



Colorado PUC E-Filings System



2012 Renewable Energy Standard Compliance Plan

Public Service Company of Colorado

Volume 1

MAY 13, 2011

Section 1 - Executive Summary

Renewable Energy Standard

In November 2004, Colorado voters passed Amendment 37 (codified at C.R.S. §40-2-124) that established a Renewable Energy Standard (“RES”) for certain Colorado electric utilities termed Qualifying Retail Utilities (“QRUs”).¹ The RES requires a QRU to generate or cause to be generated a certain percentage of their retail sales from renewable energy under certain retail rate impact limitations.

The Colorado General Assembly has modified C.R.S. §40-2-124 many times. In the 2007 session, the legislators increased the RES by the passage of HB07-1281 to 20 percent by 2020, while raising the retail rate impact limitation from 1% to 2%. In 2009, the Colorado General Assembly passed Senate Bill 09-051, which enabled third parties to sell electricity from solar facilities located on customer’s property to that end use customer. In addition, Senate Bill 09-051 expanded the size of customer-sited solar systems that can be acquired under a standard offer by the QRU and eliminated the 2 MW net meter limitation. Customer-sited systems are now limited to 120% of the customer’s average annual consumption at the site.

In the 2010 session the General Assembly, by the passage of HB 10-1001, again increased the RES to 30 percent by 2020 without increasing the 2% retail rate impact limitation. A significant change in HB10-1001 was the elimination of a solar-specific renewable energy standard, which was replaced with a much higher level Distributed Generation standard. By 2020, HB10-1001 required utilities to acquire Distributed Generation equated to 3 percent of retail sales. There are two types of Distributed Generation created by HB10-1001: (1) retail distributed generation (“Retail DG”), defined as a renewable energy resource that

¹ Capitalized terms in this Compliance Plan, if not otherwise defined herein, shall have the same meanings as in the Commission Rules Implementing Renewable Energy Standard, 4CCR 723-3-3650 et seq.

is designed primarily to provide electric energy to serve the customer's load which is located on the site of a customer's facilities and interconnected on the customer's side of the utility meter; and (2) wholesale distributed generation ("Wholesale DG"), defined as a renewable energy resource in Colorado with a nameplate rating of thirty megawatts or less that does not qualify as retail distributed generation. At least one-half of the distributed generation standard must be met with retail distributed generation.

In this same session, House Bill 10-1342 legislated the establishment of what are commonly termed Solar Gardens, a facility that is large enough to meet the solar needs of many customers. Customers may participate in these solar projects by acquiring a share of a larger facility for purposes of receiving a dollar credit on their electric bills commensurate with the share of the solar garden generation that they acquired. This bill limits Public Service Company to acquiring no more than 6 MW of Solar Garden capacity each year from 2011 through 2013.

House Bill 10-1001 requires Public Service to generate, or cause to be generated, electricity from Eligible Energy resources in the following minimum amounts:

Period	RES	Distributed Generation (DG)	Retail Distributed Generation
2010*	5% of retail sales	4% of RES (Solar)	At least ½ of solar
2011 – 2012	12% of retail sales	1% of retail sales	At least ½ of DG
2013 – 2014	12% of retail sales	1.25% of retail sales	At least ½ of DG
2015 – 2016	20% of retail sales	1.75% of retail sales	At least ½ of DG
2017-2019	20% of retail sales	2% of RES	At least ½ of DG
2020 and beyond	30% of retail sales	3% of retail sales	At least ½ of DG

Amendment 37 also created a 25 percent multiplier for Eligible Energy generated in Colorado, which is implemented under Commission Rule 3654(e). HB 10-1001 modified this multiplier such that each kilowatt-hour of Eligible Energy generated in Colorado will be counted as 1.25 kilowatt-hours of Eligible Energy except for Retail DG RECs. However, the 25 percent multiplier will continue to apply to Retail DG RECs contracted for prior to August 11, 2010. An additional multiplier, counting kilowatt-hours from Colorado Community-Based Projects² as 1.5 kilowatt-hours of Eligible Energy, was added under HB 07-1281.

Rule 3659(a) states that Renewable Energy Credits (“RECs”) will be used to comply with the RES. The Rules define each REC to mean a contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, directly attributed to a specific amount of electric energy generated from an Eligible Energy Resource. One REC results from one megawatt-hour (MWh) of electric energy generated from an Eligible Energy Resource.

Acquisition Plan

Public Service's 2012 Compliance Plan relies on the Company's existing owned Eligible Energy Resources currently producing Eligible Energy as well as contracted Eligible Energy Resources expected to produce Eligible Energy during 2012 and beyond.

Non-Distributed Generation

As a result of acquiring the 700 MW of new wind projects through the 2007 Colorado Resource Plan, as well as other generation owned or contractually acquired by the Company in prior periods, Public Service will have sufficient Non

² Community-Based Project is now defined at C.R.S. §40-2-124(c)(VI) to mean a project located in Colorado and: (a) that is owned by individual residents of a community, by an organization or cooperative that is controlled by individual residents of a community, or by a local government entity or tribal council; (b) whose generating capacity does not exceed thirty megawatts; and (c) for which there is a resolution of support adopted by the local governing body for each local jurisdiction in which the project is to be located.

DG RECs to meet the RES for the 2012 and 2013 Compliance Years. Public Service also projects it will have sufficient Non DG RECs from existing Eligible Energy Resources for compliance through at least 2021 under the current RES rules. As a result, Public Service aims to exceed the minimum levels required by HB10-1001 and is expressly allowed to exceed these minimum levels so long as the retail rate impact does not exceed two percent on the annual bills of our customers.

This plan does not address the acquisition of Non DG resources. Commission Rules 3656(a) and 3657(b)(1)(G) require resources larger than 30 MW to be acquired under the Commission Electric Resource Planning rules. The Company's next electric resource plan is scheduled to be filed on October 31, 2011.

Wholesale Distributed Generation

In response to bids received in its 2008 Solar Resource RFP, the Company executed a Solar Energy Purchase Agreement (SEPA) with Greater Sandhill 1, LLC for a new 19.2 MW DC (16.1 MW AC) photovoltaic facility located in the San Luis Valley of Colorado which the Commission found the contract to be in the public interest. The energy purchased from the facility is eligible for the 1.25% in-state REC multiplier. In addition, in 2010, the Cameo Solar Demonstration Project generated 550 RECs, which were included in the Company's REC tracker. Public Service has also acquired through power purchase agreements the full output from two-30 MW solar facilities to be located in the San Luis Valley (San Luis Solar and Cogentrix), in accord with the Company's approved 2007 Colorado Resource Plan.

As a result of acquiring Greater Sandhill, San Luis Solar and Cogentrix projects, the electricity from hydro and biomass projects that Public Service acquired under previous RFPs, as well as other generation owned or contractually acquired by the Company in prior periods, Public Service will have sufficient

Wholesale DG RECs to meet the RES for the 2012 and 2013 Compliance Years. In addition, Public Service projects it will have sufficient Wholesale DG RECs from existing Eligible Energy Resources for compliance through at least 2021 under the current RES rules. As a result, the Company will defer the acquisition of additional Wholesale DG resources until its next Electric Resource Plan to be filed on October 31, 2011.

Retail Distributed Generation

In 2010 The Company began to experience a surge in application for its Solar*Rewards program. In response to the flood of Solar*Rewards applications, Public Service filed an application with the Commission to modify the Solar*Rewards program and to lower the overall incentive being paid in conjunction with the program. As a result of that filing, the Company entered into a Settlement to set a maximum level of spending and acquisitions under the Solar*Rewards Small and Medium programs for a period extending through 2011 and until the Commission issues a final order in this proceeding for the 2012 Plan. Under the Company's 2012 Compliance Plan, Public Service proposes to continue the acquisition of Retail DG RECs from on-site solar facilities under Solar*Rewards from three market segments: "Small", "Medium" and "Large". The Small and Medium standard offers are detailed later in the Plan. The Large program will continue to be offered through a competitive solicitation issued in 2012. All program structures in terms of payment schedule for the RECs are detailed under Section 5.

For purposes of this filing, the Company is outlining three plans. The first is a Minimum Compliance Plan; the second is the Company's Recommended Plan; and the third is the High Plan. The Minimum Compliance Plan is designed to meet the minimum Retail DG compliance requirements by implementing a participation cap of 16 MWs per year. The Company needs on average 16 MW per year in order to meet the Retail DG compliance over the planning horizon with annual RECs generated from Solar*Rewards and Solar*Rewards

Community (Public Service's anticipated community solar garden offering). Public Service is not recommending adoption of the Minimum Compliance Plan.

Public Service is recommending adoption of the Recommended Plan. The Recommended Plan would exceed minimum compliance levels to help sustain the solar industry while controlling spending to a reasonable level. The Recommended Plan also gradually reduces the negative RESA deferred balance so that the RESA balance is estimated to be positive in 2017. The Recommended Plan assumes an average of 36 MW of solar acquisition per year (inclusive of 6 MW of solar garden acquisition in each of 2011, 2012 and 2013).

The High Plan also exceeds minimum compliance levels, but it costs more than the Recommended Plan. The High Plan would add approximately 60 MW of solar acquisitions each year. Each of the Plans (Minimum, Recommended and High) sets separate steps and targets for each of our Solar*Rewards programs.

Public Service is proposing to continue to acquire any unsubscribed capacity remaining under the terms of the Solar*Rewards Settlement in Docket No. 11A-135E at the prices established under the Settlement. After the steps in that Settlement have been fully subscribed, the Company proposes to target an additional 36 megawatts on an annual basis with the continuation of the program features under the Settlement. This Recommended Plan continues a trajectory of customer sited solar acquisitions with clearly defined pricing steps, similar to the step changes under the Settlement in Docket No. 11A-135E, which the Company believes sustains solar installations while recognizing the declining cost of solar panels. The 36 MW is inclusive of the 6 MW the Company proposes to acquire under our new solar gardens program which we will call Solar*Rewards Community.

Windsorce

Xcel Energy's Windsorce program is one of the largest optional utility green pricing programs in the country. Now operating in four states, Windsorce customers have purchased over 1 billion kWh since the program began in Colorado in 1997. The program remains a vital part of Public Service's growing renewable portfolio and enables our customers to proactively purchase more renewable energy to meet their personal and business needs. Based on historic growth rates, industry trends, and marketing plans, we expect annual sales growth rates of 1 percent from 2011 through 2013.

