Exhibit No. 1

**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF COLORADO**

*** * * ***

| | | |
|---|---|---|
| **IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS 2011 ELECTRIC RESOURCE PLAN** | **)** **)** **)** **)** | **DOCKET NO. 11A-869E** |

# SECOND SUPPLEMENTAL DIRECT TESTIMONY

# AND EXHIBITS OF JANNELL MARKS

# ON

# BEHALF OF

# PUBLIC SERVICE COMPANY OF COLORADO

**July 5, 2012**

## LIST OF EXHIBITS

| | |
|---|---|
| Exhibit No. JM-1 | An updated Section 2.6 (Electric Energy & Demand Forecasts) of Volume II Technical Appendix from the Company's 2011 Electric Resource Plan |

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**SECOND SUPPLEMENTAL DIRECT TESTIMONY**

**AND EXHIBITS OF JANNELL MARKS**

## I. INTRODUCTION AND PURPOSE

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Jannell Marks. My business address is 1800 Larimer Street, Denver, Colorado 80202.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

A. I am employed by Xcel Energy Services, Inc., a wholly-owned subsidiary of Xcel Energy Inc., the parent company of Public Service Company of Colorado. My job title is Director, Sales, Energy and Demand Forecasting.

**Q. FOR WHOM ARE YOU PROVIDING TESTIMONY?**

A. I am testifying on behalf of Public Service Company of Colorado (Public Service" or "Company") in this proceeding.

**Q. DID YOU FILE DIRECT TESTIMONY IN THIS CASE?**

A. Yes.

**Q. WHAT IS THE PURPOSE OF YOUR SECOND SUPPLEMENTAL DIRECT TESTIMONY?**

A. The purpose of my testimony is to present the Company's updated sales and peak demand forecast. In addition, I will provide a brief description of the sales and peak demand forecast and the methodology used to develop the forecast. Finally, I am providing as Exhibit No. JM-1, an updated Section 2.6 (Electric Energy & Demand Forecasts) of Volume II Technical Appendix from the Company's 2011 Electric Resource Plan. Exhibit No. JM-1 has been updated to reflect the Company's updated sales and peak demand forecast.

## II. SALES AND PEAK DEMAND FORECAST

**Q. WHY IS THE COMPANY FILING AN UPDATED SALES AND PEAK DEMAND FORECAST AT THIS TIME?**

A. As the Company stated in Volume I of the 2011 ERP, "Public Service proposes that [its] capacity need assessment be updated with the then current load and resource information just prior to the Phase 2 competitive solicitation process to determine the capacity need for the acquisition of additional resources. See 2011 ERP, Vol I, p. 1-28." Thus, we also intended to update our sales and peak demand forecast prior to Phase 2. We are updating the sales forecast now to give the Commission a view of our resource needs during the Resource Acquisition Period ("RAP") in light of the events outlined in Mr. Hill's Supplemental Direct Testimony.

**Q. GENERALLY, WHEN DOES THE COMPANY UPDATE ITS SALES AND PEAK DEMAND FORECAST?**

A. The Company usually updates its sales and peak demand forecast twice a year: in the February/March time frame and in the August/September time frame. The Company completed an update to its sales and peak demand forecast in March, 2012.

**Q. SINCE FILING THE 2011 ELECTRIC RESOURCE PLAN ON OCTOBER 3, 2011, HAS THE COMPANY UPDATED ITS SALES AND PEAK DEMAND FORECAST?**

