



**Dominion<sup>®</sup>**

**Rebuttal Testimony and  
Exhibits of Virginia Electric  
and Power Company**

Before the State Corporation  
Commission of Virginia

Meadow Brook – Loudoun  
500 kV Transmission Line

VOLUME II of II

Application No. 233  
Case No. PUE-2007-00031

Filed: February 5, 2008

**REBUTTAL TESTIMONY  
OF  
DAVID F. KOOGLER  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE  
STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUE-2007-00031**

1 **Q. Please state your name and position with Virginia Electric and Power Company**  
2 **("Dominion Virginia Power" or the "Company").**

3 A. My name is David F. Koogler. I am Director of State Regulation for Dominion Virginia  
4 Power.

5 **Q. Did you pre-file direct testimony on April 19, 2007, in this case?**

6 A. Yes.

7 **Q. Do you have any corrections to your initial pre-filed testimony?**

8 A. Yes. On November 7, 2007, I filed a revision to page 5 of my pre-filed direct testimony  
9 to make an adjustment for the transposition of a positive number and a negative number  
10 in a calculation showing the percentage of kWh sales related to customers on time based  
11 rates.

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

13 A. I am responding to the testimony of several Respondents and the State Corporation  
14 Commission ("SCC" or "Commission") Staff on issues related to Dominion Virginia  
15 Power's energy conservation activities. I use the term energy conservation broadly to  
16 include energy conservation, energy efficiency and demand side management, as several  
17 parties to the case seem to use these terms almost interchangeably. I will also provide an

1 update on the process that is underway and ongoing to develop and carry out the  
2 Commonwealth's future direction and policies with respect to energy conservation.  
3 Respondent and Staff witnesses who have raised these points include Dr. Lamine Mili on  
4 behalf of the Board of Supervisors of Fauquier County, Dr. Daniel M. Violette on behalf  
5 of the Piedmont Environmental Council ("PEC"), Dr. Ren Orans on behalf of Virginia's  
6 Commitment, LLC, and on behalf of the SCC Staff ("Staff"), the Bates White, LLC  
7 ("Bates White") report prepared by Spencer Yang and Nicholas Puga attached as  
8 Appendix BW-1 to the prefiled Staff testimony ("the Report") .

9 **Q. What is the SCC Staff's conclusion regarding the ability of energy conservation**  
10 **programs to avoid the need for the Meadowbrook – Loudoun Line, as presented by**  
11 **Bates White? Do you agree with their findings?**

12 A. The Report concludes that Energy Efficiency ("EE") measures are not a feasible  
13 alternative to building the transmission line. On pages 97 and 98, the Report states that  
14 ". . . while EE programs can often be approved and launched in a very short time, it can  
15 take years of slow progress to obtain meaningful levels of participation. This ramp-up  
16 time was considered by Bates White as limiting the feasibility of EE programs to defer  
17 the 2011 need for the proposed line."

18 The Company strongly supports the Staff's independent findings that EE programs cannot  
19 defer or avoid the need for this line. A similar finding was made in the KEMA Report  
20 sponsored by P. Jeffrey Palermo in his direct testimony filed in this proceeding and Mr.  
21 Palermo further expands on this concept in his rebuttal testimony.

1 **Q. Mr. Koogler, before addressing the testimony of the Respondents, can you provide**  
2 **an update on what has transpired in the Commonwealth with respect to energy**  
3 **conservation policy since your direct testimony was filed?**

4 A. Yes. Four significant developments have occurred in the area of energy conservation  
5 since my direct testimony was filed. First, the SCC conducted a proceeding (Case No.  
6 PUE-2007-00049) to examine many energy conservation-related issues, as directed by the  
7 General Assembly, and then reported its findings and recommendations to the Governor  
8 and the General Assembly on December 14, 2007. Second, the Virginia Energy Plan was  
9 released by the Governor on September 12, 2007, with a significant emphasis on energy  
10 conservation. Third, the Company filed an application with the SCC for approval of nine  
11 energy conservation and demand response pilot programs on September 18, 2007, and on  
12 January 17, 2008, the Commission issued an Order approving the pilots. Finally, the  
13 2008 session of the Virginia General Assembly convened on January 9, 2008, and a  
14 number of bills have been introduced that address policies related to energy conservation.