In 2008, the Commission approved a redesign of the program that enabled the Company to access the economies of scale created by the development of resources for the Colorado Renewable Energy Standard to meet Windsorce customer demand more cost-effectively. The Company created a unified portfolio of renewable resources under which Windsorce customers receive a portion of all Public Service renewable generation. Premiums from the Windsorce sales are credited to the Renewable Energy Standard Adjustment ("RESA") account, which increases the amount of dollars available to acquire renewable resources. Under this new program design, our customers who would like to see us acquire more renewable energy than would otherwise be in our RES Compliance Plan are able to agree voluntarily to pay more, with the understanding that we will use those premiums to obtain more renewable resources. Public Service retires RECs in proportion to the amount of Windsorce sales above what is inherent in those sales that is needed for RES compliance.

Windsorce is Green-e certified. To be Green-e Energy certified, the corresponding RECs associated with the energy sold under Windsorce cannot be used to fulfill a state renewable energy goal, and can not be "double-counted" towards that goal, with one exception. Pursuant to Green-e's National Standard Version 2.1: "If the product meets 100% of a customer's electricity use with

eligible renewables, Green-e Energy allows a percentage of a product's content to be satisfied by renewable portfolio standard (RPS) state-mandated renewables up to the percentage RPS requirement." Consequently, for Windsource customers who buy all of their electricity under the Windsource program, in 2012 and 2013, twelve percent of the RECs associated with the energy they purchase will be retired to meet the Renewable Energy Standard.

The Company charges a Windsource premium whose rate is calculated in accord with Commission Decisions No. R09-0117, C10-1033 and C10-1221. The Commission approved the methodology of the Windsource rate calculation under Docket No. 08A-260E. The Commission reexamined the Windsource rate methodology in Docket No. 09A-772E and affirmed the methodology. The Commission also accepted an intervenor recommendation that upon annual recalculation of the Windsource premium, if the premium calculation has not changed by more than plus or minus 20 percent from the then current rate, the Windsource premium would not be changed. The Company has used this methodology for calculating the Windsource premium; the updated Windsource premium of \$19.64 per MWh is approximately 9% less than the current premium of \$21.58 per MWh, which falls within the 20% tolerance level. The Company proposes to keep the 2012 Windsource premium the same as the 2010 premium of \$2.1588 per 100 kWh.

RESA Deferred Balance

Commission Rule 3661 establishes the parameters for determining the retail rate impact of implementing the Renewable Energy Standard ("RES"). Rule 3661(a) states that the net rate impact of Public Service's actions to comply with the RES shall not exceed two percent of the total electric bill annually for each retail customer. Public Service is proposing no change to the 2% Renewable Energy Standard Adjustment ("RESA") on customer bills. Public Service uses the RESA account to track both collections from customers under the RESA and the incremental costs of eligible energy resources that must be recovered through

the RESA. Under C.R.S. §40-2-124(1)(g)(I)(B), Public Service may advance funds from year to year to augment the amounts collected from retail customers for the acquisition of more eligible energy resources. Public Service has advanced funds in past years and the RESA deferred account currently has a sizeable negative balance as a result. This Compliance Plan addresses the negative RESA balance and provides for its elimination by 2017.

In order to determine the incremental costs that are collected through the RESA account, Commission Rule 3661(h) sets forth the basic method for calculating the incremental costs of renewable resources. This rule details how Public Service will use its computer model to determine the difference in costs between two alternative scenarios of electric resources over the RES Planning Period. The first scenario ("RES Plan") includes the *new* eligible energy that is added during the RES Planning Period. The second scenario (the "No RES Plan") is comprised of those "non-renewable resources reasonably available" that are necessary to replace the *new* Eligible Energy Resources in the RES Plan to meet the Company's capacity and energy requirements. The difference between these two model runs estimates the incremental cost of the eligible energy resources. These incremental costs are collected through the RESA account.

Commission Rule 3661(h)(III) considers all Eligible Energy Resources whose acquisition commenced prior to July 2, 2006 to be considered "sunk" resources that are to be included in both the RES Plan and the No RES Plan, such that they do not factor into the calculation of the overall incremental costs of the Eligible Energy Resources. These resources were contracted for prior to the implementation of the Renewable Energy Standard rules.

In addition, Commission Rules provide for the "locking down" of the estimated incremental costs of Eligible Energy Resources for a short period of time to facilitate resource planning. For those Eligible Energy Resources whose incremental costs have been locked-down in a previous compliance plan or other

proceeding, only the locked-down incremental costs of those resources are included in calculating the retail rate impact.

On May 6, 2011, the Company and all other parties to Docket No. 09A-602E (addressing a pilot period for Hybrid REC margin sharing) moved the Commission to amend the approved settlement in that docket to allow the Company to transfer certain customer margins to the RESA deferred account. The Company estimates that the transferred margins will total approximately \$55.5 million by the end of February 2012. This transfer, if approved by the Commission in Docket No. 09A-602E, will significantly reduce the negative RESA balance at no new cost to our customers. The Company's Recommended Plan, and the reduction in the negative RESA balances shown for that Plan are dependent upon the Commission granting this motion.

In the Stipulation and Settlement Agreement with respect to the Company's Solar*Rewards program, approved by the Commission in Docket No. 11A-135E, the Company agreed "to request a Commission finding in every future Renewable Energy Standard Plan and Electric Resource Plan, where approval is sought in accordance with Section 40-2-124(1)(g)(B), C.R.S., on the specific amount of funds to be advanced from year to year to augment the amount collected from retail customers under the RESA that will be presumed prudent." The amount of funds that Public Service proposes to advance in the years 2012 through 2013 to augment the amounts collected from retail customers are set forth on Table 7-3 of Volume 2 in Column V. Public Service requests a Commission finding that it is prudent for the Company to advance these funds.

RESA Interest

Public Service is authorized by law to collect interest on the negative RESA deferred balance at the Company's after tax weighted average cost of capital. Conversely, positive RESA balances accrue interest at this same rate. By

reducing the RESA negative balance, the Company's Plan reduces the amount of interest accruing on that negative RESA balance.

Solar* Rewards Community

House Bill 10-1342 requires Public Service to offer to acquire energy and RECs from community solar gardens. The Commission's rulemaking implementing this law is not yet complete. In this 2012 Compliance Plan, Public Service sets forth its proposed methodology for calculating the bill credits that will be available to customers subscribing to solar gardens. The Company also provides the tariff terms and conditions that it wishes to implement for this new program. Once the solar garden rulemaking is complete, Public Service will issue its standard offers for smaller solar gardens, its RFPs for larger solar gardens, and its tariff.

Section 2 – Introduction

Public Service Company of Colorado's 2012 Renewable Energy Standard Compliance Plan is comprised of three volumes. Volume 1 contains a narrative that describes the details of the Company's proposal for complying with the Commission's rules implementing the Renewable Energy Standard, 4 CCR 723-3-3650 *et seq.* Volume 2 contains the tables that are referenced in Volume 1. Volume 3 contains the On-Site Solar Request for Proposals and the Solar*Rewards contracts. The Solar*Rewards Community Request for Proposal and contracts will be developed after final rules are established by the Commission.

The first part of Volume 1 is divided into eleven sections, which provide all the information required by Commission Rule 3657:

- Section 1, Executive Summary
- Section 2, Introduction
- Section 3, Retail Energy Forecast, describes Public Service's retail energy forecast used to estimate the Company's retail electricity sales from 2012 through 2021. Rule 3657 (b)(I)(D).
- Section 4, Estimates of Existing and Forecasted RECs, describes the Company's estimates of the Renewable Energy Credits ("RECs") that the Company must acquire to meet the Renewable Energy Standard, and it describes the Company's projected transfer of RECs to its wholesale customers, RECs projected to be retired on behalf of the Windsource customers, and RECs which are projected to be sold in the market. This section focuses on the 2012 and 2013 Compliance Years, but also provides longer-range projections of needed RECs through 2021. Rule 3657(b)(I)(D). 3657(b)(III).
- Section 5, Acquisition Plans, describes Public Service's plans to acquire Eligible Energy from various categories of solar and non-solar resources, divided into subparts for each resource type. Rule 3657(b) (I) (E), (F), (G),

- (H), (J); Rule 3657(b) (II) and (V). The Plan also includes the acquisition of solar resources for the new Solar*Rewards-Community program.
- Section 6, Windsource, discusses how the Windsource program fits into the Public Service portfolio of renewable resources and how the pricing is calculated and the benefits of Windsource.
 - Section 7, Retail Rate Impact, discusses the retail rate impact of acquiring the Eligible Energy necessary to meet the Renewable Energy Standard (“RES”), the Company’s projection of the costs of acquiring Eligible Energy through 2021 and the lock down of new wind and solar facilities. Section 7 is responsive to Rule 3657(b)(I)(A), (B), (C), (F), (G), and (I).
 - Section 8, Cost Recovery, describes the cost recovery mechanism proposed by the Company associated with the cost of implementing the Renewable Energy Standard within the retail rate impact. This Section establishes the funds the Company proposes to loan the RESA in advance of customer recovery. Rule 3657(b) (A).
 - Section 9, Net Metering, describes the modifications the Company made to its tariff to comply with the passage of HB 10-1001 and HB 10-1349. Changes include the accommodation of Solar*Rewards Community delivery charges and administrative fees for administering the Solar*Garden-Community contracts.
 - Section 10, Interconnection. The Company is not proposing any changes to its interconnection procedures until the Commission concludes the rulemaking for Solar*Rewards Community.
 - Section 11, Conclusion, seeks approval of the 2012 Compliance Plan including the various elements presented in the plan. Rule 3657 (c).

Section 3 – Retail Energy Forecast

For the 2012 Compliance Plan, Public Service is using the forecast developed in March 2011.

Forecast Overview

Public Service has experienced historical growth in retail electric sales since 2000 averaging 1.4% per year, driven by growth in the number of customers and large increases in residential air conditioning saturation. Public Service's retail electric sales are forecasted to increase at an average annual rate of 1.2% through 2026. This lower projected growth rate is the result of slower growth in the number of customers and in residential air conditioning saturation and increased DSM impacts. The forecasted DSM impacts in the forecast include achievement of the DSM goals as proposed in Public Service's DSM Strategic Issues Filing (Direct Testimony of Debra L. Sundin in Docket No. 10A-554EG, Table 6, Page 26). The Forecast does not yet include the impact of additional energy savings the Company will be striving to achieve under its DSM plan as a result of the Commission's April 26, 2011, decision in Docket No. 10A-554EG, in which the Commission established energy savings goals that are higher than those proposed by the Company when it filed its application. To the extent that the Company is successful in achieving the newly approved higher energy savings goals, this should have the effect of further reducing the rate of growth of our retail electric sales.

