

**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 2012 RENEWABLE) DOCKET NO. 11A-___E
ENERGY STANDARD COMPLIANCE PLAN)**

DIRECT TESTIMONY OF KARI CHILCOTT CLARK

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

May 13, 2011

**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 2012 RENEWABLE) DOCKET NO. 11A- ____E
ENERGY STANDARD COMPLIANCE PLAN)**

DIRECT TESTIMONY OF KARI CHILCOTT CLARK

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kari Chilcott Clark. 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 Renewable Energy Portfolio Manager.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?

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

Q. HAVE YOU INCLUDED A DESCRIPTION OF YOUR QUALIFICATIONS, DUTIES, AND RESPONSIBILITIES?

1 A. Yes. A description of my qualifications, duties, and responsibilities is
2 included as Attachment A.

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

4 A. The purpose of my testimony is to support the sections of the Company's
5 Renewable Energy Standard ("RES") Compliance Plan relating to
6 Renewable Energy Credits ("RECs"). I am responsible for managing the
7 REC Tracking System and the Company's involvement in the Western
8 Renewable Energy Generation Information System ("WREGIS").

9 **Q. WHAT SECTIONS OF THE PUBLIC SERVICE 2012 RENEWABLE**
10 **ENERGY STANDARD COMPLIANCE PLAN DID YOU PREPARE?**

11 A. I prepared Section 4 – Estimates of Existing and Forecasted RECs in
12 Volume 1 of the Plan, and Tables 4-2 through 4-4 in Volume 2.

13 **Q. ARE THESE SECTIONS IN COMPLIANCE WITH THE COMMISSION**
14 **RENEWABLE ENERGY STANDARD RULES?**

15 A. Yes, these sections are in compliance with the Commission's RES rules.

16 **II. RENEWABLE ENERGY CREDITS**

17 **Q. PLEASE BRIEFLY DESCRIBE TABLE 4-2 IN VOLUME 2.**

18 A. Table 4-2 provides information about the RECs and type of RECs Public
19 Service plans to acquire by the end of 2012 and 2013 and the RECs that
20 Public Service expects to retire to comply with the 2012 and 2013 RES.

21 **Q. CAN YOU LEAD US THROUGH TABLE 4-2 IN GREATER DETAIL?**

1 A. Certainly. More specifically, Table 4-2 contains by REC type, the amount
2 of RECs the Company will have available and anticipates retiring for 2012
3 RES compliance. The last page contains the same information but for
4 2013 RES compliance. These RECs are provided by fuel type within each
5 REC category. For example, row 9 presents the subtotals for all eligible
6 Wholesale-DG wind resources and row 11 presents the subtotal for all
7 eligible Wholesale -DG resources.

8 For each fuel type subtotal, column a identifies the total RECs
9 carried forward from renewable energy generated in 2007 through 2010.
10 These RECs are net of any transfers and retirements that occurred during
11 those years, but do include the in-state bonus. Column b provides the
12 total RECs Public Service forecasts to have available from Eligible Energy
13 generated in 2012, net of transfers, Windsorce retirements and REC
14 sales. Columns c and d then apply the applicable in-state and community-
15 based bonus multipliers to the 2012 RECs identified in column b. Column
16 e totals the RECs accrued and the two bonus REC columns to determine
17 the total RECs available for compliance with the 2012 RES requirements.

18 Column f identifies the forecasted RES requirements based on the
19 Company's March 2011 retail sales forecast described in Section 3 of the
20 Plan and in Ms. Mark's testimony. Column g presents the vintage 2012
21 RECs borrowed forward for 2010 RES compliance that can be retired in
22 2012¹. Column h then provides a summary of the RECs Public Service

¹ This is the last pay back year that RECs could be borrowed forward from per Rule 3654 (j).

1 projects to retire for compliance with the 2012 RES requirements. Column
2 i provides an estimate of the volumes of RECs the Company anticipates it
3 will have in each category to carry forward from 2012.

