7,473      | 10,177              | 281                               | 1,841               | 76,110  |
| 2011 | 29,038      | 29,275             | 7,657      | 10,304              | 284                               | 1,882               | 78,440  |
| 2012 | 29,195      | 30,905             | 7,993      | 10,316              | 288                               | 1,948               | 80,645  |
| 2013 | 29,314      | 32,422             | 8,099      | 10,411              | 293                               | 1,975               | 82,514  |
| 2014 | 29,705      | 33,792             | 8,133      | 10,571              | 297                               | 2,004               | 84,502  |
| 2015 | 30,289      | 34,843             | 8,139      | 10,733              |                                   | 2,044               | 86,349  |
| 2016 | 30,956      | 35,918             | 8,244      | 10,923              | 307                               | 2,097               | 88,445  |
| 2017 | 31,450      | 36,867             | 8,283      | 11,051              | 312                               | 2,135               | 90,099  |
| 2018 | 31,997      | 37,994             | 8,346      | 11,221              | 317                               | 2,178               | 92,053  |
| 2019 | 32,550      | 39,190             | 8,446      | 11,419              | 322                               | 2,224               | 94,150  |
| 2020 | 33,122      | 40,608             | 8,579      | 11,643              | 327                               | 2,279               | 96,559  |
| 2021 | 33,556      | 41,761             | 8,671      | 11,795              | 332                               | 2,320               | 98,437  |
| 2022 | 34,079      | 43,016             | 8,783      | 11,969              | 337                               | 2,368               | 100,552 |
| 2023 | 34,603      | 44,336             | 8,870      | 12,138              | 343                               | 2,415               | 102,706 |
| 2024 | 35,246      | 45,785             | 8,983      | 12,335              | 348                               | 2,471               | 105,168 |





## CORRECTED APPENDIX 2C - NORTH CAROLINA SALES BY CUSTOMER CLASS (DOM LSE) (GWH)

| Year | Residential | tial Commercial Industrial Public<br>Authority |       | Street and<br>Traffic<br>Lighting | Sales For<br>Resale | Total |       |
|------|-------------|--|-------|-----------------------------------|---------------------|-------|-------|
| 1999 | 1,207       | 653  | 1,189 | 118                               | 9                   | 1,014 | 4,190 |
| 2000 | 1,299       | 681  | 1,248 | 122                               | 9                   | 1,075 | 4,434 |
| 2001 | 1,268       | 703  | 1,482 | 124                               | 8                   | 1,135 | 4,720 |
| 2002 | 1,391       | 738  | 1,592 | 131                               | 8                   | 1,182 | 5,042 |
| 2003 | 1,424       | 739  | 1,564 | 141                               | 8                   | 1,078 | 4,954 |
| 2004 | 1,479       | 769  | 1,792 | 146                               | 8                   | 84    | 4,278 |
| 2005 | 1,583       | 780  | 1,709 | 143                               | 8                   | 84    | 4,307 |
| 2006 | 1,477       | 775  | 1,763 | 137                               | 8                   | 87    | 4,247 |
| 2007 | 1,579       | 810  | 1,735 | 140                               | 8                   | 89    | 4,361 |
| 2008 | 1,546       | 806  | 1,715 | 138                               | 8                   | 49    | 4,262 |
| 2009 | 1,558       | 785  | 1,352 | 138                               | 8                   | 49    | 3,890 |
| 2010 | 1,593       | 794  | 1,272 | 140                               | 8                   | 49    | 3,857 |
| 2011 | 1,627       | 834  | 1,308 | 143                               | 8                   | 50    | 3,971 |
| 2012 | 1,654       | 872  | 1,375 | 145                               | 9                   | 51    | 4,105 |
| 2013 | 1,671       | 900  | 1,406 | 148                               | 9                   | 52    | 4,186 |
| 2014 | 1,698       | 932  | 1,411 | 151                               | 9                   | 52    | 4,253 |
| 2015 | 1,730       | 963  | 1,414 | 153                               | 9                   | 53    | 4,322 |
| 2016 | 1,767       | 994  | 1,430 | 155                               | 9                   | 54    | 4,410 |
| 2017 | 1,795       | 1,023  | 1,436 | 157                               | 9                   | 55    | 4,475 |
| 2018 | 1,826       | 1,056  | 1,446 | 160                               | 9                   | 56    | 4,553 |
| 2019 | 1,855       | 1,091  | 1,467 | 162                               | 10                  |       | 4,642 |
| 2020 | 1,888       | 1,133  | 1,489 | 165                               | 10                  | 58    | 4,744 |
| 2021 | 1,911       | 1,166  | 1,503 | 167                               | 10                  | 59    | 4,817 |
| 2022 | 1,941       | 1,203  | 1,524 | 170                               | 10                  | 60    | 4,908 |
| 2023 | 1,970       | 1,242  | 1,535 | 172                               | 10                  | 61    | 4,991 |
| 2024 | 2,006       | 1,285  | 1,553 | 175                               | 10                  | 63    | 5,092 |





.