Energy Sales Forecast

Public Service's residential sales have increased an average of 1.9% per year over the past ten years. Customer growth has averaged 1.3% per year since 2000 and is expected to increase by 1.6% per year through 2026. Use per customer has increased at an average annual rate of 0.5% since 2000, but is expected to remain flat on average through 2026. While residential air conditioning saturation is expected to continue to increase, the rate of growth is

expected to be slower than historical growth, and will be offset by the implementation of new federal energy efficiency initiatives and the impacts of new DSM programs. As a result, residential sales are forecasted to increase at 1.5% per year on average through 2026.

Commercial and industrial sales are projected to increase at an average annual rate of 1.1% through 2026, a slightly slower pace than the average growth of 1.2% per year since 2000.

Total long-term firm resale sales increased by 1.8% per year, on average, over the past ten years. Through 2026, long-term firm resale sales are expected to decrease by 4.5% per year on average. This negative rate reflects the expiration of some current contracts.

Public Service's combined retail and long-term firm wholesale electric sales are projected to grow at 0.7% per year on average through 2026. Growth during the past ten years averaged 1.4% annually. The strong historical growth rate reflects large increases in residential air conditioning saturation along with stable growth in wholesale sales during the past ten years. The lower projected growth rate is due to slowing growth in residential air conditioning saturation, the implementation of new federal efficiency standards, increased DSM impacts, and the expiration of firm wholesale contractual loads.

The Company's energy forecasts are depicted graphically in Figure 3-1 and in tabular form in Figure 3-2.

Figure 3-1 Actual and Forecasted Electric Sales (GWh)

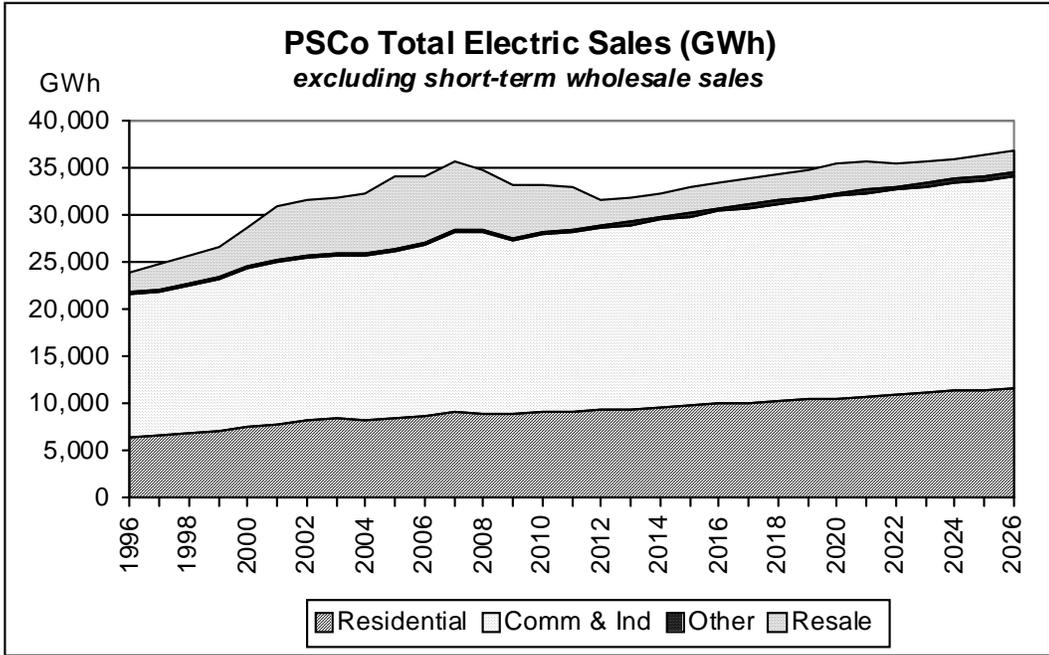


Figure 3-2 Actual and Forecasted Electric Sales (GWH)

Year	Retail Sales	Long-Term Firm Wholesale Sales	Total Sales
1996	21,671	2,198	23,869
1997	21,988	2,767	24,755
1998	22,582	3,076	25,658
1999	23,353	3,226	26,579
2000	24,604	4,110	28,714
2001	25,248	5,562	30,810
2002	25,691	5,741	31,432
2003	25,864	5,854	31,718
2004	25,704	6,509	32,213
2005	26,337	7,584	33,921
2006	26,964	7,118	34,082
2007	28,369	7,171	35,540
2008	28,393	6,358	34,751
2009	27,500	5,683	33,183
2010	28,202	4,891	33,093
2011	28,348	4,494	32,842
2012	28,812	2,700	31,511
2013	29,174	2,552	31,726
2014	29,640	2,523	32,163
2015	30,100	2,743	32,843
2016	30,637	2,629	33,266
2017	31,026	2,790	33,816
2018	31,432	2,745	34,178
2019	31,846	2,806	34,651
2020	32,294	3,004	35,298
2021	32,609	2,931	35,540
2022	32,959	2,515	35,474
2023	33,312	2,200	35,512
2024	33,741	2,155	35,896
2025	34,052	2,198	36,250
2026	34,383	2,334	36,717

Note: Values above the heavy line are actual historical values; values below the line are forecasts.

Forecast Methodology

Public Service uses monthly historical customer and sales data by rate class together with weather, economic, demographic, price, and appliance saturation and efficiency historical data and forecasts to develop its forecast of energy sales. The residential sales and commercial and industrial sales forecasts are developed using a Statistically-Adjusted End-Use (SAE) modeling approach. The SAE method entails specifying energy use as a function of the primary end-use variables (heating, cooling, and base use). The factors that affect these end-use energy requirements include price, economic and demographic variables, weather, and appliance saturation and efficiency indices.

Forecasts for sales to resale customers are developed using information from the customers and trend analysis or contractual requirements and are adjusted as appropriate to reflect the contractual schedules of energy allocations from Western Area Power Administration (WAPA).

The historical customer, sales, and price data are obtained from the Company's billing system. Forecasted price data is obtained from the Company's STRATEGIST resource planning model. Forecasted economic and demographic data are obtained from Drs. Steven B. Fisher and Phyllis Resnick (formerly provided by the Center for Business and Economic Forecasting, Inc.), and Global Insight, Inc. Historical and forecasted appliance saturation and efficiency data is obtained through studies conducted by the company and from Itron, Inc.

Section 4 – Estimates of Existing and Forecasted RECs

Renewable Energy Standard

Under Rule 3654, Public Service is required to procure Renewable Energy Credits (“RECs”), either with or without Renewable Energy, to meet the Renewable Energy Standard (“RES”). One REC results from one megawatt-hour of electric energy generated from an Eligible Energy Resource.¹ The Renewable Energy Standard is based upon percentages of the Qualifying Retail Utility’s (“QRU”) annual retail energy sales. The RES has three requirements, which are summarized below.

In 2010, the General Assembly passed House Bill 10-1001 that increased the Colorado Renewable Energy Standard (“RES”) to require a Qualifying Retail Utility (“QRU”) to generate or cause to be generated minimum amounts of electricity from Eligible Energy Resources equating to 30 percent of its electric sales by 2020. HB 10-1001 also eliminated the solar standard that had originally been established by Ballot Amendment 37 (2004) and instead established a portion of the 30 percent RES to come from Renewable Distributed Generation (“DG”). The Distributed Generation requirement was divided between Wholesale DG and Retail DG; Retail DG is a renewable resource located on the site of customer facilities and interconnected on the customer’s side of the utility’s meter, and it is limited in size in relation to the customer’s electric load. Below is a table showing the annual RES requirements by year.

¹ 4 CCR 723-3-3652 (n)

Table 1. Renewable Energy Standard

Period	RES	Distributed Generation (DG)	Retail Distributed Generation
2010*	5% of retail sales	4% of RES (Solar)	At least ½ of DG
2011 – 2012	12% of retail sales	1% of retail sales	At least ½ of DG
2013 – 2014	12% of retail sales	1.25% of retail sales	At least ½ of DG
2015 – 2016	20% of retail sales	1.75% of retail sales	At least ½ of DG
2017-2019	20% of retail sales	2% of retail sales	At least ½ of DG
2020 and beyond	30% of retail sales	3% of retail sales	At least ½ of DG

*Based on RES rules in effect prior to effective date of Dec. 30, 2010 in Docket No. 10R-243E

Table 4-1, in Volume 2, shows the total RECs needed by Public Service in each year for the period 2012 through 2021 to meet the Renewable Energy Standard, based upon the Company’s 2012 retail energy sales forecast at 100% of DSM as filed in Docket No. 10A-554EG², which reflects the number of RECs required each year, and the number of Wholesale Distributed Generation RECs

² On April 26, 2011, the Commission issues its order in Docket No. 10A-554EG which set DSM goal above the Company’s filed DSM goals; however, these increases were not taken into account - at the time the 2012 sales forecast was produced for the modeling required for this 2012 RES Compliance Plan. Increases in DSM beyond the levels assumed in the March 2011 forecast will reduce sales and, consequently, reduce the RECs needed to comply with the RES. 2012 Renewable Energy Standard Compliance Plan Volume 1

("Wholesale DG RECs") and Retail Distributed Generation RECs ("Retail DG-RECs") required per year.

Tables 4-2 and 4-3, in Volume 2, provide detailed information about the RECs Public Service has already acquired, the RECs the Company plans to acquire for each year 2012 through 2013, and the RECs that Public Service anticipates retiring to comply with the 2012 – 2013 RES and for the 2012 - 2013 Windsource programs. The Tables show the sources of RECs and when they were created or will be created. Specifically, Table 4-2 shows the RECs needed by the end of 2012 and 2013 for compliance based on the Company's 2012 sales forecast. The RECs retired for Windsource and the RECs sold are presented in Table 4-3.

Wholesale Customers

In addition to meeting its RES, Public Service must plan for the transfer of RECs to its wholesale customers based upon each wholesale customer's load ratio share of Public Service's total retail and wholesale energy deliveries.