4 **Q. ARE THE SAME DETAILS AVAILABLE IN TABLE 4-2 FOR 2013?**

5 A. Yes, page two of Table 4-2 contains the same information for 2013.
6 Column j is repeated from the 2012 details, as it contains the RECs
7 carried forward from 2012 that will factor into compliance with the 2013
8 RES requirements. Column k provides the amount of RECs that the
9 Company anticipates will be generated in 2013, net transfers, retirements
10 for the 2013 Windsource program and REC sales. The applicable bonus
11 RECs are then provided in columns l and m, and column n totals columns
12 j through m to determine the total RECs available for compliance with the
13 2013 RES requirements.

14 Columns o and p identify the forecasted 2013 RES requirements
15 and the RECs Public Service expects to retire for compliance. The last
16 column provides an estimate of the volume of RECs the Company plans
17 to carry forward from 2013 and have available for 2014 RES compliance.

18 **Q. WHAT REC BONUSES ARE BEING APPLIED?**

19 A. Rules 3654(e) and (f) provide for bonuses for each kilowatt-hour of Eligible
20 Energy generated from a resource in Colorado or Community-Based
21 project, respectively. These rules allow a QRU to count an in-state REC
22 as 1.25 RECs and a REC from a Community-Based Project as 1.50 RECs
23 for RES compliance. The in-state bonus for Retail DG applies only to

1 purchase transactions entered into prior to August 11, 2010. Columns c,
2 d, l and m in Table 4-2 reflect these rule provisions.

3 **Q. WHAT ADDITIONAL DETAIL IS PROVIDED IN VOLUME 2, TABLE 4-3?**

4 A. Table 4-3 reports details about the RECs Public Service has acquired or
5 plans to acquire from each Eligible Energy Resource, the RECs the
6 Company expects to transfer to other parties, the RECs retired for
7 Windsource, the RECs forecast to be sold and the net RECs that Public
8 Service then anticipates having available for RES compliance. If Table 4-
9 3 is compared to Table 4-2, the RECs reported in column b and k of Table
10 4-2 are net of the RECs transferred or sold and RECs retired for
11 Windsource detailed in Table 4-3.

12 **Q. CAN YOU DESCRIBE TABLE 4-3 IN DETAIL?**

13 A. Yes. Table 4-3 contains details for 2012 on the first two pages and for
14 2013 on the last two pages. Table 4-3 provides details for each Eligible
15 Energy Resource and is subtotaled by fuel type within each REC
16 category.

17 Column b provides the RECs forecasted to be acquired in 2012.
18 Columns c - e present the RECs the Company anticipates will be
19 transferred to other parties in 2012 (such as the City of Boulder and
20 wholesale customers), and retired on behalf of Windsource customers.
21 The RECs presented in column d represent the RECs transferred to the
22 wholesale customers based on their load ratio share. Column f presents
23 the 2012 executed REC transactions. Column g provides the RECs

1 available, net of anticipated REC transfers, Windsource retirements and
2 sales. This “net” column is then transferred to Table 4-2, column b.
3 Columns i through n in Table 4-3 provide the same details for 2013.
4 Column n reports the net of the RECs the Company anticipates to acquire
5 (column i) and transfer, retire for Windsource or sell (sum of columns j
6 through m) in 2013. That “net” value in column n is then transferred to
7 Table 4-2, column k.

8 **Q. WHY IS THE COMPANY TRANSFERRING RECS TO OTHER**
9 **PARTIES?**

10 A. Rule 3660(l) requires Public Service to transfer RECs to its wholesale
11 customers based on the wholesale customer's load ratio share of Public
12 Service's total retail and wholesale energy deliveries, if the wholesale
13 customer agrees to pay the full costs associated with the acquisition of the
14 Eligible Energy. Columns d and k in Table 4-3 reflect the Company's
15 anticipated REC transfer obligations given Rule 3660(l).