#### **CORRECTED APPENDIX 2G – SUMMER & WINTER PEAKS**

| Company Name: Virginia Elec  | tric and Po | wer Com | pany   |         |        |        |        |        |        |              |        |            |              |        |        |        |        | Sch    | edule 5 |
|------------------------------|-------------|---------|--------|---------|--------|--------|--------|--------|--------|--------------|--------|------------|--------------|--------|--------|--------|--------|--------|---------|
| POWER SUPPLY DATA            |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
|                              | (,          | ACTUAL) |        |         |        | •      |        |        |        | (PR          | OJECTE | <b>)</b> ) |              |        |        |        |        |        |         |
|                              | 2006        | 2007    | 2008   | 2009    | 2010   | 2011   | 2012   | 2013   | 2014   | 2015         | 2016   | 2017       | 2018         | 2019   | 2020   | 2021   | 2022   | 2023   | 2024    |
| li. Load (MW)                |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
| 1. Summer                    |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
| a. Adjusted Summer Peak (1)  | 17,196      | 17,455  | 16,908 | 16,704  | 16,952 | 17,530 | 18,163 | 18,261 | 18,727 | 18,958       | 19,332 | 19,703     | 19,970       | 20,371 | 20,932 | 21,349 | 21,747 | 22,137 | 22,428  |
| b. Other Commitments (2)     | 150         | 150     | 150    | 336     | 320    | 256    | 551    | 179    | 111    | -64          | -74    | -81        | -84          | -86    | -89    | -91    | -94    | -114   | -116    |
| c. Total System Summer Peak  | 17,046      | 17,305  | 16,758 | 16,368  | 18,632 | 17,274 | 17,612 | 18,082 | 18,616 | 19,022       | 19,406 | 19,784     | 20,054       | 20,457 | 21,021 | 21,440 | 21,841 | 22,251 | 22,544  |
| d. Percent Increase in Total |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
| Summer Peak                  |             | 1.5%    | -3.2%  | -2.3%   | 1.6%   | 3.9%   | 2.0%   | 2.7%   | 3.0%   | 2.2%         | 2.0%   | 1.9%       | 1, <b>4%</b> | 2.0%   | 2.8%   | 2.0%   | 1.9%   | 1.9%   | 1.3%    |
| 2 Winter                     |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
|                              |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
| a. Adjusted Winter Peak (1)  | 14,444      | 16,060  | 15,135 | 14,5851 | 14,594 | 14,883 | 15,136 | 15,574 | 15,900 | 16,013       | 16,309 | 16,501     | 16,924       | 17,257 | 17,600 | 17,936 | 18,182 | 18,496 | 18,942  |
| b. Other Commitments (2)     | 150         | 150     | 150    | 297     | 299    | 301    | 271    | 204    | 153    | -11          | -18    | -24        | -26          | -27    | -29    | -31    | -33    | -55    | -57     |
| c. Total System Winter Peak  | 14,294      | 15,910  | 14,985 | 14,288  | 14,295 | 14,582 | 14,864 | 15,370 | 15,748 | 16,024       | 16,327 | 16,525     | 16,950       | 17,284 | 17,630 | 17,967 | 18,216 | 18,551 | 18,999  |
| d. Percent Increase in Total |             |         |        |         |        |        |        |        |        |              |        |            |              |        |        |        |        |        |         |
| Winter Peak                  |             | 11.3%   | -5.8%  | 4.6%    | 0.1%   | 2.0%   | 1.9%   | 3.4%   | 2.5%   | 1. <b>8%</b> | 1.9%   | 1.2%       | 2.6%         | 2.0%   | 2.0%   | 1.9%   | 1.4%   | 1.6%   | 2.4%    |

(1) Peak after energy efficiency and demand-side programs, see Schedule 1

(2) To include firm commitments for the receipt of specified blocks of power (i.e., unit power, limited term, diversity exchange, etc.)



