

**DIRECT TESTIMONY  
OF  
JOHN M. REYNOLDS  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE  
STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUE-2007-\_\_\_\_\_**

1   **Q.   Please state your name and business address.**

2   A.   My name is John M. Reynolds, and my business address is 955 Jefferson Avenue,  
3       Valley Forge Corporate Center, Norristown, Pennsylvania 19403-2497.

4   **Q.   By whom are you employed and in what capacity?**

5   A.   I am employed by PJM Interconnection, L.L.C. (“PJM”), a regional transmission  
6       organization (“RTO”), as a Senior Engineer in the Capacity Adequacy Planning  
7       Department. My responsibilities include analysis of historical loads and development  
8       of the long-term load forecast for the PJM region, support of the PJM capacity markets  
9       and administration of the Active Load Management program. I serve as chairman of  
10      the PJM Load Analysis Subcommittee.

11  **Q.   Please describe your professional experience and educational background.**

12  A.   I have been employed by PJM since June 1998, as a Senior Engineer in the Capacity  
13      Adequacy Planning Department.

14       In addition to my work for PJM, I contribute to the activities of the North American  
15      Electric Reliability Corporation (formerly the North American Reliability Council)  
16      (“NERC”), currently as chairman of the NERC Load Forecasting Working Group, and I  
17      am a member of the Electric Utility Forecasters’ Forum (formerly serving as President).  
18      I have testified previously on ratemaking matters in proceedings before state  
19      commissions.

1 Prior to joining PJM, I was employed by the Delmarva Power & Light Company for  
2 twelve years in load research and load forecasting functions. Prior to that, I worked for  
3 Chase Econometrics for four years as an automotive market analyst. In that position, I  
4 developed forecasts of passenger car and light truck production.

5 I hold a Bachelor of Arts in Economics and a Master of Arts in Economics, both from  
6 the University of Delaware.

7 **Q. Please describe the purpose of your testimony.**

8 A. The purpose of my testimony is to describe PJM's long-term load forecasting process  
9 and its relation to the Virginia Electric and Power Company ("Dominion Virginia  
10 Power") transmission zone. I will do this primarily by sponsoring the PJM  
11 Load/Energy Forecasting Model White Paper, which is provided as Attachment JMR-1  
12 to my testimony, and the 2006 PJM Load Forecast Report, which is provided as  
13 Attachment JMR-2 to my testimony.

14 **Q. How were you involved in the preparation of the PJM Load/Energy Forecasting  
15 Model White Paper and the 2006 PJM Load Forecast Report?**

16 A. I was the primary author of the PJM Load/Energy Forecasting Model White Paper. I  
17 am a member of the team that prepared the 2006 Load Forecast Report and was  
18 responsible for sponsoring the report before PJM stakeholders.

19 **Q. What does the PJM Load/Energy Forecasting Model White Paper contain?**

20 A. The white paper describes PJM's prior load forecast methodology and the reasons why  
21 PJM came to develop an independent forecast function. It traces the development of

1 the current forecast methodology through the publication of the first forecast and  
2 outlines ongoing enhancements to the model.

3 **Q. Please describe the PJM load forecasting model.**

4 A. The model produces estimates of the monthly peak loads of each of the eighteen PJM  
5 zones, as well as the total RTO. Forecasts are developed for each zone's non-  
6 coincident peak and the zone's share of the RTO peak. The econometric models are  
7 supplemented with a Monte Carlo estimation process to derive a distribution of  
8 forecasts over a wide range of possible weather conditions.

9 **Q. What are the primary drivers of the forecast?**

10 A. The models are driven by calendar effects (day of week, month, minutes of daylight,  
11 etc.), anticipated economic conditions in the region as well as weather conditions.

12 **Q. What does the 2006 Load Forecast Report contain?**

13 A. The load forecast report presents the results of PJM's forecasting model for years  
14 2006 through 2016. For each PJM zone, region and the RTO, three years of monthly  
15 peaks are presented. Ten years of forecasted annual summer and winter peaks are  
16 presented, as well as estimates of load management delegated to PJM for dispatch.  
17 Seasonal peaks are presented for selected combinations of zones.

18 **Q. Please describe the load forecast for the Dominion Virginia Power zone.**

19 A. The Dominion Virginia Power zone forecast includes all load connected to the  
20 transmission system, which includes the retail loads of Dominion Virginia Power, as  
21 well as the load of all municipal and cooperative systems located in the territory. In  
22 the 2006 PJM Load Forecast Report, the Dominion Virginia Power zone is projected  
23 to have summer peak growth of 1.9% per year, growing from 18,398 MW in 2006 to

1 22,175 MW in 2016. The Dominion Virginia Power zone's winter peak forecast is  
2 projected to grow at 2.0% per year, from 16,401 MW in 2005/06 to 19,918 MW in  
3 2015/16.

4 **Q. What input do Transmission Owners have into the load forecast results?**

5 A. PJM asks the Transmission Owners for input related to large, unexpected load  
6 changes.

7 **Q. Did Dominion Virginia Power provide any input of this sort into the 2006 PJM  
8 Load Forecast Report?**

9 A. Yes. Dominion Virginia Power notified PJM that some generators on its system  
10 would be converting to Behind-the-Meter status in 2006, with the result that they  
11 would net their associated load. Consequently, the 2006 load forecast reflects a  
12 reduction in the Dominion Virginia Power zone summer peak forecast by 150 MW for  
13 each year of the forecast.

14 **Q. Does PJM produce forecasts for areas within the zones?**

15 A. No. The forecasts are only at the zone level. Distribution companies use the PJM  
16 zone forecasts to develop load studies down to the level of load buses. Phillip Powell  
17 explains in his testimony how Dominion Virginia Power allocates the PJM load  
18 forecast for the Dominion Virginia Power zone across the Dominion Virginia Power  
19 system, including to the areas comprising the northern Virginia portion of its service  
20 territory.

21 **Q. Does this conclude your prepared direct testimony?**

22 A. Yes, it does.