A. Yes, the Company completed an update to its sales and peak demand forecast in March, 2012.

**Q. PLEASE DESCRIBE PUBLIC SERVICE'S UPDATED SALES AND PEAK DEMAND FORECAST.**

A. The updated sales and peak demand forecast is presented in Table 1, shown on the following page.

**Table 1**

**Actual and Forecasted Summer Native Load Peak Demand and Annual Native Load Energy Sales**

| | Summer Native Load Peak Demand | | Annual Native Load Energy Sales | |
|---|---|---|---|---|
| | MW | Annual Growth | GWh | Annual Growth |
| 2002 | 6,057 | 5.3% | 31,432 | 2.0% |
| 2003 | 6,442 | 6.4% | 31,710 | 0.9% |
| 2004 | 6,445 | 0.0% | 32,275 | 1.8% |
| 2005 | 6,912 | 7.2% | 33,921 | 5.1% |
| 2006 | 6,656 | -3.7% | 34,082 | 0.5% |
| 2007 | 6,940 | 4.3% | 35,544 | 4.3% |
| 2008 | 6,692 | -3.6% | 34,764 | -2.2% |
| 2009 | 6,160 | -7.9% | 33,213 | -4.5% |
| 2010 | 6,322 | 2.6% | 33,146 | -0.2% |
| 2011 | 6,908 | 9.3% | 32,672 | -1.4% |
| 2012 | 6,428 | -6.9% | 30,884 | -5.5% |
| 2013 | 6,532 | 1.6% | 31,122 | 0.8% |
| 2014 | 6,589 | 0.9% | 31,316 | 0.6% |
| 2015 | 6,670 | 1.2% | 31,563 | 0.8% |
| 2016 | 6,759 | 1.3% | 31,899 | 1.1% |
| 2017 | 6,829 | 1.0% | 32,177 | 0.9% |
| 2018 | 6,897 | 1.0% | 32,455 | 0.9% |

**Q. PLEASE SUMMARIZE THE DATA REFLECTED IN TABLE 1.**

A. Over the past five years (2007-2011), Public Service's native sales (retail and firm wholesale requirements) decreased 0.8 percent per year on average. Retail sales increased 1.2 percent per year on average, while firm wholesale requirements declined an average of 10.8 percent per year. From 2012 through 2018, Public Service's Base Case native sales (retail and firm wholesale requirements) are projected to be lower than 2011 sales levels, resulting in a compounded annual rate of decline of -0.1 percent through 2018. However, this decline occurs entirely in 2012 (-5.5 percent lower than 2011), due in large part to the expiration of the Black Hills contract at the end

of 2011. After declining in 2012, native sales are projected to increase through 2018 at a compounded annual rate of 0.8 percent. Retail sales are expected to increase at an average annual rate of 0.9 percent from 2012 through 2018, while firm wholesale requirements are projected to grow at a compounded annual rate of 0.4 percent during this time period.

Public Service's Base Case native peak demand increased at a compounded annual rate of 0.7 percent over the past five years (2007-2011). At the time of the 2011 peak, additional load was being served to Holy Cross and Intermountain due to Comanche 3 being unavailable. Without this additional load served in 2011, the 2007-2011 compounded annual rate of growth would be 0.0 percent. From 2012 through 2018 native peak demand is projected to be lower than 2011 peak demand levels, resulting in a 0.0 percent compounded annual growth rate. Similar to native sales, this decline occurs entirely in 2012, due to the expiration of the Black Hills contract and the high 2011 peak due to the Comanche 3 unavailability. After declining in 2012 with the expiration of the Black Hills contract and with Comanche 3 assumed to be available, native peak demand is projected to increase through 2018 at a compounded annual rate of 1.2 percent.

The forecast of native sales and peak demand includes achievement of the Demand-Side Management ("DSM") goals consistent with the Strategic Issues docket. The low historical period growth rates are due primarily to the loss of wholesale customers during these time periods, in addition to the current weak economic conditions.

**Q. WHAT METHODOLOGY WAS USED TO DEVLEOP THIS UPDATED FORECAST OF SALES AND PEAK DEMAND?**

A. The Company used the same methodology that was used to develop the sales and peak demand forecast presented in the Company's 2011 Electric Resource Plan, Volume II Technical Appendix Section 2.6.

**Q. HOW DOES THE UPDATED FORECAST COMPARE WITH THE FORECAST PRESENTED IN THE COMPANY'S 2011 ELECTRIC RESOURCE PLAN AS FILED ON OCTOBER 31, 2011?**

A. Table 2 provides a comparison of the updated forecast of peak demand and sales with the 2011 Electric Resource Plan forecast of peak demand and sales. By 2018, the updated peak demand forecast is 100 megawatts (MW) (1.5 percent) higher than the 2011 Electric Resource Plan forecast, while the updated sales forecast is 394 gigawatt-hours (GWh) (1.2 percent) lower than the Resource Plan forecast.