#### **CORRECTED APPENDIX 2H – PROJECTED SUMMER & WINTER PEAK LOAD & ENERGY FORECAST**

| Company | Name: |
|---------|-------|
|---------|-------|

.

Virginia Electric and Power Company

Schedule 1

I. PEAK LOAD AND ENERGY FORECAST

|  | (A     | CTUAL) ( | 1)     |        |        |        |        |        |        | (PR    | OJECTE | <b>)</b> } |         |         |         |         |         |         |         |
|--|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|---------|---------|---------|---------|---------|---------|---------|
|  | 2006   | 2007     | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017       | 2018    | 2019    | 2020    | 2021    | 2022    | 2023    | 2024    |
| 1. Utility Peak Load (MW)                |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| A. Summer                                |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| 1a. Base Forecast                        | 17,046 | 17,305   | 16,756 | 16,368 | 16,632 | 17.274 | 17,612 | 18,082 | 16.616 | 19,022 | 19,406 | 19,784     | 20,054  | 20,457  | 21,021  | 21,440  | 21,841  | 22,251  | 22,544  |
| 1b. Additional Forecast                  |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| BTMG                                     |        |          |        | 158    | 158    | 158    | 155    | 152    | 147    | 143    | 141    | 141        | 141     | 141     | 141     | 141     | 141     | 121     | 121     |
| NCEMC                                    | 150    | 150      | 150    | 150    | 150    | 150    | 150    | 150    | 150    | 0      | 0      | 0          | 0       | 0       | 0       |         | 0       | 0       | 0       |
| 2. Conservation, Efficiency              |        |          |        | 0      | 0      | 0      | -31    | -106   | -170   | -192   | -200   | -207       | -210    | -212    | -215    | -217    | -220    | -222    | -224    |
| 3. Demand-Side and Response              |        |          |        | -14    | -44    | -100   | -181   | -273   | -369   | -435   | -495   | -551       | -595    | -627    | -654    | -677    | -692    | -705    | -716    |
| 4. Demand-Side and Response-Existing (2) | 21     | 23       | 22     | 22     | 21     | 19     | 17     | 15     | 15     | 15     | 15     | 15         | 15      | 15      | 15      | 15      | 15      | 15      | 15      |
| 5. Peak Adjustment                       |        |          |        | 28     | 12     | -52    | 276    | -16    | -16    | -15    | -15    | -15        | -15     | -15     | -15     | -15     | -15     | -13     | -13     |
| 6. Adjusted Load                         | 17,196 | 17,455   | 16,908 | 16,704 | 16,952 | 17,530 | 18.163 | 18,261 | 18,727 | 18,958 | 19,332 | 19.703     | 19,970  | 20,371  | 20,932  | 21,349  | 21,747  | 22,137  | 22,428  |
| 7. % Increase in Adjusted Load           |        | 1.5%     | -3.1%  | -1.2%  | 1.5%   | 3.4%   | 3.6%   | 0.5%   | 2.5%   | 1.2%   | 2.0%   | 1.9%       | 1.4%    | 2.0%    | 2.8%    | 2.0%    | 1.9%    | 1.8%    | 1.3%    |
| (from previous year)                     |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| B. Winter                                |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| 1. Base Forecast                         | 14,294 | 15,910   | 14,985 | 14,288 | 14.295 | 14,582 | 14,864 | 15,370 | 15,748 | 16,024 | 16,327 | 16,525     | 16.950  | 17,284  | 17,630  | 17,967  | 18,216  | 18,551  | 18,999  |
