EXHIBIT 10

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY FOR A DETERMINATION PURSUANT TO THE PROVISIONS OF N.J.S.A. 40:55D-19	:	BPU DOCKET
(SUSQUEHANNA-ROSELAND)	:	

TO THE HONORABLE COMMISSIONERS OF THE
NEW JERSEY BOARD OF PUBLIC UTILITIES:

PRE-FILED DIRECT TESTIMONY OF JOHN M. REYNOLDS ON BEHALF OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY IN SUPPORT OF SUSQUEHANNA-ROSELAND TRANSMISSION LINE PROJECT

I. BACKGROUND

Q. Please state your name and business address.

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

II. PURPOSE OF TESTIMONY

Q. Please describe the purpose of your testimony.

A. The purpose of my testimony is to describe PJM's long-term load forecasting process and its relation to the PLGrp and PS transmission zones,[1] as well as to support the 2007 PJM Load Forecast Report which was used in the analysis that led to selecting the Susquehanna-Roseland Project in the RTEP. In addition, I

[1] *See supra* at 9 and 10 for a detailed description of the PLGrp and PS transmission zones.

will also address how Demand Side Management and Energy Efficiency are incorporated into the forecast process.

III. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

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

A. I am employed by PJM as a Senior Economic Analyst in the Capacity Adequacy Planning Department.

Q. Please describe your current responsibilities.

A. My responsibilities include analysis of historical loads and development of the long-term load forecast for the PJM region, and support of the PJM capacity markets and Load Management programs. I serve as chairman of the PJM Load Analysis Subcommittee.

Q. Please describe your professional experience and educational background.

A. I have been employed by PJM since June 1998 as a Senior Economic Analyst in the Capacity Adequacy Planning Department.

In addition to my work for PJM, I contribute to the activities of the North American Electric Reliability Corporation (formerly the North American Reliability Council) ("NERC"), as a member of the NERC Load Forecasting Working Group (formerly serving as Chairman), and I am a member of the Electric Utility Forecasters' Forum (formerly serving as President) and the Edison Electric Institute's Load Forecasting Group. I have testified previously on ratemaking matters and transmission need in proceedings before state commissions.

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

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

IV. EXHIBITS

Q. Please identify and briefly describe the exhibits to your testimony and summarize the contents of those exhibits.

A. I am sponsoring the following exhibits with my direct testimony: PJM Load/Energy Forecasting Model White Paper (Exhibit JMR-1); PJM Manual 19: Load Forecasting and Analysis (Exhibit JMR-2); The Brattle Group's review of the PJM load forecasting model (Exhibit JMR-3); and the 2007 PJM Load Forecast Report (Exhibit JMR-4).

V. THE PJM LOAD FORECASTING PROCESS

Q. Please explain your involvement in the preparation of the PJM Load/Energy Forecasting Model White Paper and the 2007 PJM Load Forecast Report, and in the preparation of subsequently-issued PJM Load Forecast Reports.

A. I was the primary author of the PJM Load/Energy Forecasting Model White Paper. I am a member of the team that has prepared the Load Forecast Reports

from 2006 to the present and was responsible for sponsoring the reports before PJM stakeholders.

Q. What do the PJM Load/Energy Forecasting Model White Paper and PJM Manual 19 contain?

A. The white paper describes PJM's prior load forecast methodology and the reasons why PJM came to develop an independent forecast function. It traces the development of the forecast methodology through the publication of the first forecast and outlines ongoing enhancements to the model. PJM Manual 19: Load Forecasting and Analysis, contains sections describing PJM's methods for developing historical load data, weather-normalized peaks and coincident peaks (5CP). Section 3 of the Manual describes the current load forecast model process in detail.