15 **Q. Can you provide more information on the SCC's energy conservation proceeding,**  
16 **Case No. PUE-2007-00049?**

17 A. My direct testimony noted that the 2007 Virginia General Assembly included a Third  
18 Enactment Clause in SB1416/HB3068 which directed the SCC to conduct a proceeding,  
19 engage interested parties, study many issues related to energy conservation and then  
20 report back to the Governor and the General Assembly by December 15, 2007, with  
21 specific recommendations on what legislative changes would be necessary to advance  
22 energy conservation-related policies. The Commission issued an Order on June 8, 2007,  
23 establishing a proceeding for this purpose, Case No. PUE-2007-00049. As directed by  
24 the Commission, the Commission Staff convened a work group of interested

1 stakeholders. Interest in the process was extremely strong, as more than 50 organizations  
2 and 150 individuals, representing utilities, environmental organizations and consumers,  
3 participated. With so many complex issues to address and a very limited timeframe to do  
4 it, the Staff wisely formed five subgroups to facilitate the process. Three face-to-face  
5 meetings were held between July and September of 2007, and the subgroups held many  
6 additional meetings to work on the issues. Dominion Virginia Power actively  
7 participated in all five subgroups, as did a number of the parties to that proceeding. The  
8 Commission Staff submitted a report to the Commission on November 16, 2007, that  
9 included the reports of the five subgroups along with a number of Staff observations and  
10 recommendations. The Commission forwarded the report to the General Assembly and  
11 the Governor on December 14, 2007.

12 **Q. Mr. Koogler, could you give us a brief summary of the contents of the Staff Report**  
13 **("Staff Report") delivered by the Commission on December 14, 2007, to the**  
14 **Governor and General Assembly?**

15 **A.** Yes. The Staff Report concludes that the 10% electric energy consumption reduction  
16 goal (relative to electricity consumption in 2006) proposed by the General Assembly is  
17 attainable by 2022. However, the Staff found that while the 10% is attainable, only "cost  
18 effective" energy conservation should be undertaken. The Staff deferred to the Virginia  
19 Energy Plan and the stakeholders in this proceeding for specific identification of energy  
20 conservation programs potentially to be deployed in Virginia. The Staff Report's lone  
21 recommendation addresses the Staff's perceived "most significant deficiency associated  
22 with this important effort." To address this perceived deficiency, Staff recommends on  
23 pages 61 and 62, that "Virginia's major electric utilities be required to develop and file

1 with the SCC rate element specific marginal cost of service studies and associated  
2 avoided electric supply cost forecasts."

3 The Staff Report also notes that the sub-groups did not explicitly examine whether  
4 potential energy efficiency will be "cost-effective," "fair" and "efficient." The Staff  
5 Report concluded, on page 9, that these are "crucial and desirable" program attributes and  
6 that more analysis was needed to make these determinations. Furthermore, on page 41,  
7 the Staff Report recommended that the Commission consider reviewing and updating its  
8 promotional allowance rules that have been in effect since 1992.

9 In its transmittal letter ("Transmittal Letter") to the Governor and members of the  
10 Virginia General Assembly sent on December 14, 2007, the Commission states the Staff  
11 Report's conclusion that the desired goals cannot be reached, and the implementation  
12 questions answered, absent significant additional cost data necessary to determine  
13 "whether such programs are . . . 'cost effective' 'fair,' and 'efficient' []." The Commission  
14 notes that the economic legislative and regulatory actions needed to achieve a 10%  
15 reduction in electricity consumption are "substantial" and likely to entail significant  
16 impacts on various sectors of Virginia's economy and people. The Transmittal Letter also  
17 suggests that the General Assembly may wish to consider legislation "(1) to address the  
18 recommendation in the Staff Report 'that Virginia's major electric utilities be required to  
19 develop and file with the [Commission] rate element specific marginal cost of service  
20 studies and associated electric supply cost forecasts'. . .and/or (2) to define some other  
21 guideline or mechanism for declaring whether a specific conservation plan is 'cost  
22 effective.'"

1 Q. **Can you highlight the energy conservation-related recommendations included in the**  
2 **Virginia Energy Plan ("the Plan")?**

3 A. Yes. The Plan sets out a goal for energy independence that has energy conservation and  
4 education as a key component. The Plan concurs with the SCC's findings that a 10%  
5 reduction in electricity consumption in 2022 (relative to base year 2006) is achievable.  
6 The Plan provides an estimate on the cost of achieving such results, noting that  
7 consumers in the Commonwealth would need to support energy conservation by paying  
8 approximately \$280 - \$320 million per year (\$100 to \$120 million per year paid to  
9 support utility programs and another \$180 to \$200 million out-of-pocket to invest in  
10 energy conservation measures). The Plan correctly notes that consumer education is an  
11 absolutely critical element of a statewide energy conservation program.

12 Q. **What is the status of the Virginia Energy Plan?**

13 A. The findings and recommendations contained in the Plan, as well as the Staff Report on  
14 the Commission conservation proceeding, are available to the General Assembly as it  
15 considers legislation in 2008 and future sessions. The Governor has taken important  
16 follow-up steps by recently convening the first meeting of his Energy Advisory Council  
17 and also appointing the Commission on Climate Change. Dominion Virginia Power  
18 senior executives have been appointed to both bodies.