| 1b. Additional Forecast                  |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| BTMG                                     |        |          |        | 158    | 158    | 158_   | 155    | 152    | 147    | 143    | 141    | 141        | 141     | 141     | 141     | 141     | 141     | 121     | 121     |
| NCEMC                                    | 150    | 150      | 150    | 139    | 141    | 143    | 145    | 148    | 147    | 0      | 0      | 0          | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 2. Conservation, Efficiency              |        |          |        | 0      | 0      | Q      | -29    | -95    | -141   | -154   | -169   | -165       | -167    | -168    | -170    | -172    | 174     | -176    | -178    |
| 3. Demand-Side and Response              |        |          |        | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0          | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 5. Adjusted Load                         | 14,444 | 16,060   | 15,135 | 14,585 | 14,594 | 14,883 | 15,136 | 15,574 | 15,900 | 16.013 | 16,309 | 16,501     | 16,924  | 17,257  | 17,600  | 17,936  | 18.182  | 18,496  | 18,942  |
| 6. % Increase in Adjusted Load           |        | 11.2%    | -5 8%  | 3.6%   | 0.1%   | 2.0%   | 1.7%   | 2,9%   | 2,1%)  | 0.7%   | 1.8%   | 1.2%       | 2.6%    | 2.0%    | 2.0%    | 1.9%    | 1.4%    | 1.7%    | 2.4%    |
| 2. Energy (GWh)                          |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| A. Base Forecast                         | 62,983 | 87,755   | 85,798 | 81,993 | 83,114 | 86,388 | 89,604 | 92,195 | 94,471 | 96.460 | 98,729 | 100.518    | 102.621 | 104,895 | 107,494 | 109,519 | 111.813 | 114,135 | 116,795 |
| B. Additional Forecast                   |        |          |        |        |        |        |        |        |        |        |        |            |         |         |         |         |         |         |         |
| BTMG                                     |        |          | _      | 1,396  | 1,386  | 1,386  | 1,363  | 1.319  | 1,282  | 1,255  | 1.238  | 1,235      | 1,235   | 1,235   | 1.238   | 1.235   | 1,235   | 1,064   | 1,181   |
| NCEMC                                    |        |          |        | 590    | 605    | 619    | 645    | 658    | 676    | 0      | 0      | 0          | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| ODECsupp                                 |        |          |        | 161    | 119    | 0      | 0      | 0      | 0      | 0      | 0      | 0          | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| C. PJM Energy Efficiency                 |        |          | -      | -17    | -18    | -18    | -19    | -19    | -20    | -20    | -21    | -21        | -22     | -22     | 23      | -23     | -24     | -24     | -25     |
| D. Conservation & Demand Response        |        |          |        | -94    | -521   | -1.293 | -2,127 | -2,866 | -3.079 | -3,158 | -3,194 | -3.231     | -3.242  | -3.252  | -3.263  | -3,273  | -3.283  | -3.293  | -3.304  |
| E. Adjusted Energy                       | 82,983 | 87,755   | 85,798 | 84,016 | 84,685 | 87.082 | 89,467 | 91,287 | 93,329 | 94,537 | 96,752 |            | 100.592 | 102,856 | 105,447 | 107,458 | 109,741 | 111.662 | 114.647 |
| F. % Increase in Adjusted Energy         |        | 5.8%     | -2.2%  | -2.1%  | 0.8%   | 2.8%   | 2.7%   | 2.0%   | 2.2%   | 1.3%   | 2.3%   | 1.8%       | 2.1%    | 2.2%    | 2.5%    | 1.9%    | 2.1%    | 2.0%    | 2.5%    |

