



IN THE MATTER OF THE APPLICATION
OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009
RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN

DOCKET NO. 08A-_____E

DIRECT TESTIMONY
OF
KARI CHILCOTT CLARK

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

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IN THE MATTER OF THE APPLICATION OF) PUBLIC SERVICE COMPANY OF) COLORADO FOR APPROVAL OF ITS) 2009 RENEWABLE ENERGY STANDARD) COMPLIANCE PLAN)	DOCKET NO. 08A-____E
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**DIRECT TESTIMONY OF
KARI CHILCOTT CLARK**

- 1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**
- 2 A. My name is Kari Chilcott Clark. My business address is 550 15th Street,
3 Denver, Colorado 80202.
- 4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**
- 5 A. I am employed by Xcel Energy Services, Inc., a wholly-owned subsidiary
6 of Xcel Energy Inc., the parent company of Public Service Company of
7 Colorado. My job title is Renewable Energy Portfolio Manager.
- 8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?**
- 9 A. I am testifying on behalf of Public Service Company of Colorado ("Public
10 Service" or the "Company").
- 11 **Q. HAVE YOU INCLUDED A DESCRIPTION OF YOUR QUALIFICATIONS,
12 DUTIES, AND RESPONSIBILITIES?**
- 13 A. Yes. A description of my qualifications, duties, and responsibilities is
14 included as Attachment A.
- 15 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

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

7 **Q. WHAT SECTIONS OF THE PUBLIC SERVICE 2009 RENEWABLE**
8 **ENERGY STANDARD COMPLIANCE PLAN DID YOU PREPARE?**

9 A. I prepared Section 4 – Estimates of Existing and Forecasted RECs and
10 Tables 4-2 through 4-4 in Volume 2. In addition, I prepared the Non-Solar
11 RECs and the REC Tracking subsections of Section 5 – Acquisition Plan.

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

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

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

16 A. Table 4-2 provides detailed information about the RECs Public Service
17 has already acquired, the RECs the Company plans to acquire by the end
18 of 2008, and the RECs that Public Service expects to retire to comply with
19 the 2008 and 2009 RES. The table shows the sources of these RECs
20 and details when they were, or are expected to be, created.

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

22 A. Certainly. More specifically, the first two pages of Table 4-2 contain
23 details on the RECs the Company will have available and anticipates

1 retiring for 2008 RES compliance. The last two pages contain the same
2 details but for 2009 RES compliance. These details are provided by each
3 Eligible Energy Resource and subtotaled by fuel type. For example, rows
4 16 through 25 contain details for *each* eligible wind resource and row 26
5 contains the subtotal for all eligible wind resources.

6 For each resource and fuel type subtotal, column a identifies the
7 total RECs carried forward from renewable energy generated in 2004
8 through 2007. These RECs are net of any transfers and retirements that
9 occurred during those years. Column b provides the total RECs Public
10 Service expects to have available from Eligible Energy generated in 2008,
11 net of transfers and Windsorce retirements, which reflect the
12 Windsorce program close-out. The estimate was calculated using actual
13 generation through September 2008 and adding a forecast of the
14 expected generation for the remainder of 2008. Column c then totals
15 column a and b to determine the total RECs projected to be generated
16 through the end of 2008.

17 Columns d and e then apply the applicable in-state and community-
18 based bonus multipliers to the total RECs identified in column c. Column f
19 totals the RECs generated and the two bonus REC columns to determine
20 the total RECs available for compliance with the 2008 RES requirements.

21 Column g identifies the forecasted RES requirements based on the
22 Company's September 2008 retail sales forecast described in Section 3 of
23 the Plan and in Ms. Marks' testimony. Column h contains the RECs

1 borrowed forward from the 2007 compliance year. Column i provides a
2 summary of what RECs Public Service projects to retire for compliance
3 with the 2008 RES requirements. Column j provides an estimate of how
4 many RECs the Company anticipates it will have in each category to carry
5 forward from 2008. A negative value in this column indicates the
6 projection that RECs will be borrowed from 2009.