**Table 2**

**Comparison of Updated Summer Native Load Peak Demand and Annual Annual Native Load Energy Sales Forecast with ERP Forecast**

| | Summer Native Load Peak Demand (MW) | | | Annual Native Load Energy Sales (GWh) | | |
|---|---|---|---|---|---|---|
| | ERP Forecast | Updated Forecast | Change | ERP Forecast | Updated Forecast | Change |
| 2012 | 6,391 | 6,428 | 37 | 31,046 | 30,884 | -162 |
| 2013 | 6,464 | 6,532 | 68 | 31,248 | 31,122 | -126 |
| 2014 | 6,521 | 6,589 | 69 | 31,550 | 31,316 | -234 |
| 2015 | 6,599 | 6,670 | 71 | 32,052 | 31,563 | -489 |
| 2016 | 6,682 | 6,759 | 77 | 32,270 | 31,899 | -371 |
| 2017 | 6,743 | 6,829 | 86 | 32,635 | 32,177 | -459 |
| 2018 | 6,797 | 6,897 | 100 | 32,849 | 32,455 | -394 |

**Q. IS THIS MAGNITUDE OF CHANGE BETWEEN THE TWO FORECASTS WITHIN A REASONABLE RANGE?**

A. Yes. In the October 2011 ERP filing, the Company provided high and low forecast sensitivities that were developed using Monte Carlo simulations to establish confidence bands around the base forecast. The high forecast sensitivity represented the 85$^{th}$ percentile confidence band, while the low forecast sensitivity represented the 15$^{th}$ percentile confidence band. Based on the confidence bands associated with the ERP base forecast, the updated peak demand forecast is at the 56$^{th}$ percentile level, while the updated sales forecast is at the 45$^{th}$ percentile level. This is well within a reasonable forecast range.

**Q. WHAT ARE THE MAJOR CONTRIBUTORS TO THE CHANGES IN THE UPDATED FORECAST?**

A. The increase in the peak demand forecast is the result of a higher-than-expected actual 2011 peak, which flows through the entire forecast horizon, and higher forecasted peak loads for the Company's firm wholesale customers.

The largest driver of the lower sales forecast is lower residential sales, which is the result of both slower growth in the number of residential customers and greater declines in residential use per customer. The updated forecast of residential customer additions is lower than the ERP forecast due to housing starts recovering at a slower pace than previously expected. In addition, the projected decline in residential use per customer is greater than

the decline previously forecasted due in large part to greater efficiencies, and thus less growth, in the miscellaneous end use category. The miscellaneous end use category includes miscellaneous electric appliances and plug-in loads.

**Q. HOW HAS THE FORECAST OF THE ECONOMY CHANGED SINCE THE ERP FORECAST WAS DEVELOPED?**

A. The updated sales and peak demand forecast is based on an economic forecast for the state of Colorado provided by IHS Global Insight. The forecast was obtained from IHS Global Insight in December 2011. The December 2011 economic outlook for the Company's service territory through the Resource Acquisition Period ending in 2018 continues to show that Colorado's economy will slowly improve, but overall growth will be stronger than recorded over the previous five years. Growth in Colorado real GSP is expected to average 2.1 percent per year from 2011 to 2018. This is slower growth than the 2.8 percent growth projected with the original ERP forecast. Real personal income growth is expected to average 2.3 percent per year through 2018, again, slower than the original ERP forecast of 2.8 percent. Non-farm employment should advance by 1.7 percent annually on average over the Resource Acquisition Period, which is the same growth rate projected with the original ERP forecast. Public Service's residential customers are expected to increase by 99,688 over the next 7 years, averaging gains of 1.2 percent per year through 2018. As I mentioned

previously, this is slower than the original ERP projected growth of 1.4 percent per year.

**Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

A. My testimony presents the Company's updated sales and peak demand forecast as provided in Exhibit JM-1, the updated Section 2.6 (Electric Energy & Demand Forecasts) of Volume II Technical Appendix from the Company's 2011 Electric Resource Plan. By 2018, the updated peak demand forecast is 100 megawatts (MW) (1.5 percent) higher than the 2011 Electric Resource Plan forecast, while the updated sales forecast is 394 gigawatt-hours (GWh) (1.2 percent) lower than the Resource Plan forecast. These forecast changes are well within a reasonable forecast range based on the confidence bands associated with the ERP base forecast

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes, it does.