(1) 88% of zonal load (2) Existing DSM programs are included in the load forecast







#### **CORRECTED APPENDIX 2I – REQUIRED RESERVE MARGIN**

| Company Name:  | <u>Virginia Elec</u>                  | tric and P                     | ower Con         | npany      |            |            |       |       |               |       |            |        |            |       |        |       |            |        | Sch      | edule 6 |
|--|---------------------------------------|--------------------------------|------------------|------------|------------|------------|-------|-------|---------------|-------|------------|--------|------------|-------|--------|-------|------------|--------|----------|---------|
| POWER SUPPLY DATA                                      | (continued)                           |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
|  |                                       |                                | (ACTUAI          | .)         |            |            |       |       |               |       | (PR        | OJECTE | D)         |       |        |       |            |        |          |         |
|  |                                       | 2006                           | 2007             | 2008       | 2009       | 2010       | 2011  | 2012  | 2013          | 2014  | 2015       | 2016   | 2017       | 2018  | 2019   | 2020  | 2021       | 2022   | 2023     | 2024    |
| I. Reserve Margin (1)                                  |                                       |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| (Including Cold Reserv                                 | e Capability)                         |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| 1. Summer Reserve M                                    | largin                                |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| a. MW (1)  |                                       | 64                             | 5 494            | 1,312      | 3,122      | 2,947      | 2,821 | 3,040 | 2,191         | 2,247 | 2,275      | 2,320  | 2,365      | 2,397 | 2,445  | 2,512 | 2,562      | 2,610  | 2,657    | 2,693   |
| b. Percent of Load                                     |                                       | 3.89                           | 2.9%             | 7.8%       | 18.7%      | 17.4%      | 16.1% | 16.7% | 12.0%         | 12.0% | 12.0%      | 12.0%  | 12.0%      | 12.0% | 12.0%  | 12.0% | 12.0%      | 12.0%  | 12.0%    | 12.0%   |
| c. Actual Reserve Ma                                   | argin (4)                             | N/A                            | <u>N/A</u>       | N/A        | 10.17%     | <u> </u>   | 9.6%  | 9.5%  | 10.3 <u>%</u> | 7.7%  | 6.9%       | 8.6%   | 6.4%       | 11.2% | 10.1%  | 8.6%  | 8.6%       | 9.6%   | 10.5%    | 11.9%   |
| 2. Winter Reserve Mar                                  | rgin                                  |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| a. MW (1)  |                                       | N/A                            | N/A              | <u>N/A</u> | <u>N/A</u> | 6,634      | 6,123 | 6,799 | 5,692         | 5.785 | 5,141      | 5,120  | 5.377,     | 4,619 | 5,667  | 5,981 | 5,844      | 6,057, | 6,215    | 6,094   |
| b. Percent of Load                                     |                                       | N/A                            | N/A              | N/A        | <u>N/A</u> | 45.5%      | 41,1% | 44.9% | 36.5%         | 36.4% | 32.1%      | 31.4%  | 32.6%      | 27.3% | 32.8%  | 34.0% | 32.6%      | 33.3%  | 33.6%    | 32.1%   |
| c. Actual Reserve Ma                                   | argin (4)                             | N/A                            | N/A              | N/A        | <u>N/A</u> | <u>N/A</u> | N/A   | N/A   | N/A           | N/A   | <u>N/A</u> | N/A    | N/A        | N/A   | N/A    | N/A   | N/A I      |        | VA I     | N/A     |
|  |                                       |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| I. Reserve Margin (1)(2)                               | )(3)                                  |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| (Excluding Cold Reser                                  | ve Capability)                        |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| 1. Summer Reserve M                                    | largin                                |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| a. MW (1)  |                                       | 70                             | 8 49             | 1,312      | 3,122      | 2,947      | 2,821 | 3,040 | 2,191         | 2,247 | 2,275      | 2,320  | 2,365      | 2,397 | 2,445  | 2,512 | 2,562      | 2,610  | 2,657    | 2,693   |
| b. Percent of Load                                     |                                       | 3.07                           | 6 2.99           | 7.8%       | 18.7%      | 17.4%      | 16.1% | 16.7% | 12.0%         | 12.0% | 12.0%      | 12.0%  | 12.0%      | 12.0% | 12.0%  | 12.0% | 12.0%      | 12.0%  | 12.0%    | 12.0%   |
| c. Actual Reserve M                                    | argin (4)                             | <u>N/A</u>                     | <u>N/A</u>       | N/A        | 10.2%      | 8.9%       | 9.6%  | 9.5%  | 10.3%         | 7.7%  | 6.9%       | 8.6%   | 6.4%       | 11.2% | 10.1%  | 8.6%  | 8.6%       | 9.6%   | 10.5%    | 11.9%   |
| 2. Winter Reserve Mar                                  | rgin                                  |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| a. MW (1)  |                                       | N/A                            | N/A              | N/A        | N/A        | 6,634      | 6,123 | 6,799 | 5,692         | 5,785 | 5,141      | 5,120  | . 5,377,   | 4,619 | 5,667. | 5,981 | 5,844      | 6,057  | 6,215    | 6,094   |
| b. Percent of Load                                     |                                       | N/A                            | <u>N/A</u>       | N/A        | <u>N/A</u> | 45.5%      | 41.1% | 44.9% | 36.5%         | 36.4% | 32.1%      | 31.4%  | 32.6%      | 27.3% | 32.8%  | 34.0% | 32.6%      | 33.3%  | 33.6%    | 32.1%   |
| c. Actual Reserve M                                    | argin (4)                             | N/A                            | N/A              | N/A        | <u>N/A</u> | N/A        | N/A   | N/A   | N/A           | N/A   | N/A        | N/A    | N/A        | N/A   | N/A    | N/A   | N/A I      | N/A 1  | N/A      | N/A     |
|  |                                       |                                |                  |            |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |
| III. Annual Loss-of-Loa                                | d Hours (5)                           | N/A                            | <u>N/A</u>       | N/A        | <u>N/A</u> | N/A        | N/A   | N/A   | N/A           | N/A   | N/A        | N/A    | <u>N/A</u> | N/A   | N/A    | N/A   | <u>N/A</u> | N/A    | <u> </u> | N/A     |
| (1) To be calculated based<br>(2) The Company has no u | on Total Net Cap<br>nits in Cold Rese | pability for :<br>irve past 20 | summer an<br>306 | d winter.  |            |            |       |       |               |       |            |        |            |       |        |       |            |        |          |         |