16 *1. WINDSOURCE PROGRAM*

17 **Q. PLEASE DESCRIBE HOW THE COMPANY WILL RETIRE RECS FOR**
18 **THE 2012 WINDSOURCE PROGRAM TO COMPLY WITH THE**
19 **DECISION IN DOCKET NO. 08A-260E.**

20 A. Actual retirements for each specific resource will be allocated according
21 to the mix of resource types (non-DG, wholesale DG and retail DG) in the
22 renewable portfolio. The company could retire RECs that have a
23 generation date from the last half of the prior year, as allowed by Green-e

1 Standards, in both 2012 and 2013. Once these RECs are retired for
2 Windsource, they cannot be used for wholesale REC transfers or RES
3 compliance or sold to a third party. The Windsource REC retirements will
4 be based on the proportional allocation of the Retail DG RECs, Wholesale
5 DG RECs and Non-DG RECs from eligible resources as defined by the
6 third party verification entity and vintage month, and will be detailed in the
7 2012 and 2013 PSCo RES Compliance Reports.

8 **Q. SINCE WINDSOURCE IS NOW SOURCED FROM THE COMPANY'S**
9 **RENEWABLE PORTFOLIO, HOW WILL THE COMPANY ACCOUNT**
10 **FOR THE FACT THAT CUSTOMERS PURCHASING 100% OF THEIR**
11 **ENERGY FROM WINDSOURCE ARE PURCHASING ENERGY FROM A**
12 **PORTFOLIO OF RENEWABLE ENERGY REQUIRED FOR THE**
13 **COLORADO RES?**

14 A. The Windsource premiums are calculated using the assumption that
15 Windsource customers are already receiving through payment of their
16 retail rates the energy needed to meet the Renewable Energy Standard.
17 In effect, the Windsource customer is purchasing renewable energy in
18 addition to the energy needed to meet the RES. This was approved by the
19 Commission in Docket No. 08A-260E. In 2012 and 2013, customers who
20 purchase 100% of their energy from Windsource are really only paying a
21 premium that assumes that they are purchasing 88% of their renewable
22 energy under Windsource and 12% of their renewable energy under their
23 retail rates. Therefore, the RECs associated with 12% of the Windsource

1 sales to customers who purchase 100% Windsource energy will be retired
2 for 2012 and 2013 RES compliance and 88% of the RECs associated with
3 these sales will be retired for Windsource compliance.

4 **Q. WHAT PERCENTAGE OF WINDSOURCE CUSTOMERS PURCHASE**
5 **100% RENEWABLE ENERGY?**

6 A. Approximately 60% of the Windsource sales in 2010 were for 100%
7 subscriptions. We expect this percentage to remain stable through 2012
8 and 2013.

9 **Q. HAS THE PUBLIC UTILITIES COMMISSION APPROVED THIS**
10 **METHODOLOGY IN A PREVIOUS DOCKET?**

11 A. Yes. The Commission approved this methodology in Docket No. 08A-
12 260E and reaffirmed this methodology in Docket No. 09A-772E, as long
13 as the Windsource program continued to be certified by a third-party
14 certification entity and the customers were notified that a portion of the
15 RECs associated with Windsource sales will be retired for RES
16 compliance.

17 **Q. IS THE WINDSOURCE PROGRAM THIRD-PARTY CERTIFIED?**

18 A. Yes. The Company expects to continue to use Green-e to certify our
19 Windsource program through 2013.

20 **Q. HAVE THE WINDSOURCE CUSTOMERS BEEN NOTIFIED THAT A**
21 **PORTION OF THE RECS ASSOCIATED WITH WINDSOURCE SALES**
22 **WILL BE RETIRED FOR RES COMPLIANCE?**

1 A. Yes. In the Summary of Prices, Terms and Conditions attached to the
2 annual letter to Windsource customers, the Company explained this
3 special retirement provision for 100% subscription. This letter was sent to
4 the Windsource customers in May 2010 and will continue to be sent on an
5 annual basis.