Q. Please describe the PJM load forecasting model.

A. The model produces estimates of the monthly unrestricted peak loads of each of the eighteen PJM zones, selected Locational Deliverability Areas ("LDAs") and the total RTO. Unrestricted load is the load prior to any downward adjustments for load management or voltage reduction. Forecasts are developed for each zone's non-coincident peak and the zone's share of the RTO peak. The econometric models are supplemented with a Monte Carlo estimation process to derive a distribution of forecasts over a wide range of possible weather conditions. PJM issues a load forecast annually.

Q. What are the primary drivers of the forecast?

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

Q. What does the 2007 Load Forecast Report contain?

A. The load forecast report presents the results of PJM's forecasting model for the years 2007 through 2022. For each PJM zone, region and the RTO, three years of monthly peaks are presented. Fifteen years of forecasted annual summer and winter peaks are presented, as well as estimates of load management delegated to PJM for dispatch. Seasonal peaks are presented for selected combinations of zones.

Q. Has there been any independent validation of the PJM load forecasting methodology?

A. Through the Load Analysis Subcommittee, PJM Members had input into the development process, and the final model was endorsed by the Planning Committee. Subsequent to the adoption of the forecast, The Brattle Group ("TBG") was commissioned by PJM to conduct an independent evaluation of PJM's load forecasting methodology. TBG substantially endorsed the PJM load forecasting methodology while suggesting some refinements for PJM's consideration.

Q. The TBG report suggested technical improvements to PJM's methodology. Are these technical improvements incorporated into PJM's load projection processes?

A. PJM adopted many of the recommendations made by TBG for the 2007 PJM Load Forecast Report. The adopted recommendations included the following:

- Seasonal or Monthly Models – PJM increased the seasonality of the independent variables in the model.

- Consider alternative weather variables – PJM developed separate weather measures for summer, winter, and shoulder months.

- Correlating diversity with weather conditions – the processing of results of the model were revised to model electrical diversity such that it is now greater at mild weather conditions and declines as weather becomes more extreme.

- Using seasonal data to develop annual peak forecasts – the PJM model now aggregates data over the summer season instead of relying on the month of July.

Additionally, PJM's 2008 Load Forecast Report incorporated the TBG recommendation regarding consistency between energy and peak load forecasting by adding a PJM energy forecast for each transmission zone and the PJM RTO.

Q. Have any other enhancements been made to the PJM load forecasting methodology?

A. Yes. In addition to those suggested by TBG, PJM has implemented the following changes:

- To enhance consistency between historical and forecasted loads, the weather normalization of seasonal peaks was incorporated into the forecast model beginning with Summer 2007 loads.

- For the 2009 PJM Load Forecast Report, a binary variable has been added to selected zonal models to account for major load shifts or significant price increases.

- For the 2009 PJM Load Forecast Report, forecasts for Locational Deliverability Areas are directly modeled, and no longer represent diversified sums of the constituent zone forecasts.

- For the 2009 PJM Load Forecast Report, forecasts for Load Management and Energy Efficiency are significantly revised to incorporate resources that have been cleared in Reliability Pricing Model auctions.

Q. Do any external areas or agencies rely upon the PJM load forecast?

A. Yes. PJM supplies the load forecast to the two NERC regions that include PJM zones, Reliability*First* and the SERC Reliability Corporation. Reliability*First* and SERC use the PJM forecast to develop their forecasts and reliability assessments submitted to NERC.

Q. How were considerations of Demand Side Management and Energy Efficiency handled in the 2007 PJM Load Forecast Report?

A. Demand Side Management was treated as an explicit adjustment to the unrestricted load forecast. As shown in Table B-7 of JMR-4, PJM included load management that was expected to be delegated to PJM for dispatch at times of system emergency with mandatory compliance. For planning purposes, PJM assumed it would have available load management resources equal to the amount that was registered in 2007. Energy Efficiency gains were included in the PJM load forecasting methodology to the extent that they impacted the rate of historic load growth.

Q. Have any changes been made to the treatment of Demand Side Management and Energy Efficiency since the 2007 PJM Load Forecast Report?