(3) The Company and PJM forecasts a summer peak throughout the Planning Period

(4) Does not include spot purchases of capacity

(5) The Company follows PJM reserve requirements which are based on LOLE





#### **CORRECTED APPENDIX 6E – CAPACITY POSITION**

| Company Name: Virgi        | nia Electric and Pow | er Co | ompany  |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          | Sch    | edule 4 |
|----------------------------|----------------------|-------|---------|----------|--------|---------------|----------|---------------|--------|-----------|----------|---------|------------|-------------|---------|--------|--------|----------|--------|---------|
| POWER SUPPLY DATA          |                      |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
|                            |                      | (/    | ACTUAL) |          |        | 0010          |          | -             | 0040   |           | (PR      | OJECTED | ))<br>0017 | 0040        | 0040    |        |        |          |        |         |
| I. Capability (MW)         |                      |       | 2007    | 2008     | 2009   | 2010          | 2011     | 2012          | 2013   | 2014      | 2015     | 2010    | 2017       | 2018        | 2019    | 2020   | 2021   | 2022     | 2023   | 2024    |
| 1. Summer                  |                      |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| a. Installed Net Dependab  | le                   |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| Capacity (1)               | 15                   | ,552  | 15,723  | 16,210   | 16,469 | 16,531        | 17,287   | 17,862        | 17,946 | 17,874    | 18,450   | 19,133  | 19,849     | 21,043      | 21,383  | 21,723 | 22,363 | 23,003   | 23,643 | 24,283  |
| b. Positive Interchange    |                      |       |         |          |        |               |          | -             |        |           |          |         |            |             |         |        |        |          |        |         |
| Commitments (2)            | 2                    | ,076  | 2,076   | 1,660    | 1,935  | 1,935         | 1,935    | 1,9 <u>32</u> | 1,929  | 1,923     | 1,376    | 1,373   | 568        | 575         | 408     | 363    | 141    | 141      | 121    | 121     |
| c. Capability in Cold Rese | rve/                 |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| Reserve Shutdown Stat      | turs (1)             | 63    | 0       | <u> </u> | 0      | 0             | 0        | 0             | 0      | 0         | <u> </u> | 0       | 0          | 0           | 0       | 0      | 0      | 0        | 0      | 0       |
| d. Demand Response - Ex    | dsting               | 21    | 23      | 22       | 22     | 21            | 19       | 17            | 18     | <u>15</u> | 15       | 15      | 15         | <u>15</u>   | 15      | 15     | 15     | 15       | 15     | 15      |
| e. Demand Response - Pr    | roposed              |       |         |          | 0      | 0             | <u> </u> | 91            | 273    | 369       | 435      | 495     | 551        | 595         | 627     | 654    | 677    | 692      | 705    | 716     |
| f. Capacity Sale           |                      |       |         |          | 0      | 0             | 0        | ٥             | -200   | -200      | -200     | -200    | -200       | -200        | -200    | -200   | -200   | -200     | -200   | -200    |
| g. Capacity Purchase       |                      |       |         |          | 1,963  | 1,779         | 1,355    | 1,578         | 504    | 1,008     | 1,172    | 851     | 1,299      | 353         | 597     | 904    | 930    | 721      | 525    | 214     |
| h. Capacity Adjustment     |                      |       |         |          | -541   | -347          | -225     | -263          | 0      | 0         | 0        | 0       | 0          | 0           | 0       | 0      | 0      | 0        | 0      | 0       |
| i. Total Net Summer Capa   | ubility17            | ,712  | 17,822  | 18,092   | 19,826 | <u>19,898</u> | 20,351   | 21,199        | 20,451 | 20,974    | 21,233   | 21.653  | 22,067     | 22,367      | 22,815  | 23,445 | 23,911 | 24,357   | 24,794 | 25,135  |
| 2. Winter                  |                      |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| a. Installed Net Dependat  | le                   |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| Capacity (1)               |                      |       |         |          | 19,269 | 19,449        | 19,651   | 20,357,       | 20,962 | 20,878    | 20,162   | 20,777  | 20,779     | 21,390      | 22,527, | 22,877 | 23,050 | 23,718   | 24,386 | 25,035  |
| b. Positive Interchange    |                      |       |         |          |        |               |          | ,             |        |           |          |         | ·          |             |         |        |        | <u> </u> |        |         |
| Commitments (2)            |                      |       |         |          | 1,963  | 1,779         | 1,355    | 1,578         | 504    | 1,008     | 1,172    | 851     | 1,299      | 353         | 597     | 904    | 930    | 721      | 525    | 214     |
| c. Capability in Cold Rese | erve/                |       |         |          |        |               |          |               |        |           |          |         |            |             |         |        |        |          |        |         |
| Reserve Shutdown Sta       | tus (1)              | 63    | 0       | 0        | 0      | 0             | 0        | 0             | 0      | o         | o        | 0       | 0          | 0           | 0       | 0      | 0      | 0        | o      | 0       |
| d. Demand-Side and Res     | ponse                |       |         |          | 0      |               | 0        | 0             | 0      | 0         | 0        | 0       | 0          | 0           | 0       | 0      |        | 0        | 0      |         |
| e. Capacity Sale           | ·                    |       |         |          | 0      | 6             |          |               | -200   | -200      | -200     | -200    | -200       | -200        | -200    | -200   | -200   | -200     | -200   | -200    |
| f. Total Net Winter Capab  | ility —              |       |         |          | 21,232 | 21,228        | 21.006   | 21,935        | 21,266 | 21,685    | 21,154   | 21,429  | 21,878     | )<br>21,544 | 22,924  | 23,581 | 23,780 | 24,239   | 24,711 | 25.049  |