6 *2. SOLAR*REWARDS PROGRAM*

7 **Q. PLEASE SUMMARIZE TABLE 4-4.**

8 A. Table 4-4 presents the projected RECs that the Company expects will be
9 generated by resources acquired through the Company's Solar*Rewards
10 programs and proposed Solar*Rewards Community programs as well as
11 those resources recently acquired under various resource plans with the
12 most recent 2007 Colorado Resource Plan acquiring approximately 500
13 MW of wind and 60 MW of solar. The Company anticipates acquiring 200
14 MW more wind through its 2011 Wind RFP. This Table does not show the
15 impact of the carry forward or borrow forward rules.

16 **Q. HOW DOES THE COMPANY TRACK THE RECS FOR COMPLIANCE?**

17 A. For internal tracking purposes, the Company developed a REC Tracking
18 System, which became operational in mid-2007. The internal database
19 creates, tracks, and counts all RECs by type of renewable resource, date
20 of generation, identification of the generator, and generation location. The
21 REC Tracking System issues a REC for each megawatt-hour of
22 renewable energy Public Service produces or purchases through power
23 purchase agreements. To ensure RECs are not double counted or retired

1 for multiple purposes, the system assigns a unique serial number to each
2 credit. The REC Tracking System was designed to ensure compatibility
3 with WREGIS, which was under development at the time. All Non-DG and
4 Wholesale-DG generators are registered in WREGIS and generation has
5 been loaded since January 2009. Retail-DG generators greater than 1
6 MW (large Retail-DG) are registered in WREGIS and generation has been
7 loaded since Nov 2010.

8 **Q. WHY AREN'T ALL RETAIL DG SOLAR RECS TRACKED IN WREGIS?**

9 A. Per Rule 3659(j), effective December 30, 2010, retail DG generators are
10 exempt from registration in WREGIS.

11 *3. WESTERN RENEWABLE ENERGY GENERATION INFORMATION*
12 *SYSTEM (WREGIS)*

13 **Q. WHAT IS WREGIS?**

14 A. WREGIS, the Western Renewable Energy Generation Information
15 System, is an independent, renewable energy registry and credit tracking
16 system for electricity generation within the western states, including
17 Colorado. WREGIS was developed through a collaborative effort between
18 the Western Governors Association, the Western Regional Air Partnership
19 and the California Energy Commission. WREGIS is operated by the
20 Western Electricity Coordinating Council, of which Public Service is a
21 member.

22 **Q. IS PARTICIPATION IN WREGIS MANDATORY?**

1 A. Yes. Per Rule 3659(j), effective December 30, 2010, all renewable energy
2 resources located in the region covered by the Western Electricity
3 Coordinating Council (WECC) that generate RECs used by the Company
4 for RES compliance shall be registered in WREGIS and record their RECs
5 in WREGIS, with the exception for small retail DG.

6 **Q. ARE THERE COSTS ASSOCIATED WITH PARTICIPATION IN WREGIS?**

7 A. Yes, Public Service will incur costs for participating in WREGIS. WREGIS
8 charges an annual account holder fee of \$1,500. In addition, WREGIS
9 charges a fee when a renewable energy credit or certificate is issued,
10 transferred, or retired. The WREGIS issuance and transfer fee is \$0.005
11 per certificate. The fee for retiring a REC is \$0.01 per certificate. The
12 Company anticipates its 2012 expenses associated with participation in
13 WREGIS will be approximately \$64,000.