19 Q. **You noted earlier that since your direct testimony was filed in this proceeding,**  
20 **Dominion Virginia Power has sought and received approval from the SCC to**  
21 **conduct several energy conservation and demand response pilots. Why was this**  
22 **action taken while the SCC's process was still underway?**

23 A. In addition to the numerous time based rates and educational efforts that I describe in my  
24 pre-filed direct testimony, the Company decided it was important to be proactive and to

1 not wait for all of the policy questions to be answered before taking action. The  
2 Company felt it would be prudent to conduct pilots or experimental energy conservation  
3 programs in parallel with the process that is ongoing between the Commission and the  
4 General Assembly to work out the Commonwealth's long term policies on energy  
5 conservation. Dominion Virginia Power's non-fuel rates have been capped for over a  
6 decade as a result of restructuring legislation, and our rates today including fuel are  
7 essentially the same as they were in 1993. As a result, our customers have not had the  
8 economic incentive to conserve for many years. Our previous experience with load  
9 control programs, time-of-usage rates and energy conservation initiatives were not  
10 broadly accepted and adopted on a sustainable basis by our customers in the 1980s and  
11 early 1990s.

12 Our new pilots are intended to give us some practical experience with newer technologies  
13 and approaches, but most importantly, we need to gauge consumer interest and  
14 acceptance. Our pilots will be in-place for the summer of 2008 and are expected to  
15 provide valuable information that the Company and the Commission will be able to use  
16 as a first step in determining what programs may be cost effective and viable on a larger  
17 scale, system-wide basis. Dominion Virginia Power also is sponsoring an energy  
18 efficient lighting promotion that offers customer discounts on compact fluorescent light  
19 ("CFL") bulbs purchased at Home Depots throughout our service area. Because of the  
20 program's popularity, Dominion Virginia Power will expand it and offer the discount at  
21 additional retailers during 2008.

1 **Q. Mr. Koogler, you stated that the 2008 General Assembly is addressing energy**  
2 **conservation-related policy issues. Would you please comment?**

3 A. Three dozen energy conservation-related bills have been introduced before the Virginia  
4 legislature. These range from numerous tax incentives tied to energy conservation to a  
5 directive to the SCC to continue its work to develop an effective model for Virginia to  
6 successfully implement the optimal cost-effective energy conservation programs.

7 **Q. Given the ongoing process that you have described to set the Commonwealth's**  
8 **fundamental policies regarding energy conservation, do you feel the assertions by**  
9 **the Respondents in the case that Dominion Virginia Power should be aggressively**  
10 **pursuing new large scale energy conservation programs at this time are**  
11 **appropriate?**

12 A. No, I don't. It is clear to me that the parties who are critical of Dominion Virginia  
13 Power's energy conservation efforts are not "in tune" with Virginia's legislative and  
14 regulatory processes. The Commonwealth should be commended on taking a methodical  
15 and measured approach to major policy issues that can have a significant impact on the  
16 cost and reliability of energy, as well as the state's economic development position.  
17 Those of us in the industry believe that this second round of energy conservation (the first  
18 followed the energy crisis of the 1970's) will be different, and it will require fundamental  
19 and transformational changes to how consumers buy and use energy. That is why it is so  
20 important that our policymakers in Virginia take the time to lay a solid foundation now,  
21 so that the energy conservation efforts undertake will be sustainable and viable for  
22 decades into the future.

1 **Q. PEC witness Violette suggests at pages 14-23 of his testimony that Dominion**  
2 **Virginia Power could be doing a better job with how it prices electricity in order to**  
3 **encourage energy conservation. Can you comment?**

4 A. It has been almost 15 years, the early 1990s, since Dominion Virginia Power has had the  
5 opportunity to revise its rate designs to align with costs. A multi-year rate settlement in  
6 Case No. PUE-1996-00296 and the rate caps imposed by the Virginia Electric Utility  
7 Restructuring Act passed by the General Assembly in 1999 have limited the ability of  
8 Virginia's electric utilities to propose modifications to its rate structures.

9 The Staff Report noted that rate design was an area where considerable work could, and  
10 should, be done so that consumers would have the correct "price signals" to make  
11 informed economic choices. The Company believes that the recent, significant advances  
12 in metering and communication technology will open the door to more wide-scale  
13 deployment of "smart meters," which can then be paired with so-called "smart rates" and  
14 in-home automation of appliances. Future generations will be equipped with the tools  
15 and knowledge to use electricity much more efficiently and will know how and when to  
16 conserve. But this is not the answer to today's situation where there is a critical need for  
17 additional infrastructure to ensure reliability is maintained in 2011.