A. Yes. With the 2009 PJM Load Forecast Report, PJM will include as an explicit adjustment to the load forecast any energy efficiency programs that will have cleared in an RPM auction.

Q. Will this include the impact of the demand side and conservation initiatives of the various PJM states?

A. Yes, these demand side and conservation initiatives will be included in PJM's planning process to the extent that the programs have been developed and PJM can determine to a degree of specificity and certainty that the impacts can be achieved.

Q. Please describe the load forecast for the PLGrp Transmission zone.

A. The PLGrp zone forecast includes all load connected to the transmission system, which includes the retail loads of PPL-Electric Utilities and UGI Energy Services, as well as the load of all municipal and cooperative systems located in the territory. In the 2007 PJM Load Forecast Report, the PLGrp zone is projected to have summer peak growth of 1.5% per year, growing from 7,387 MW in 2007 to 8,551 MW in 2017. The PLGrp zone's winter peak forecast is projected to grow at 0.8% per year, from 7,360 MW in 2006/07 to 8,008 MW in 2016/17.

Q. Did the 2008 PJM load forecast result in a significantly different load forecast for the PLGrp Transmission zone?

A. No. The PLGrp zone summer peak forecast for the study year 2012 in the 2007 PJM Load Forecast Report was 7,972 MW. In the 2008 PJM Load Forecast Report, the 2012 PLGrp summer peak forecast was 7,932 MW, 50 MW, or 0.6%, lower.

Q. Please describe the load forecast for the PS Transmission zone.

A. The PS zone forecast includes all load connected to the transmission system, which includes the retail loads of Public Service Electric and Gas Company ("PSE&G"), as well as the load of all municipal and cooperative systems located in the territory. In the 2007 PJM Load Forecast Report, the PS zone is projected to have summer peak growth of 1.4% per year, growing from 10,801 MW in 2007 to 12,451 MW in 2017. The PS zone's winter peak forecast is projected to grow at 1.2% per year, from 7,048 MW in 2006/07 to 7,967 MW in 2016/17.

Q. Did the 2008 PJM load forecast result in a significantly different load forecast for the PS Transmission zone?

A. No. The PS zone summer peak forecast for the study year 2012 in the 2007 PJM Load Forecast Report was 11,625 MW. In the 2008 PJM Load Forecast Report, the 2012 PS zone summer peak forecast was 11,642 MW, 17 MW (0.1%) higher

Q. Did the 2008 PJM load forecast result in a significantly different load forecast for the Mid-Atlantic locational deliverability area?

A. No. The Mid-Atlantic summer peak forecast for the study year 2012 in the 2007 PJM Load Forecast Report was 64,639 MW. In the 2008 PJM Load Forecast Report, the 2012 Mid-Atlantic summer peak forecast was 64,748 MW, 109 MW (0.2%) higher.

Q. Will the 2009 PJM load forecast result in a different load forecast for any of the zones or locational deliverable areas mentioned earlier?

A. Based on the current economic outlook, PJM expects the 2009 PJM Load Forecast Report, currently in draft form, to show lower summer peak loads for all Zones and LDAs for the years 2009 through 2011. PJM expects summer peak

loads to rebound to levels that are approximately one to two percent lower than the loads in the 2008 Load Forecast Report for the years 2012 through 2016. PJM expects summer peak loads for the PS zone to be approximately one percent lower and the PLGrp zone to be three to four percent lower in those years, compared to the 2008 Load Forecast Report.

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

A. PJM asks the Transmission Owners for input related to large load changes that are known to the Transmission Owners but not to PJM. PJM applies its professional judgment to determine if a forecast adjustment is warranted.

Q. Were any adjustments applied to the forecasts of either the PLGrp or PS transmission zones in either the 2007 Load Forecast Report or the 2008 Load Forecast Report?

A. No.

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

A. No. The forecasts are only at the zone level. Distribution companies use the PJM zone forecasts to develop load studies down to the level of load buses.

Q. Does this conclude your direct testimony?

A. Yes, it does.