14 **Q. ARE ANY ADDITIONAL REC TRACKING EXPENSES EXPECTED?**

15 A. Yes, the company is planning to sign-up as an account holder in NYSE
16 Blue's (formerly APX) Environmental Management Account (EMA) which
17 interconnects with WREGIS but expands the functionality to enable
18 forecasting REC position. EMA can be inter-connected to multiple
19 regional REC Tracking systems used by Xcel Energy so the annual cost of
20 \$25,000 will be allocated across several states. Public Service's portion,
21 based on annual retirements for the states able to use the system will be
22 34% of the annual cost or approximately \$8,500.

1 **Q. WILL PUBLIC SERVICE ANTICIPATE RECOVERING THESE COSTS**
2 **THROUGH THE RESA?**

3 A. Yes, Public Service does intend to recover the costs associated with
4 participating in WREGIS and EMA through the RESA. These costs are
5 included in the RESA budget, Tables 7-3 and 7-4, under administrative
6 costs.

7 **Q. HOW IS PUBLIC SERVICE PLANNING TO RETIRE RECS FOR**
8 **COMPLIANCE WITH THE RES?**

9 A. For compliance year 2012, Public Service plans to retire RECs for RES
10 compliance in its REC Tracking System. Since the earliest vintages of
11 RECs are retired first, all RECs created prior to January 1, 2009 will be
12 retired in the REC Tracking System. Until all RECs from pre-January
13 2009 vintages of Non-DG and Wholesale DG have been retired or
14 transferred, any compliance RECs retired with a vintage of January 2009
15 or later will be retired, transferred or sold in both the REC Tracking
16 System and WREGIS. After all pre-January 2009 vintages of these RECs
17 have been retired or transferred, Non-DG and Wholesale DG RECs will be
18 tracked and retired exclusively in WREGIS and the Company's REC
19 Tracking System will be used to shadow the WREGIS system. Once all
20 pre-November 2010 RECs from large Retail-DG have been retired, these
21 type of RECs will be tracked and retired exclusively in WREGIS. All RECs
22 from Retail-DG systems smaller than 1 MW will continue to be tracked and
23 retired in the REC Tracking System for all vintages.

1 **Q. WHY ARE THE RECS NOT PRESENTED BY RESOURCE IN TABLE 4-**
2 **2?**

3 A. It is difficult for Public Service to estimate exactly how many RECs from
4 each eligible resource will be retired for 2010 and 2011 RES compliance,
5 because RECs are retired by June 1 of the year following the compliance
6 year. Therefore, since these RECs roll forward into 2012, the resource-
7 specific details in Table 4-2 have been intentionally left blank. Instead, the
8 inventory and retirement of RECs are provided for each RES requirement
9 level (Retail-DG, Wholesale-DG and Non-DG) out of the total RECs
10 projected. Public Service will populate the resource-specific details of
11 Table 4-2 in its 2012 Compliance Report filed on June 1, 2013.

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

13 A. Yes

Attachment A

Statement of Qualifications

Kari C. Clark

July 2009 – Present

Renewable Energy Portfolio Manager, Xcel Energy

Responsible for the overall management of Xcel Energy's renewable energy portfolio and compliance with renewable portfolio standards. Administrator of Xcel Energy's accounts in the WREGIS, M-RETs and ERCOT REC registries and the Company's internal REC tracking system.

1998 – June 2007

Senior Load Research Analyst, Xcel Energy

Senior Quantitative Risk Analyst, Xcel Energy

Lead responsibility for load research sampling and analysis for all Xcel Energy jurisdictions. Provided testimony on the Residential Experimental Price Response Pilot and Incorporation of a Temperature Factor into the Therm Multiplier before the Colorado Public Utilities Commission. Filed rate case written testimony with the Public Utilities Commissions of Colorado, New Mexico and Texas.

1996 – 1998

Senior Statistical Consultant, Boeing Commercial Airplane Group

Facilitated verification teams to determine reliability of service and manufacturing processes and coached project teams on the use of statistical process control techniques.

Education

Master of Science in Applied Mathematics, University of Colorado

Bachelor of Science in Education, Mathematics, Pittsburg State University