(1) Net Seasonable Capability.

(2) To include lirm commitments for the receipt of specified blocks of power (i.e., unit power, limited term, diversity exchange, cogeneration, small power production, etc.)

#### DIRECT TESTIMONY OF MICHAEL J. JESENSKY ON BEHALF OF VIRGINIA ELECTRIC AND POWER COMPANY BEFORE THE NORTH CAROLINA UTILITIES COMMISSION DOCKET NO. E-100, SUB 118 DOCKET NO. E-100, SUB 124

Q. Please state your name, business address, and position with Virginia Electric
 and Power Company.

My name is Michael J. Jesensky and my business address is 120 Tredegar Street, 3 Α. 4 Richmond, Virginia. I am the Director of Demand-Side Analysis for Virginia Electric and Power Company d/b/a Dominion North Carolina Power ("DNCP" or 5 6 the "Company"). I am responsible for the analysis of Demand-Side Management 7 ("DSM") programs, which include both Demand Response and Energy Efficiency 8 programs. The analysis of DSM programs includes screening and modeling, in 9 addition to performing cost/benefit analyses to evaluate the impact of such 10 programs on stakeholders. A statement of my background and qualifications is 11 attached as Appendix A.

12 Q. What is the purpose of your testimony in this proceeding?

A. On September 1, 2009, the Company filed its 2009 Integrated Resource Plan
("2009 Plan") with the North Carolina Public Utilities Commission ("NCUC") as
an update to the previously filed 2008 Integrated Resource Plan. The purpose of
my testimony is to adopt the current and proposed DSM programs discussed in
Chapter 3, the future DSM programs outlined in Chapter 5, the discussion
regarding planned demand-side actions for the next five years in Chapter 7, and

| 1  |    | the corresponding appendices, all of which are contained in the 2009 Plan. These |
|----|----|--|
| 2  |    | chapters and sections were prepared under my supervision and direction.          |
| 3  | Q. | Since the 2009 Plan was submitted, do you have any corrections to that           |
| 4  |    | filing?  |
| 5  | Α. | Yes. On page 3-13 of the 2009 Plan, the reference to "Over 3,400,000 CFL Bulbs   |
| 6  |    | Sold as of June 1, 2009" in the Compact Fluorescent Light price reduction        |
| 7  |    | program description should read "Over 3,200,000 CFL Bulbs Sold as of June 1,     |
| .8 |    | 2009."   |
| 9  | Q. | With the inclusion of these corrections to the 2009 Plan, does this conclude     |
| 10 |    | your prefiled direct testimony in this proceeding?                               |
| 11 | Α. | Yes it does.   |

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#### BACKGROUND AND QUALIFICATIONS OF MICHAEL J. JESENSKY

I graduated from Virginia Military Institute in May of 1982 with a Bachelor of Science Degree in Electrical Engineering. I continued my education with a Master of Business Administration in May of 1988 from Virginia Commonwealth University.