Public Service offered load-ratio shares of its RECs, to eight wholesale customers: Aquila Networks – WPC ("Aquila"), now Black Hills/Colorado Electric Utility Company, LP ("Black Hills"); Grand Valley Rural Power Lines, Inc. ("Grand Valley"); Holy Cross Electric Association, Inc. ("Holy Cross"); Yampa Valley Electric Association, Inc. ("Yampa Valley"); Intermountain Rural Electric Association ("IREA"); City of Burlington; Town of Julesburg; and Town of Center.

Black Hills, Grand Valley, Holy Cross, Yampa Valley, IREA, the City of Burlington and the Town of Center have agreed to pay the full cost of their load ratio share of the acquisition of Non-Retail DG Eligible Energy Resources. The Town of Julesburg has declined to purchase their load-ratio share of Public Service RECs. The Black Hills' Power Sale Agreement terminates on December 31, 2011, so PSCo will discontinue REC transfers to Black Hills on January 1, 2012.

Table 4-3 in Volume 2 shows the forecasted REC transfers for those wholesale customers electing to pay the full costs of their load ratio share of the Non-Retail DG Eligible Energy Resources. The transferred RECs will not be available to Public Service to meet its Renewable Energy Standard.

Windsor Source Sales

Public Service received approval from the Commission in Docket No. 08A-260E to revise its Windsor Source program to provide for program expansion that allows for additions of renewable resources under a voluntary cost-based tariff service for customers who want more renewable energy than what is available in our standard portfolio. Based on the Commission Order in Docket No. 08A-260E, Windsor Source sales will now be sourced from the Company's Eligible Energy Resource portfolio with premiums from sales under the Windsor Source tariff being credited back through the Renewable Energy Standard Adjustment ("RESA"). In addition, the Commission approved in Docket No. 09A-772E that customers who purchase 100% of their energy from Windsor Source are already receiving the benefit that a certain percentage of that energy is on the system to meet the RES requirements, which is 12% in 2012 and 2013. Therefore, 12% of the Windsor Source sales to customers that purchase 100% Windsor Source energy will be retired for each RES compliance year in 2012 and 2013. This is in accord with the Green-e Standards. Windsor Source customers were notified in 2010 that a portion of the Windsor Source sales will be retired for the RES.

Applicable RES Rules

Rule 3654(h) permits a QRU to count Eligible Energy generated on or after January 1, 2004 for compliance with the Renewable Energy Standard. The Rule also contains a carry forward provision, where a REC may be retired for RES compliance in the year that the energy is generated or for five years following the year in which it was generated. In addition, Rule 3654(j) contains a borrow

forward provision that allows a QRU to submit in its first four compliance years (2007 through 2010), Eligible Energy generated in the two subsequent compliance years to be counted for compliance.

Rule 3654(e) provides for a 25 percent “bonus” for each kilowatt-hour of Eligible Energy generated in Colorado, except that the in-state bonus for Retail DG applies only to purchase transactions entered into prior to August 11, 2010. Also, Rule 3654(f) provides for a 50 percent “bonus” for each kilowatt-hour of Eligible Energy generated from a Community-Based project, which means that Community-Based project generated RECs count as 1.5 RECs for RES compliance. However, for each kilowatt-hour of Eligible Energy, a QRU may take advantage of only one of the compliance multipliers. The Company does not currently have any Community-Based projects.

Tracking of RECs

On December 30, 2010, Rule 3659(j) became effective which requires all generators larger than 1 MW be registered and create REC certificates with the Western Renewable Energy Generation Information System (WREGIS). As of November 1, 2010, all on-site solar systems greater than 1 MW are tracked in WREGIS. RES compliance retirements will occur in WREGIS once the banked inventory of RECs created from generation prior to WREGIS registration have been retired or transferred to a third party. Retail DG systems smaller than 1 MW will continue to be tracked in the Company’s REC tracking system. WREGIS currently requires revenue-quality meter data for all classes of generators, including customer-sited distribution generation; therefore, the On-Site Solar Systems installed before March 23, 2011 of 10 kW or less that are customer owned cannot currently be registered in WREGIS. RECs from Retail DG Solar Systems acquired before March 23, 2011 of 10 kW or less will be determined by the PVWATTS program at the time of contracting. RECs for all other Retail DG systems will be based on meter data.

Plan to Meet 2012 and 2013 RES Requirements

Non-DG RECs

Public Service projects, using the carry forward provision under the Rule 3654(h), that it will meet its 2012 and 2013 Non-DG RES requirement with RECs carried forward from prior years. Table 4-2, provides the projections for the Non-DG RECs that we project we will have at the end of 2012 (page 1), and 2013 (page 2).

Wholesale DG RECs

Table 4-2, rows 4 - 11, provides the Wholesale DG resources and associated RECs (“Wholesale DG RECs”) forecasted to meet the 2012 and 2013 Wholesale DG RES requirement. Public Service expects to meet its 2012 and 2013 Wholesale DG RES requirement with Wholesale DG RECs carried forward from prior years.

Retail DG RECs

As shown on Table 4-2, pages 1 and 2, Public Service expects to have sufficient Retail DG RECs to meet the 2012 and 2013 RES requirement using the RECs carried forward from 2011, coupled with RECs created from Retail DG generation in 2012 and 2013.

Short-Term Forecast of 2012 and 2013 RES Compliance

Tables 4-2 and 4-3, in Volume 2, project Public Service’s acquisition and retirement of RECs for compliance with the 2012 and 2013 RES requirements based on electric retail sales as shown in Section 3. All of the RECs carried forward and acquired for purposes of meeting the RES, with the exception of the RECs transferred, sold or retired for Windsorce, are eligible to be counted for RES compliance in 2012 and 2013.

Table 4-2 summarizes Public Service’s forecasted REC position for 2012 – 2013 RES compliance. Table 4-2 summarizes, by source (including the “bonus” RECs), the RECs carried forward from past years, the expected acquisition of RECs, the expected retirement of RECs for compliance, and the RECs that Public Service forecasts it will have available to carry forward to future years.

Long-Range Forecast of RES Sources

Table 4-4, in Volume 2, reports Public Service’s long-range plan for acquisition of RECs through 2021 and is based on the Company’s acquisition of 503 MW of wind and 60 MW of solar resources from the Company’s 2007 Colorado Resource Plan in Docket No. 07A-447E, RECs from a 200 MW wind project from the Company’s 2011 Wind RFP, as well as RECs from Solar*Rewards and Solar*Rewards – Community. Table 4-4 shows only the RECs that we expect to acquire net of transfers each year and the projected bonuses allowed by the Renewable Energy Standard Rules. Table 4-4 does not show the impact of the carry forward provisions in the RES Rules.

Public Service will acquire Retail DG RECs through both its standard offers in the small and medium Solar*Rewards programs, through competitive bids under the Solar*Rewards Large programs, and through the Company’s new Solar*Rewards Community standard offers and competitive bids (column a). The RECs retired for Windsource sales are presented in column b and the RECs forecast to be sold in column c, prior to the application of the 25 percent in-state “bonus” to transactions entered into prior to August 11, 2010 (column d). We have a column for the incremental 25 percent bonus (above the in-state bonus) that is provided by Community-Based RECs in column e should projects be considered Community-Based. Currently, our REC forecast does not include the multiplier of 1.5 for Solar*Rewards Community; however, the Company believes many of the Solar*Rewards Community projects could qualify as Community-Based projects. The total Retail DG RECs that we project are set forth in column f.

Columns g through l of Table 4-4 show the projections of the Wholesale DG RECs that the Company proposes to acquire through 2021 and the projections for Windsource retirements and REC sales. For purposes of Table 4-4, all of the Wholesale DG RECs are assumed to qualify for the in-state bonus and none are assumed to qualify for the community-based bonus. Table 4-4 does not show any impacts of carrying forward or borrowing forward Wholesale DG RECs.

Table 4-4, columns m through r show the Non-DG RECs that Public Service estimates will be produced through 2021 and the projections for Windsource retirements and REC sales. The sources of these RECs are Eligible Energy Resources owned by the Company and purchases from Eligible Energy Resources. These projections do not account for the carrying forward or borrowing forward of RECs.

Section 5 – Acquisition Plans

This section describes the acquisition of renewable resources for all three categories of RES Compliance: Non Distributed Generation (“DG”), Wholesale DG and Retail DG. By definition, renewable resources greater than 30 MW are considered to be Non-Distributed Generation, while renewable resources 30 MW or less are considered to be either Wholesale DG (not customer-sited) or Retail DG (customer-sited, including solar gardens).

A. Non Distributed Generation

The Company is in the process of completing the acquisition of renewable resources that were selected in its most recent 2007 Colorado Resource Plan (“2007 CRP”). Consistent with the approved 2007 CRP, Public Service has already acquired approximately 500 MW of additional wind resources and is in the process of acquiring an additional 200 MW of wind under the 2011 Wind RFP, in accord with the Commission’s approval of the Company’s request to amend its approved resource plan. The Company expects the first 500 MW of wind to be fully operational before October 1, 2011 and is expected to generate approximately 1,723,900 MWh, annually. It is anticipated that the additional 200 MW of wind will become operational before the end of 2012 and generate approximately 800,000 MWh annually. The energy purchased from these facilities (Cedar Point, Cedar Creek II and the remaining 200 MW of wind) are eligible for the 1.25% in-state REC multiplier.

As a result of acquiring the generation from these wind projects, other wind generation that Public Service acquired under the Company’s 2005 Resource Plan, as well as other generation owned or contractually acquired by the Company in prior periods, Public Service will have sufficient Non DG RECs to meet the RES for the 2012 and 2013 Compliance Years. Public Service also

projects it will have sufficient Non DG RECs from existing Eligible Energy Resources for compliance through at least 2021 under the current RES rules.

This plan does not address the acquisition of Non DG resources. Commission Rules 3656 (a) and 3657 (b)(1)(G) require resources larger than 30 MW to be acquired under the Commission Electric Resource Planning rules. The Company's next electric resource plan is scheduled to be filed on October 31, 2011.

B. Wholesale Distributed Generation

In response to bids received in its 2008 Solar Resource RFP, the Company executed a Solar Energy Purchase Agreement (SEPA) with Greater Sandhill 1, LLC for a new 19.2 MW DC (16.1 MW AC) photovoltaic facility located in the San Luis Valley of Colorado. In Decision No. C09-0477, the Commission found the Company's application for approval of the contract to be in the public interest and approved the SEPA. The energy purchased from the facility is eligible for the 1.25% in-state REC multiplier. In addition, in 2010, the Cameo Solar Demonstration Project generated 550 RECs, which were included in the Company's REC tracker.