18 **Q. Would you please comment on Dr. Violette's DSM assessment?**

19 A. Yes. Dr. Violette sponsors a Summit Blue Assessment paper entitled "Situational  
20 Analysis of Demand-Side Management Options in the Commonwealth of Virginia"  
21 ("DSM Assessment"). The DSM Assessment develops a portfolio of five DSM programs  
22 that are based on successful programs implemented by other utilities. He also states that  
23 variants of these five program types have been deployed in many jurisdictions over the

1 past twenty years and have achieved substantial energy savings and peak demand  
2 reductions within planning horizons of five years or less. While the paper touts the  
3 benefits regarding DSM in other states, the socioeconomic, regulatory and political  
4 situation can vary drastically from state to state. We really have no way of assessing  
5 whether any of Dr. Violette's proposals are viable in Virginia at this time, given that the  
6 Commonwealth's policymakers are still very much at-work developing the state's policy  
7 on energy conservation. As I mentioned earlier, the Staff Report concluded that cost  
8 considerations are crucial and there is still the open question that the Commission posed  
9 to the legislature concerning the definition of "cost effective." After these important  
10 issues are resolved, then programs such as those suggested by Dr. Violette can be  
11 assessed to see if they are viable for Virginia.

12 Under the new regulatory model adopted for Virginia by last year's General Assembly,  
13 each utility is required to develop and file with the SCC a plan for its projected generation  
14 and transmission requirements to serve its native load for the next 10 years, starting in the  
15 year of its first biennial review. That is expected to occur in 2011 for Dominion Virginia  
16 Power. In preparing that plan, the Company will analyze the entire spectrum of DSM  
17 measures. I am confident that our planners will consider a portfolio of DSM programs,  
18 including the extensive list of potential consumption reduction and demand reduction  
19 programs identified by the subgroups and included in the Staff's Report.

1 Q. Dr. Violette also recommends at pages 24-25 of his testimony that the PJM Demand  
2 Response Programs provide the Company another area of opportunity for  
3 Dominion Virginia Power to work to reduce future load and peak demand growth.  
4 Do you agree?

5 A. I agree that the PJM Demand Response Programs provide opportunities, but the  
6 Commission should be aware when evaluating these opportunities that they are not  
7 targeted towards Load Serving Entities, but to end-use customers and to Curtailable  
8 Service Providers. As noted earlier, Virginia had a restructured electric industry structure  
9 from 1999 through July 1 of last year. Now we have a hybrid regulatory system where  
10 generation is regulated but nearly all of Virginia stays in PJM and customers have access  
11 to market-based consumption-modification programs.

12 Dominion Virginia Power currently has approximately 50 customers participating in PJM  
13 Demand Response Programs and that number is expected to grow significantly in the next  
14 few years. We understand that Curtailment Service Providers are aggressively recruiting  
15 customers to sign up for the program. The Commonwealth of Virginia recently signed an  
16 agreement with a Curtailment Service Provider and we have already seen several large  
17 Commonwealth of Virginia accounts begin to participate in that program.

18 The money that PJM pays to Dominion Virginia Power's customers who respond to  
19 economic price signals and reduce their consumption ultimately gets charged back to  
20 Dominion Virginia Power. The new re-regulation law includes a provision for the  
21 Commission to approve a rider to pass through the cost of the PJM program to customers,  
22 which is appropriate.

1 I agree that a market-based, economically driven demand response program can be a good  
2 thing for Virginia consumers, as long as the rules and guidelines under which the program  
3 operates are fair and equitable. We currently believe that there are some shortcomings in  
4 the rules and guidelines for how the PJM Demand Response Programs operate and the  
5 Company continues to be active in the PJM Demand Response Working Group to try to  
6 correct the shortcomings in the program.

7 **Q. Mr. Koogler, can you please summarize your rebuttal testimony?**

8 A. We agree with the Staff's consultant that Energy Efficiency measures cannot avoid or  
9 defer the need for this transmission line. The Company's own witness, P. Jeffrey  
10 Palermo, of KEMA made a similar finding in his direct and rebuttal testimonies.  
11 Dominion Virginia Power also agrees with the Respondents that there are many  
12 opportunities to improve rate designs and to implement energy conservation programs in  
13 the future to off-set in part the Commonwealth's continuing growth in electric demand.  
14 But it cannot happen overnight and although the Company is committed to the process, it  
15 cannot alleviate the need for the Meadow Brook to Loudoun facility. Virginia's  
16 policymakers are now hard at work defining the policies and rules and regulations that  
17 will form the foundation for an energy conservation program for the state that will be  
18 sustained for generations to come. Dominion Virginia Power's pilots that will be  
19 conducted this year will provide helpful and practical data about the technology options,  
20 but even more importantly they will tell us what energy conservation measures that  
21 electric consumers in Virginia are willing to embrace. These measures will be  
22 implemented in the context of other proceedings and are outside the scope of this case.

1 Q. Does this conclude your testimony?

2 A. Yes, it does.