7 **Q. ARE THE SAME DETAILS AVAILABLE IN TABLE 4-2 FOR 2009?**

8 A. Yes, pages three and four of Table 4-2 contain the same details for 2009.
9 Column j is repeated from the 2008 details, as it contains the RECs
10 carried forward (or borrowed forward) from 2008 that will factor into
11 compliance with the 2009 RES requirements. Column k provides the
12 count of RECs the Company anticipates will be generated in 2009, net
13 transfers and retirements for the 2009 Windsource program. The
14 applicable bonus RECs are then provided in columns l and m, and column
15 n totals columns j through m to determine the total RECs available for
16 compliance with the 2009 RES requirements.

17 Column o through q identify the forecasted 2009 RES requirements
18 and the RECs Public Service expects to retire for compliance. These
19 RECs include those RECs borrowed forward from 2009 for 2008 RES
20 compliance (column p). The last column provides an estimate of how
21 many RECs the Company plans to carry forward from 2009 and have
22 available for 2010 RES compliance.

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

1 A. Rules 3654(f) and (g) provide for bonuses for each kilowatt-hour of
2 Eligible Energy generated from a resource in Colorado or Community-
3 Based project, respectively. These rules allow a QRU to count an in-state
4 REC as 1.25 RECs and a REC from a Community-Based Project as 1.50
5 RECs for RES compliance. Columns d, e, l and m in Table 4-2 reflect
6 these rule provisions.

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

8 A. Table 4-3 reports details about the RECs Public Service has acquired or
9 plans to acquire from Eligible Energy Resources, the RECs the Company
10 has or expects to transfer to other parties, and the net RECs that Public
11 Service then anticipates having available for RES compliance. If Table 4-
12 3 is compared to Table 4-2, the RECs reported in Table 4-2 are net of the
13 RECs transferred and acquired and RECs retired for Windsource.

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

15 A. Yes. Table 4-3 is in a similar layout as Table 4-2; it contains details for
16 2008 on the first two pages and for 2009 on the last two pages. Also, as
17 with Table 4-2, Table 4-3 provides details for each Eligible Energy
18 Resource and is subtotaled by fuel type.

19 Columns a and b provide the actual RECs generated through
20 September 2008 and the expected generation for the remainder of 2008.
21 Column c then totals columns a and b to determine the total RECs
22 acquired in 2008. Column d presents the total RECs the Company
23 anticipates will be transferred to other parties in 2008. Column e provides

1 the RECs retired to close-out the current Windsource program. Column f
2 contains the RECs available, net of anticipated REC transfers and
3 Windsource retirements. This "net" column is then transferred to Table 4-
4 2, column b.

5 Columns g, h, and i in Table 4-3 provide the same details for 2009.
6 Column j reports the net of the RECs the Company anticipates to acquire
7 (column g), retire for Windsource (column h), and transfer (column i) in
8 2009. That "net" is then transferred to Table 4-2, column k.

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

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

18 **Q. WHY IS THE COMPANY RETIRING RECS FOR WINDSOURCE IN**
19 **2008?**

20 A. Public Service filed¹ an application to revise its Windsource program to
21 provide for program expansion that allows for cost-effective additions of
22 wind resources and eventually other renewable resources under a

¹ On June 24, 2008, Public Service filed an application to revise the Company's Windsource Program. That application is pending in Docket No. 08A-260E.

1 voluntary cost-based tariff service for customers who want more
2 renewable energy than what is nominally available in our standard
3 portfolio. In the subsequent stipulation filed in Docket No. 08A-260E, the
4 Company committed to close-out the existing Windsource program and
5 rectify the oversubscription problem by retiring sufficient RECs such that
6 “the total number of RECs retired over the life of the Windsource program
7 through December 31, 2008 matches the total amount of Windsource
8 energy (rounded up to the next megawatt hour) sold under the
9 Windsource program through December 31, 2008.” The total Windsource
10 RECs retired shown in Table 4-3 represent the projected number of RECs
11 from wind resources required to rectify the oversubscription problem, and
12 are eligible for REC transfers to wholesale customers.