Public Service has also acquired through power purchase agreements the full output from two-30 MW solar facilities to be located in the San Luis Valley (San Luis Solar and Cogentrix), in accord with the Company's approved 2007 Colorado Resource Plan. See Decision No. C09-1257. The Company expects the San Luis Solar and Cogentrix projects to come on line in 2012 and to generate approximately 153,587 Wholesale DG RECs annually.

As a result of acquiring the Greater Sandhill, San Luis Solar and Cogentrix projects, the electricity from hydro and biomass projects that Public Service

acquired under previous RFPs, as well as other generation owned or contractually acquired by the Company in prior periods, Public Service will have sufficient Wholesale DG RECs to meet the RES for the 2012 and 2013 Compliance Years. In addition, Public Service projects it will have sufficient Wholesale DG RECs from existing Eligible Energy Resources for compliance through at least 2021 under the current RES rules. Further, additional Wholesale DG acquisitions at this time should be reviewed as part of the Company's next Electric Resource Plan because they can be large enough to influence that overall acquisition plan. Public Service will file its Electric Resource Plan on October 31, 2011.

C. Retail Distributed Generation

Solar*Rewards

In 2010 The Company began to experience a surge in applications for its Solar*Rewards program. In response to the flood of Solar*Rewards applications, Public Service filed an application with the Commission to modify the Solar*Rewards program and to lower the overall incentive being paid in conjunction with the program. As a result of that filing, the Company entered into a Settlement to set a maximum level of RESA spending and acquisitions under the Solar*Rewards Small and Medium programs for a period extending through 2011 and until the Commission issues a final order in this proceeding for the 2012 Plan. Under the Company's 2012 Compliance Plan, Public Service proposes to honor the obligations under that Settlement, plus continue the acquisition of Retail DG RECs from on-site solar facilities under Solar*Rewards from three market segments: "Small", "Medium" and "Large". The Small and Medium standard offers will be expanded as detailed later in this section. The Large program will continue to be offered through a competitive solicitation issued in 2012. All program structures in terms of payment schedule for the RECs will be detailed later in this section.

Tracking Customer Participation in the Solar*Rewards Program

Public Service utilizes an online application and tracking system for administering the Small, Medium and Large programs. The online system is the public interface to the dataset that includes all on-site customer and system details needed to manage the program. Public Service will continue to submit monthly reports to the Commission.

Solar*Rewards Contracts

Public Service maintains standardized “base form” Solar*Rewards contracts containing terms and conditions that govern the Company’s small and medium program offerings. In addition, the Company maintains separate contracts for systems that are owned by third-party developers and governmental entities.

Public Service is proposing changes to the terms and conditions of its base form contracts to implement the program changes set forth in this filing. In Volume 3 we have provided three representative base form contracts that reflect, in redline form, the changes we propose:

- Combined Rebate and REC Purchase Contract for small (less than 10kW) PV Systems, where the PV System is owned by the Customer;
- REC Purchase Contract for medium systems (greater than 10 kW), where the PV System is owned by the Customer; and,
- REC Purchase Contract (any size), where the PV System is owned by a Third-party Developer.

Also included in Volume 3 are the application forms, current standard agreements and general procedures for the Company’s programs under rule

3658, and the standard agreements for interconnection of renewable energy resources pursuant to rule 3665.

Goals for Retail DG

Projections of the acquisition of Retail DG RECs for 2012 and 2013 are set forth on Tables 4-2, 4-3, and 4-4. Although the Company cannot predict the cost of customer-sited solar in the future, the Company presents in Tables 7-3 and 7-4 a forecast of RESA revenues and expenditures based upon 36 MW annually combined with the pricing of Table 4 below. The anticipated costs of our proposed programs are included in the On-Site Solar Costs set forth on Table 7-3 and 7-4.

Solar*Reward Reservation Program Parameters

The 2012 RES Compliance year will be the sixth year of operating a successful RES on-site solar program – Solar*Rewards.

Significant changes have occurred over the span of this program. Most recently, as a result of the Settlement in Docket No. 11A-135E and Commission Decision No. C11-0304, all of the Solar*Rewards programs will eventually move to a performance based incentive (PBI) with stepped pricing reductions, eliminating the upfront Rebate and REC payments. Other changes initiated under past Plans which continue today include a project reservation deposit which we have applied to all Small, Medium and Large program applications.

The motivation for setting these reservation requirements was due in part to the number of Solar*Rewards applications that were submitted, but were not completed. While some degree of attrition is expected, the previously high number of incomplete projects signaled that a more formal process requiring a higher level of commitment on the part of the applicant was necessary. Having a high number of incomplete applications in the project queue leaves the Company
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guessing as to which projects are real and which are tentative. Accurate forecasting and budgeting becomes difficult, if not impossible, because of these phantom applications. Applications for projects that are not completed also adversely impact the solar installers and customers who wish to participate in our Solar*Rewards program.

The reservation fee is due within five days of an application's submission. If the project is completed within project reservation parameters (system size and time to complete), the reservation fee will be returned to the remitter in the form of a check, upon project completion. If the project is not completed within twelve months, or if the project size variation exceeds $\pm 10\%$ from the size in the application, the reservation fee is forfeited and credited to the RESA fund. Projects that are not completed within twelve months of the application date will be deactivated and will not be entitled to any rebate or REC payments under that specific application.

This program feature, along with the stepped REC pricing structure, is designed to help customers and the Company alike. As the Company looks to acquisition targets and budgets as potential ceilings and/or triggers for pricing changes, it is critical that the application process be as fair, transparent, and as realistic as possible. As it has been doing since 2009, the Company posts daily updates to the Company's website of the total amount in megawatts of reserved applications, so all customers will have information as to when the offered REC price is likely to decline. These schedules give the industry the transparent information to help in business planning.

The Solar*Rewards project application tool is designed to encourage accurate, viable applications, and to assist the Company and other interested parties in maintaining an accurate queue of projects. This accuracy is particularly important when combined with a stepped REC pricing approach.

Solar*Rewards also allows commercial tenants to participate. As of September 1, 2009, a commercial end-use customer who is a tenant in a building can install a system on that building even though a different party is the building owner. The minimum term of the Solar*Rewards contract is twenty years; however, for systems between 100 kW and 1 MW, the tenant may enter into a Solar*Rewards contract with a term consistent with the tenant lease term. Additionally, under certain conditions, a commercial tenant could move the system to a different location prior to the end of the contract term, and, if compliant with the relocation terms, the tenant would still have the benefit of the performance based incentives.

Net-metered customers have an option when it comes to excess energy credits at the end of the year. Customers have a one-time option to choose to roll excess kilowatt-hour credits over from year to year until the customer discontinues their electric service at that address, at which time the solar bank is “dissolved”. The other option is to have those credits “cashed-out” at the end of each calendar year. Upon discontinuing electric service at that address, the customer is paid for any remaining excess energy.

On March 21, 2011 the Commission approved a Settlement between Public Service and parties¹ in Docket No. 11A-135E reducing or eliminating the Rebate for on-site solar projects under Solar*Rewards. The Settlement included certain acquisition targets under the various programs and established declining stepped pricing. Public Service will continue to operate under the terms of the Settlement until the Commission issues its final order in this case. As outlined below, to the extent there is remaining capacity under any of the Small or Medium programs contained within the settlement, the Company plans to initiate its 2012 plan at the

¹ Parties to the Settlement include Commission Staff, OCC, GEO, WRA, Solar Alliance, CoSEIA, and CRES.
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current step pricing should capacity still be available under the acquisition targets set in the Settlement.

Solar Rewards Program Changes

For purposes of this filing, the Company is outlining three plans. The first is a Minimum Compliance Plan; the second is the Company's Recommended Plan; and the third is the High Plan. The Minimum Compliance Plan is designed to meet the minimum Retail DG compliance requirements by implementing a participation cap of 16 MWs per year. The Company needs on average 16 MW per year in order to meet the Retail DG compliance over the planning horizon with annual RECs generated from Solar*Rewards and Solar*Rewards Community (Public Service's anticipated community solar garden offering). The Recommended Plan would exceed minimum compliance to help sustain the solar industry while controlling spending at a reasonable level, which contributes annually to the reduction of the negative RESA deferred balance. The Recommended Plan forecasts an average of 36 MW of solar acquisition per year. The High Plan also exceeds minimum compliance levels, costs more, but would add approximately 60 MW of solar acquisitions each year. Each of the Plans (Minimum, Recommended and High) show separate steps and targets for each of our Solar*Rewards programs.

Public Service continues to see value in the Medium program and, as such, the Company will continue to offer this program. However, the Company no longer sees a need to distinguish between the Medium 1 and Medium 2 programs and instead proposes to combine the two Medium programs into one standard offer program upon acceptance of the 2012 RES Plan. The Medium program, when combined with the ability of commercial tenants to install solar systems, allows commercial customers to install solar and further their "green" commitments.

The Small programs will remain as the Small Customer Owned and Small 3rd Party programs; however, they will share a combined allocation of MWs. When the Small program step allocation is full, both small programs will move to the next step, regardless of how the step was filled

Program Acquisition and Pricing

1. Minimum Compliance Plan

The Company forecasts that 16 MW per year over the next ten years will be required to meet the minimum Retail DG standard. The allocations for each individual program shown in the following table are designed to help keep the respective program allocations of RESA dollars in line with the relative proportion of each customer group’s contributions to the RESA. (The underlying assumption is that Small Programs are Residential and Medium, and Large Programs are Non-Residential.) This approach of allocating expenditures in proportion to revenues collected complies with Commission Rule 3655(f). With this approach, the programs will be limited in capacity available to each program and each program will move to the next pricing step at the beginning of the next year. There will be an annual megawatt cap by program.

Table No 1- Minimum compliance acquisitions for 2012-2021

	Small Programs	Medium Program	Large Program	Solar* Rewards Community	Total	Cumulative
2012	3	4	3	6	16	16
2013	3	4	3	6	16	32
2014	3	4	3	6	16	48
2015	3	4	3	6	16	64
2016	3	4	3	6	16	80
2017	3	4	3	6	16	96
2018	3	4	3	6	16	112
2019	3	4	3	6	16	128
2020	3	4	3	6	16	144
2021	3	4	3	6	16	160

- Note – the Solar Rewards Community (Solar Gardens) program description is outlined later in this section.

The anticipated program allocation split using the acquisitions stated above are approximately 38% Residential and 62% Non-Residential. For this determination, the Company assumed the Small programs are all Residential customers, the Medium and Large programs are all Non-residential customers, and the Solar*Rewards Community Residential/Non-Residential split is assumed to be 50/50.