I joined Virginia Electric and Power Company in June of 1982 as an engineer in Telecommunications and Transmission & Distribution. I have held various management positions in Telecommunications Engineering, Enterprise Systems Management, and Metering Technology before being promoted to Director of Metering Services in 2000. From 2001 to 2007, I held various director-level leadership positions in Billing and Credit Systems Support, and Business Development and Planning. Additionally, I am a certified Dominion Six Sigma Green Belt. I am currently the Director of Demand-Side Analysis on behalf of Virginia Electric and Power Company. I am responsible for the analysis of Demand-Side Management ("DSM") programs, including Peak-Shaving and Energy Efficiency programs. DSM analysis includes the screening and modeling of such programs, in addition to performing cost/benefit analyses required in evaluating these programs.

## FILED

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Clerk's Office N.C. Utilities Commission

#### DIRECT TESTIMONY OF AARON A. REED ON BEHALF OF DOMINION NORTH CAROLINA POWER BEFORE THE NORTH CAROLINA UTILITIES COMMISSION DOCKET NO. E-100, SUB 118 DOCKET NO. E-100, SUB 124

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| 1  | Q. | Please state your name and position, and describe your educational                |
|----|----|---|
| 2  |    | background and experience with Virginia Electric and Power Company                |
| 3  |    | ("Dominion North Carolina Power" or the "Company").                               |
| 4  | А. | My name is Aaron A. Reed, and I am a Business Development Manager for the         |
| 5  |    | Company and my business address is 120 Tredegar St, Richmond, Virginia            |
| 6  |    | 23219.  |
|    | _  |   |
| 7  | Q. | Please describe your areas of responsibility with the Company.                    |
| 8  | A. | I am responsible for identifying prospective generation acquisition and           |
| 9  |    | development opportunities, coordinating evaluation, analysis, and due diligence   |
| 10 |    | activities, and participating in negotiations of key contracts and agreements for |
| 11 |    | the Company. I am also responsible for developing strategies for expansion of the |
| 12 |    | Company's generation business. I am also responsible for management of the        |
| 13 |    | Company's Renewable Energy and Energy Efficiency Portfolio Standard               |
| 14 |    | Compliance Plan ("REPS Compliance Plan"). A statement of my background            |
| 15 |    | and qualifications is attached as Appendix A.                                     |
|    |    |   |

16 Q. What is the purpose of your testimony in this proceeding?

| 1 | Α. | The purpose of my testimony is to adopt Dominion North Carolina Power's 2009 |
|---|----|--|
| 2 |    | REPS Compliance Plan filed on September 1, 2009, as Addendum 1 to the        |
| 3 |    | Company's Report of its Integrated Resource Plan as revised on September 15, |
| 4 |    | 2009. The 2009 REPS Compliance Plan was prepared under my supervision and    |
| 5 |    | direction, and is accurate and complete to the best of my knowledge.         |
|   |    |  |
| 6 | Q. | Do you have any changes or correction to Addendum 1?                         |
| 7 | А. | No.  |
| 8 | 0. | Does this conclude your prefiled direct testimony in this proceeding?        |

9 A. Yes, it does.

#### BACKGROUND AND QUALIFICATIONS OF AARON A. REED

I graduated from the North Carolina State University in 2000 with a Bachelor of Science degree in Mechanical Engineering. I joined Virginia Electric and Power Company in 2000. From 2000 to 2003, I worked at Chesterfield Power Station as an engineer and was promoted to Engineer II during that time. In 2003, I transferred to F&H Operations as a support staff engineer for the company's mid-west assets for approximately 2 years before I transferred to the F&H Environmental Excellence group where I was promoted to Engineer III. I was responsible for review of various new potential renewable technologies, managed a companywide biomass feasibility study, and participated in the developing the company's position on both the Virginia and North Carolina renewable energy portfolio standards. In 2007, I was promoted to Business Development Manager for the company. In my current position, I am responsible for identifying prospective generation acquisition and development opportunities, coordinating evaluation, analysis, and due diligence activities, and participating in negotiations of key contracts and agreements for the Company. I am also responsible for developing strategies for expansion of the Company's generation business and for the management of the Company's Renewable Energy and Energy Efficiency Portfolio Standard Compliance Plan ("REPS Compliance Plan").

#### CERTIFICATE OF SERVICE DOCKET NO. E-100, SUB 124

I hereby certify that a copy of the Direct Testimony and Exhibits of Dominion North Carolina Power was mailed, first-class, postage prepaid, to each of the following:

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This the 10th day of December, 2009.

Horace P. Payne, Jr. Senior Counsel

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