13 **Q. PLEASE DESCRIBE HOW THE COMPANY WILL RETIRE 2009 RECS**
14 **TO COMPLY WITH THE STIPULATION FILED IN DOCKET NO. 08A-**
15 **260E, IF THAT STIPULATION IS APPROVED BY THE COMMISSION.**

16 A. Actual retirements for each specific resource will be allocated according
17 to the mix of resource types (wind, solar, etc.) in the renewable portfolio
18 and will incorporate the FIFO method. The company will retire RECs that
19 have the earliest generation date allowed by Green-e for the Windsource
20 program in both 2008 and 2009. Once these RECs are retired for
21 Windsource, they cannot be used for wholesale REC transfers or RES
22 compliance. The Windsource REC retirements projected in Table 4-3 by
23 generator are for illustrative purposes only, to allow for estimation of net

1 RECs available by resource. Actual Windsource REC retirements will be
2 based on the resource type allocation and vintage month and will be
3 detailed in the 2008 PSCo RES Compliance Report.

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

5 A. Table 4-4 presents the projected RECs that the Company expects will be
6 generated under the Company's likely Phase II Scenario. This Table does
7 not show the impact of the carry forward or borrow forward rules.

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

9 A. For internal tracking purposes, the Company developed a REC Tracking
10 System, which became operational in mid-2007. The internal database
11 creates, tracks, and counts all RECs by type of renewable resource, date
12 of generation, identification of the generator, and generation location. The
13 REC Tracking System issues a REC for each megawatt-hour of
14 renewable energy Public Service produces or purchases through power
15 purchase agreements. To ensure RECs are not double counted or retired
16 for multiple purposes, the system assigns a unique serial number to each
17 credit. The REC Tracking System was designed to ensure compatibility
18 with WREGIS, which was under development at the time.

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

21 A. For compliance year 2008, Public Service plans to retire RECs for RES
22 compliance in its REC Tracking System (see below for more details).
23 Beginning with compliance year 2009, Public Service plans to retire RECs

1 for non-solar RES compliance in WREGIS if the Commission submits a
2 Change Control Request to WREGIS to request that all RECs from prior
3 years still eligible for RES compliance are accepted into the WREGIS
4 system. The WREGIS system will retire the earliest generated RECs first
5 for compliance with the RES (FIFO method). Until RECs are retired in the
6 system, it is difficult for Public Service to estimate exactly how many
7 RECs from each eligible resource will be retired for 2008 and 2009 RES
8 compliance because RECs are retired at the end of the year only.
9 Therefore, the resource-specific details in columns h through j and p
10 through r of Table 4-2 have been intentionally left blank. Instead, the
11 retirement of RECs for those columns is provided for each RES
12 requirement level (SO-RECs, S-RECs and NS-RECs) out of the total
13 RECs projected. Public Service will populate the resource-specific details
14 in columns h through j in its Compliance Report filed on June 1, 2009.

15 **Q. WHAT IS WREGIS?**

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

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

2 A. Xcel Energy is required to register in WREGIS to comply with the New
3 Mexico Renewable Portfolio Standard. Participation in WREGIS for
4 Colorado RES compliance is currently voluntary.

5 **Q. WHAT VALUE DOES WREGIS PROVIDE?**

6 A. Public Service believes WREGIS will add credibility to REC transactions
7 and the development of a REC market by protecting against double or
8 multiple counting of the same renewable energy. WREGIS independently
9 validates renewable energy generators, creates merchantable renewable
10 energy certificates from metered renewable energy generation, registers
11 the transfer of certificates within (and out of) the system, and tracks
12 retirement of certificates. Therefore, a certificate is independently
13 validated and can only be counted once for the purposes of a state's
14 renewable portfolio standard or a voluntary renewable program.

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

17 A. Yes, Public Service will incur costs for participating in WREGIS. WREGIS
18 charges an annual account holder fee of \$1,500. In addition, WREGIS
19 charges a fee when a renewable energy credit or certificate is issued,
20 transferred, or retired. The WREGIS issuance and transfer fee is \$0.005
21 per certificate. The fee for retiring a REC is \$0.01 per certificate. The
22 Company anticipates its 2009 expenses associated with participation in
23 WREGIS will be approximately \$36,000.

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

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

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

7 A. Yes.

Kari Clark
Renewable Energy Portfolio Manager
550 15th Street, Denver, Colorado 80202

July 2008 – 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