To be consistent and fair to all programs, the Company is using one reduction rate per step for all programs. The Company is using a similar reduction per step of \$.01/kWh as used in the Settlement steps. This price reduction is also supported by the solar installed cost predictions reported in Deutsche Bank's May 6, 2010, Solar Photovoltaic's - FITT research report. The 2010-2015 average cost drop of their solar installed cost predictions is approximately 10 percent annually.

The 2012 steps will not begin until the megawatts in the steps from the Settlement are completely filled. The last steps in the Settlement for the Small customer owned and Small Third Party programs are \$.14/kWh and \$.11/kWh respectively. The Medium Tier 1 program is at \$.13/kWh and the Medium Tier 2 program is filled. Once the Settlement steps are filled, the new 2012 pricing steps will start at \$10/MWh less than the last steps in the settlement. The Company's Minimum Compliance Plan pricing and steps are set forth in Table No. 2 below.

Table No. 2 – Minimum Compliance Plan Program Steps

Small –Customer Owned		Small – Third Party Developer		Medium Program	
	Price per kWh (PBI)		Price per kWh (PBI)		Price per kWh (PBI)
2012	\$0.13	2012	\$0.10	2012	\$0.10
2013	\$0.12	2013	\$0.09	2013	\$0.09
2014	\$0.11	2014	\$0.08	2014	\$0.08
2015	\$0.10	2015	\$0.07	2015	\$0.07
2016	\$0.09	2016	\$0.06	2016	\$0.06
2017	\$0.08	2017	\$0.05	2017	\$0.05
2018	\$0.07	2018	\$0.04	2018	\$0.04
2019	\$0.06	2019	\$0.03	2019	\$0.03
2020	\$0.05	2020	\$0.02	2020	\$0.02
2021	\$0.04	2021	\$0.01	2021	\$0.01

*PBI = Production-based Incentive

Because the Minimum Compliance Plan has annual megawatt caps for each program, once the Settlement steps are filled, the new steps would have a fixed price for the available program megawatts in each year. For example, under the Minimum Compliance Plan for the Small—Customer Owned program, after the Settlement steps are filled, there would be available a standard offer for 3 additional megawatts at a performance-based incentive of \$0.13 per kWh. The 2013 steps will not begin until the megawatts in the steps from 2012 are completely filled. The step reductions in the performance based incentive (PBI) will reach a minimum level of \$.01/kWh at some time in the future and will continue at this level as an incentive for customers to continue participating in the program.

2. Recommended Plan

While we have provided information on the minimum number of Retail DG that the Company must acquire to meet the RES, the Company’s goal for the solar programs is not to acquire only the minimum needed for compliance. Our goal is to help sustain the Colorado solar industry while controlling spending so that we can eliminate, over a reasonable period, the negative RESA deferred balance. To that end, the Company recommends approval of a plan that limits new contracts for on-site solar facilities to commitments, on a present value basis, that total no more than \$46.7M in 2012 and \$37.9M in 2013. These spending limits would allow for the MW target acquisitions by program shown in Table No. 3, which total approximately 30 MW per year. (In addition the Company would acquire 6 MW of solar garden capacity each year). To determine the present value of the contracts entered into in each year, the Company would discount the stream of expected payments under the contracts back to the contracting year at the Company’s after tax weighted average cost of capital.

Table No 3 - Recommended Plan Acquisitions

	Small Programs	Medium Program	Large Program	Solar* Rewards Community	Total	Cumulative
2012						
Step 1	4.8	8.2	4	6	23	
Step 2	4.8	8.2			13	
	9.6	16.4	4	6	36	36
2013						
Step 3	4.8	8.2	4	6	23	
Step 4	4.8	8.2			13	
	9.6	16.4	4	6	36	72

* Note – the Solar*Rewards Community (Solar Gardens) program description is outlined in its section below.

The planned acquisitions shown in Table No. 3 continue for years 2014-2021 for purposes of the 10 year RES planning requirement.

To achieve the spending limits discussed above, the Company would offer the following pricing for the standard offer programs:

Table No. 4 – Recommended Plan Pricing (\$/kWh)

		Small - Customer Owned	Small - Third Party Developer	Medium Program
2012	Step 1	\$0.13	\$0.10	\$0.10
	Step 2	\$0.12	\$0.09	\$0.09
2013	Step 3	\$0.11	\$0.08	\$0.08
	Step 4	\$0.10	\$0.07	\$0.07
2014	Step 5	\$0.09	\$0.06	\$0.06
	Step 6	\$0.08	\$0.05	\$0.05
2015	Step 7	\$0.07	\$0.04	\$0.04
	Step 8	\$0.06	\$0.03	\$0.03
2016	Step 9	\$0.05	\$0.02	\$0.02
	Step 10	\$0.04	\$0.01	\$0.01
2017	Step 11	\$0.03	\$0.01	\$0.01
	Step 12	\$0.02	\$0.01	\$0.01
2018 - 2021	Step 13	\$0.01	\$0.01	\$0.01

In order to meet the spending control component of the Company's goal for solar programs, the Company has developed two pricing steps per year as shown in Table 4. The price decline per step is \$.01/kWh similar to the Minimum Compliance Plan and the Settlement in Docket No. 11A-135E.

Under this approach, the Small program and the Medium program will independently move to the second step as that current step capacity is filled by

applications. Once the second step capacity is filled in that year, additional acquisitions will not continue until the start of the following year.

If the pricing steps per program are not filled in any year, the remaining MW in that step will be carried forward to the next year. However, for each program, the Company will close the offering under that program once the steps for that year and all prior years have been filled. For example, if the last step in the Small programs for 2012 (Step 2) is only half filled at 2.4MW by end of 2012, the unsubscribed megawatts in Step 2 and the Step 2 pricing will continue into 2013 and the first 2.4 MW subscribed in 2013 will be at the step 2 price. However, the Company will close the Small program in 2013 once all the megawatts in Step 4 are subscribed. The Company believes this pricing structure reflects a market based approach to solar acquisitions. As with the Minimum Compliance Plan, the Company will honor the steps in the Settlement from Docket No. 11A-135E. To the extent there are unsubscribed megawatts in any program remaining under that Settlement when the 2012 RES Compliance Plan is approved, those megawatts and step pricing will be honored prior to using the steps and pricing set forth in this Recommended Plan.

3. The High Plan

The High Plan also would acquire more Retail DG than required to meet compliance with the Retail DG Standard and would be more expensive. Public Service does not recommend adoption of the High Plan, but we provide it here for informational purposes.

Public Service does not recommend adoption of the High Plan due to structural problems that currently exist in how the Company's retail rates interact with the rule requirement for net metering. Currently, net metering allows customers who install on-site generation to avoid paying not only for alternative generation but

also to avoid paying for the utility infrastructure that is used to back-up the on-site solar generation. Until rates are redesigned to address this issue, Public Service does not recommend adoption of this High Plan, because of the adverse impacts it will have on our other customers. This issue is discussed in more detail later.

The High Plan megawatts and pricing steps are set forth on Tables 5 and 6. The same rules would apply to limit the acquisitions by year as discussed for the Recommended Plan. The High Plan limits new contracts for on-site solar facilities to spending, on a present value basis, that total no more than \$71.1M in 2012 and \$56.4M in 2013

Table No. 5 – High Plan Acquisitions

	Small Programs	Medium Program	Large Program	Solar* Rewards Community	Total	Cumulative
2012						
Step 1	4.50	7.50	6	6	24	
Step 2	4.50	7.50			12	
Step 3	4.50	7.50			12	
Step 4	4.50	7.50			12	
	18	30	6	6	60	60
2013						
Step 5	4.5	7.5	6	6	24	
Step 6	4.5	7.5			12	
Step 7	4.5	7.5			12	
Step 8	4.5	7.5			12	
	18	30	6	6	60	120

Table No. 6 – High Plan Pricing (\$/kWh)

		Small - Customer Owned	Small - Third Party Developer	Medium Program
2012	Step 1	\$0.13	\$0.10	\$0.10
	Step 2	\$0.12	\$0.09	\$0.09
	Step 3	\$0.11	\$0.08	\$0.08
	Step 4	\$0.10	\$0.07	\$0.07
2013	Step 5	\$0.09	\$0.06	\$0.06
	Step 6	\$0.08	\$0.05	\$0.05
	Step 7	\$0.07	\$0.04	\$0.04
	Step 8	\$0.06	\$0.03	\$0.03
2014	Step 9	\$0.05	\$0.02	\$0.02
	Step 10	\$0.04	\$0.01	\$0.01
	Step 11	\$0.03	\$0.01	\$0.01
	Step 12	\$0.02	\$0.01	\$0.01
2015 - 2021	Step 13	\$0.01	\$0.01	\$0.01

Plan Comparison

In summary, the design of each of these plans is similar. All three plans have a Small Customer Owned program, a Small 3rd Party program, a Medium program and a Large program. The pricing steps for each plan begin where the Settlement in Docket No. 11A-135E ends, continuing the price step decreases.

The major difference between the Minimum Compliance Plan, the Recommended Plan, and the High Plan is the acquisition capacity. The Minimum Compliance plan has annual capacity acquisition caps set at 16 MW per year as shown in table No. 1. The Recommended Plan and the High Plan each have a cumulative spending limit by year that increases the megawatts over the minimum compliance levels. Under either the the Recommended Plan or the High Plan, the Company anticipates a higher level of annual acquisition than the Minimum Compliance plan, which will ultimately be controlled by the market response to the pricing in the standard offers.

Program Details

Solar*Rewards Small Program (systems .5 kW – 10 kW)

As a result of the Settlement, the Small Customer-owned program is transitioning to a PBI program, while the Small – Third Party Developer standard offer functions much the same as the Third Party Developer program options for Medium projects. For the Customer-owned program, the end-use customer will enter into a contract with the Company to generate solar energy for a term of twenty years with a PBI payment stream over ten years based on actual production over those ten years. The RECs for years 11 through 20 will continue to be determined by the PV Watts solar calculator (or an equivalent tool) in accord with Commission Rule 3658(f)(IX). For the third Party Developer program, the Developer will enter into a twenty year contract for the sale of RECs and will be paid monthly based on actual production from the solar system over the twenty years. A second meter dedicated to the generation will measure the production under both Small programs. The second meter will be owned, maintained and read by the Company and be paid for by the Solar*Rewards system owner via a monthly metering charge based on the average embedded costs.

Both of the Small Program offerings will require Reservation fees of \$250 per project. Program parameters are that the project must be completed within twelve months, and the system size cannot change more than 10 percent (more or less) from the initial application. Projects that take longer than twelve months to complete will forfeit the originally guaranteed REC price and will be subject to the price prevailing at the time of completion. Deposits on projects taking longer than twelve months to complete or whose system size changes more than 10 percent are forfeited to the RESA.

Going forward, REC prices for both of the Small Program offerings, along with the Medium offerings, will be adjusted using a stepped pricing approach with limits on total cumulative spending per year on new contracts for on-site solar facilities. The PBI and acquisition levels for all three of the Plans are shown on Tables in this Section 5, which will allow the industry more transparency as to the future of REC pricing.

The Company is targeting the capacity under the Small program to approximately 38% of the capacity target to comply with Rule 3655(f) which directs the Company to allocate its expenditures for the acquisition of retail renewable distributed generation according to the proportion of RESA revenues derived from each customer group—residential and non-residential. The Company calculated the portion of RESA revenues derived from residential and non-residential to be 38 and 62 percent respectively.

Solar*Rewards Medium Program (systems >10 kW – 100 kW and >100 – 500kW)

The Medium program was first introduced in the Company's 2007 RES Compliance Plan for systems between 10 and 100 kW. In 2009, Senate Bill 09-051 expanded the size of solar PV systems that could be acquired under a Standard Offer programs. Therefore, in 2009, the Company proposed a Medium Tier 2 program for systems between 100 and 500 kW. From the start of the Medium programs to the end of 2010, there have been 217 Medium Program applications completed for a total of just over 12 MW. In 2010 alone, 172 applications were completed for a total of 9.5 MW. There has been greater interest in the Medium Program in 2011 than any other year the program has been available. We are forecasting approximately 20 MW to be completed by the end of the year 2011.

Solar*Rewards Large (RFP) Program (systems >500 kW – 2 MW)

Projects selected in the 2010 RFP are expected to come on-line in 2011. We expect approximately 2.6 MW from this solicitation. The Company proposes to continue the Large Program by issuing an RFP in 2012 for up to 4 MW

Program Feature

In line with the Reservation fees being collected in the Small and Medium programs, the Large program currently has a project deposit fee of \$5000. This fee is collected when the project is accepted and refundable if the project is completed within the timeframe specified in the RFP. If forfeited, the funds are deposited into the RESA.

Third Party Developers

Applications for the Solar*Rewards Small, Medium and Large programs are available to Third-Party Developers to own and maintain installations on customer sites. As the owner/operator of the PV system, the Developer enters into the REC contract with Public Service to receive the monthly REC payments directly. The Developer makes arrangements with the end-use customer for the receipt of the generation. As the equipment owner, the Developer is the party who enters into the Interconnection Agreement with Public Service. The retail customer is also able to elect the net metering tariff, and it is the retail customer who will receive any financial benefit of any excess generation returned to the grid. Excess generation will either be paid to the end-use customer within 60 days of the end of the calendar year (or termination of service), or will be rolled over to the next year, depending on the customer's election.

Rate Structure Concerns

The Company currently provides incentives to customers, in the form of rebates and REC payments, for participating in Solar*Rewards by installing solar panels on their properties to offset their electricity usage. All of our customers pay into the RESA to fund these incentives; but only a small fraction of our customers

receive incentives from the RESA. Public Service maintains that it is not appropriate for non-participants in Solar*Rewards to shoulder the costs of the participants in Solar*Rewards beyond the rebates and RECs that are funded through the RESA.

Even though our Solar*Rewards customers have installed solar panels, unless they are completely isolated from the utility grid they all depend on and use the capacity of the utility's electric system and its infrastructure every day to back up their solar systems, particularly when their electric load is higher than their solar generation. Consequently, Solar*Rewards customers should pay the cost of the utility infrastructure that they continue to use, even after they install their solar panels. Under Public Service's current rate structure and net metering, Solar*Rewards customers are not paying the costs incurred to serve them.

Public Service maintains that this inequity should be resolved in the near future in a way that respects cost causation principles, is fair to our customers who have already installed solar panels, is fair to customers who wish to install solar panels, and is fair to our customers who do not wish to install solar panels. We believe these cost structure issues can be addressed under a subsequent application.

Retail REC Acquisition

Tables 4-2 through 4-4 set forth the projected totals for Standard Offer RECs and other REC purchases. RECs are presented by class: Small Customer-owned, Small Third Party Developer, Medium (10.1-500 kW), and Large.

C. Solar Gardens

Solar*Rewards – Community Program

In 2011, Public Service proposes to add to its Retail DG REC acquisition by launching a new program based on House Bill 10-1342. The Solar*Rewards Community program, a solar garden program, will enable customers who cannot or wish not to participate in the Solar*Rewards programs an opportunity to participate in solar generation. Customers will purchase or lease shares of a solar garden installed in their community. Subscribing customers will receive credits on their bill for the energy produced at a central location, avoiding the need to install solar on their homes. This program provides Public Service customers with more solar program offerings.

For the RES Compliance years 2011-2013, the Solar*Rewards Community program will offer to purchase the energy and RECs from qualified solar gardens up to 6 MWs each year for the first three years. The offering will include up to 3 MW for standard offers of 500 kW or less. The other 3 MW offering, the Large program, will be handled through a competitive solicitation for systems greater than 500 kW up to 2 MW. The program structure, terms and conditions, and payment schedules will be detailed later in this section. Starting in 2014, the Commission will determine the minimum and maximum solar garden purchases the Company will target to acquire.

Solar*Rewards Community – Standard Offer Program

Up to 3 MW of installations per year are planned for each of the compliance years 2011-2013. The standard offer program will consist of two programs, based on system size:

- Solar*Rewards Community Small Program for systems from 10kW – 50 kW
- Solar*Rewards Community Medium program for systems from 50.1kW – 500kW

Unless Commission solar garden rules provide otherwise, applications for the standard offer will be reviewed and accepted on a first come, first serve basis, provided all application requirements are met. Both programs will share from the same capacity of up to 3 MW allocation. The Company is providing standard offers in different sizes in order to keep the program comparable to the Solar*Rewards program. The program size offerings are set to encourage participation in smaller systems that may not have the economies of scale of large systems.

The standard offer is a performance based incentive (PBI) expressed in \$/kWh. The standard offerings will be comparable to the current Solar*Rewards offers at the beginning of each year. The standard offerings are up to 3 MW each year for 2011-2013 for both programs. The Company is estimating the standard offer will change each year as shown in Table 5. The Small Program, 10-50 kW, and the Medium Program, 50.1 – 500kW, will be paid over a period of twenty years.

The Solar*Rewards Community Small program offer will be based on the Solar*Rewards Small Third Party program offer plus \$.03/kWh to help incentivize initial market adoption similar to past actions the Company has taken in offering new programs. The standard offer for the Medium program will be the same as the current offer for the Solar*Rewards Medium program at the beginning of each year. The Company believes an additional incentive is not required in the Medium program because of the high adoption the Company is experiencing with the Solar*Rewards Medium program. There will be a \$.10/kWh price decline from 2011 to 2012; then the program will follow the anticipated annual price declines

similar to the Solar*Rewards Recommended Compliance Plan but with only one step decline a year.

Since the offering in 2011 will not be for a complete year, there is a possibility that not all of the 6 MW will be applied for in 2011. If this occurs, the balance, at the stated price for 2011 can be applied for in 2012 in addition to the 6 MW planned 2012 acquisitions. From the start of the program in 2011 through December 31, 2012, the Company proposes to allow up to a total of 12 MWs be accepted.

The Company plans to annually adjust the steps consistent with the adjustment to the Solar*Rewards Medium program. The planned acquisition levels and PBI for the standard offer are listed in Table 7.

Table No. 7 – Solar*Rewards Community Standard Offer Program – Price and Acquisition

SRC Small Program (10-50kW)		SRC Medium Program (50.1-500kW)		Acquisition	
Year	Price per kWh (PBI)	Year	Price per kWh (PBI)	MW per Year	Cumulative MW
2011	\$0.14	2011	\$0.11	3	3
2012	\$0.13	2012	\$0.10	3	6
2013	\$0.11	2013	\$0.08	3	9
2014	\$0.09	2014	\$0.06	3	12
2015	\$0.07	2015	\$0.04	3	15
2016	\$0.05	2016	\$0.02	3	18
2017	\$0.03	2017	\$0.01	3	21
2018	\$0.01	2018	\$0.01	3	24
2019	\$0.01	2019	\$0.01	3	27
2020	\$0.01	2020	\$0.01	3	30
2021	\$0.01	2021	\$0.01	3	33

The acquisition plan for the Large Solar*Rewards Community Program is also up to 3 MW per year, bringing the total annual Solar*Rewards Community program acquisitions up to 6MW per year

Solar*Rewards Community – Large (RFP) Program

The Company will competitively solicit up to 3 MW of installations per year for the compliance years 2011-2013. The information for the bid program will be available on the Company website once the Commission's rules for Solar Gardens are complete. The bid program pre-meeting will be held in the first quarter of every year with the exception of 2011, the schedule for which is yet to be determined, based on the issuance of final solar garden rules.

Project selection

Standard Offer

The applications will be approved on a first come first serve basis once all application requirements and Commission rules pertaining to solar gardens are met.

Large Program

The RFP for the Large program will be released once per year and developers can gain access to the RFP through the Company web site. The RFP will contain the requirements that need to be included in the bid. Once the bid requirements are satisfied, the Company will use the balance of quantitative and qualitative information to make the project selections. The mandatory selection criteria are as follows:

- Lowest levelized REC price per MWh
 - Will be considered net of avoided cost
- Attached list of qualified subscribers

- Minimum of ten subscribers
 - Copies of signed subscriber agreements
 - Subscribers meeting the 120 percent annual average consumptions limitation and reside in the same county as the Solar*Rewards Community system
- Acceptable low-income plan
 - Others as may be required by Commission final rules

The mandatory criteria will apply in the bid evaluation once the application has met the application and bid requirements and Commission rules pertaining to solar gardens.

Solar*Rewards Community Production Credit

All participating customers will receive a Solar*Rewards Community net metering “production” credit on their bill monthly. It will be based on the total monthly solar energy generated by the solar garden multiplied by the customer’s percentage or share, leased or purchased in the garden. This credit, expressed in dollars, is calculated by multiplying the customer’s share of the solar garden production by the Company’s total aggregate retail rate for the class in which the customer takes retail service from the Company. The credit will be reduced by a charge covering the cost of delivering the energy to the customer. Solar*Rewards Community customers will still contribute to the RESA and to the cost of Demand-Side Management programs.

The customer’s total electric use will be billed as it is billed today. The Solar*Rewards Community production credit will be displayed as a dollar amount after the monthly electricity use and cost total. The dollar credit will be subtracted from the customer amount due and the total amount due will be displayed below the production dollar credit. The bill credit is explained in detail in Section 9, Net Metering. An example of how the solar production credit will appear on the

participating customer's bill is displayed in Table No. 8 (figures are for illustrative purposes only).

Table No. 8 – Customer Bill Example

Electric Use

Total use (5/15/11 – 6/15/11) = 625 kWh	
Tier 1 (500kWh x \$.093/kWh)	\$46.50
Tier 2 (125kWh x \$.137/kWh)	\$17.16
Total use charge (with riders, etc.)	\$63.66

Solar*Rewards Community Production Credit

Production (4/1/11 – 5/1/11) = 524 kWh	
Production credit (524 x \$.059/kWh)	\$30.90

Total Bill	\$32.76
Franchise fee	\$0.98
Sales Tax	<u>\$2.22</u>
Amount Due	<u>\$29.55</u>

There will be a time lag of at least one full customer bill cycle between when the solar production meter is read and when the solar production credit for that particular month will be credited on the customer bill.

There are 21 bill cycles within the Company's service territory. The Solar*Rewards Community system can serve multiple customers within any given county, so there could be customers on multiple bill cycles per Solar*Rewards Community system installation. Attempting to synchronize any

one installed system with the various bill cycles would be a significant and costly administrative and capital intensive endeavor. This expense can and should be avoided by delaying reflection of the credit by one month.

Solar*Rewards Community Administration - Standard Offer Program and RFP Program

The system owner will be required to provide the necessary application documentation and meet the requirements stated in the Commission's rules before the application will be reviewed for approval.

Due to the potential popularity of the program, and fairness to other applicants, an applicant may be withdrawn from the application process for lack of action after certain points in the application and installation process. The Company has determined two points where this could occur: 1) If one month has elapsed from issue of reservation form to which the applicant has not responded; and 2) if the solar installation has not been installed within twelve months from submitting the executed Solar*Rewards – Community ownership contract.

Tracking Customer Participation in the Solar*Rewards Community Program

Public Service will use an online application and tracking system and a REC operations payment system for all RECs and unsubscribed energy production. This system will also house a subscriber management system that will be accessible by the solar garden owners and used for inputting subscriber information, system allocation/subscriber and for managing subscriber additions/deletions to their system. Public Service will use the same database as the reference list for both customer validation of new additions and for monthly

bill crediting. The online system is the public interface to the dataset that includes both Solar*Rewards - Community information and the application/subscriber management system for Solar*Rewards – Community owners. Public Service will include on its monthly reports to the Commission applicable information related to Solar*Rewards Community.

Solar*Rewards - Community Contracts

There will be a contract called the Solar*Rewards Community ownership contract. The contract will contain the terms and conditions necessary to accommodate the Solar*Rewards Community program offerings. The contract term will be for 20 years. The Interconnection Agreement used for the Solar*Rewards Community programs will be the same as used for the Solar*Rewards programs. Until the Commission issues final rules, the Company is unable to provide base contracts.

The Company anticipates different ownership contracts for:

- 10-50kW systems, under the standard offer program
- 50-500kW systems, under the standard offer program
- 10kW – 2MW under the bid program

Reservation Deposits

Similar to Solar*Rewards, a reservation deposit will be required for each system application. The reservation fee is due within five days of an application's submission. The Solar*Rewards Community Small program reservation deposit is \$500 per application and the Solar*Rewards Community Medium program deposit is \$1,500 per application. The Large RFP program requires a non-refundable \$500 filing fee and a \$5,000 project deposit, which is conditionally refundable. As with Solar*Rewards program, the final system size is allowed to vary +/- 10 percent of the size stated in the application.

If the project is not completed within twelve months, or if the project size variation exceeds ± 10 percent, the reservation fee is forfeited and credited to the RESA. Projects that are not completed within 12 months of the application date will be deactivated and will not be entitled to any REC payments under that specific application.

Section 6 – Windsource

Windsource Program

Xcel Energy’s Windsource program is one of the largest utility green pricing programs in the country. Now operating in four states, Windsource customers have purchased over 1 billion kWh since the program began in Colorado in 1997. The program remains a vital part of Public Service’s growing renewable portfolio and enables our customers to proactively purchase more renewable energy to meet their personal and business needs.

Background

The Windsource program was originally established as an experimental voluntary value-priced energy program in 1997. Designed to stimulate wind development in Colorado, the program was responsible for development of the first commercial wind farm in Colorado: the 30-megawatt Ponnequin wind farm. Demand for the program grew significantly and Windsource became one of the leading voluntary green power programs in the country.

In 2008, the Commission approved a redesign of the program that enabled the Company to access the economies of scale created by the development of resources for the Colorado Renewable Energy Standard to meet Windsource customer demand more cost-effectively. The Company created a unified portfolio of renewable resources under which Windsource customers receive a portion of all Public Service renewable generation. Premiums from the Windsource sales are credited to the Renewable Energy Standard Adjustment (“RESA”) account, which increases the amount of dollars available to acquire renewable resources.

Under this new program design, our customers who would like to see us acquire more renewable energy than would otherwise be in our RES Compliance Plan

are able to agree voluntarily to pay more, with the expectation that we will continue to offer more renewable resources. Public Service retires RECs in proportion to the amount of Windsource sales, above what is inherent in those sales, that are needed for RES compliance. The Windsource premium is calculated assuming that Windsource customers are already paying for the compliance level of renewable energy through their electric rates, so that when they elect to increase their share of renewable energy, the price paid reflects only the increment above compliance levels. By this process, there is no double counting of RECs and no double charging.

Settlement

In connection to the 2008 Windsource filing, Public Service agreed to certain terms that would be included in the redesigned Windsource program. Ongoing terms included Marketing Transparency surrounding the mix of resources being offered under the Windsource program; Incremental Renewable Energy Additions utilizing Windsource premiums to acquire more renewable energy generation beyond what the Company would otherwise have acquired as part of its resource planning process; a breakout of RECs retired on behalf of the Windsource sales; and program certification.

Included in this Compliance Plan are projected 2012 and 2013 Windsource sales, projected premium revenues, projected RECs from each renewable energy generation resource (for Solar*Rewards, RECs are aggregated and projected by program), and the Windsource premium calculation.

Green-e Certification

The Windsource program has continued to maintain its certification through the Green-e Energy program. Green-e Energy provides oversight for voluntary renewable energy transactions in the United States. The Green-e Energy National Standard identifies many criteria renewable energy must meet to be

certified. Energy must come from eligible sources of supply, like wind, solar, geothermal, biomass, or “low-impact” hydropower. Only new renewable facilities can be used, built during or after 1997. Energy applied to sales in a given year must be generated over a certain span of time either in that year, in the last six months of the previous year, or in the first three months of the following year. Certified energy is accounted for and tracked through the annual Green-e Energy verification audit process, which Public Service completed most recently in June of 2010. Green-e also performs marketing compliance reviews twice a year to ensure that customer communications are transparent, that programs live up to their advertising claims, and that customers are getting what they have paid for. Public Service most recently completed a marketing compliance review in March, 2011.

To be Green-e Energy certified, the corresponding RECs associated with the energy sold under Windsource cannot be used to fulfill a state renewable energy goal and can not be “double-counted” towards that goal, with one exception. Pursuant to Green-e’s National Standard Version 2.1: “If the product meets 100% of a customer’s electricity use with eligible renewables, Green-e Energy allows a percentage of a product’s content to be satisfied by renewable portfolio standard (RPS) state-mandated renewables up to the percentage RPS requirement.” Consequently, for Windsource customers who buy all of their electricity under the Windsource program in 2012 and 2013, twelve percent of the RECs associated with the energy they purchase will be retired to meet the Renewable Energy Standard.

2012 and 2013 Windsource Forecast

Based on historic growth rates, industry trends, and marketing plans, we expect annual sales growth rates of 1 percent from 2011 through 2013. Growing sales among commercial and industrial customers will be the primary driver behind the growth, particularly among public entities and customers using Windsource to

obtain LEED certification points. Residential penetration rates are projected to stay flat due to economic conditions. Revenue collected through Windsource toward the RESA is forecast at \$4,688,467 in 2012 and \$4,735,351 in 2013.

Calculation of the Windsource Rate

The Company proposes to keep the 2012 Windsource premium the same as the 2010 premium of \$2.1588 per 100 kWh. The Windsource rate was recalculated using current assumptions and is within 20 percent of the 2010 rate of \$2.1588 per 100 kWh. In accord with Commission Decisions No. C10-1033 and C10-1221, no adjustment to the Windsource rate will be made.

The calculation of the Windsource premium is based on the concept that the premium is equal to the average incremental cost of adding renewable energy to the Company's system to replace the RECs that are being used in the Windsource program. The average incremental cost of adding renewable energy to the Company's system is calculated in a similar fashion to how the Company determines the retail rate impact for the RESA, by determining the incremental cost, above avoided cost, of new Eligible Energy Resources that may be acquired in the future. To determine the Windsource premium for the 2012 Compliance Plan, the Company performed a comparison of a modified RES portfolio that included 100 MW of additional wind resources in years 2013, 2014 and 2015, on top of all of the renewable resources that were selected in the 2009 All-Source solicitation, to a modified No-RES portfolio that removed the three 100 MW wind projects that were added to the modified RES portfolio. The modified No-RES Plan scenario provided the basis to calculate the average system costs prior to the addition of any proposed new renewable energy generation. The modified RES Plan scenario was used to develop the average cost of the system with the inclusion of the proposed renewable energy generation (three – 100 MW wind projects). By subtracting the costs of the modified No RES Plan from the modified RES Plan on an annual basis, the Company was able to identify the

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additional or incremental costs that can be attributed to inclusion of the three 100 MW new wind resources that are being added to the Company's existing portfolio. Likewise, by comparing the modified RES Plan to the modified No-RES Plan, the Company can determine the annual quantity of renewable energy that is generated by these proposed renewable resources.

Exhibit 6-1 in Volume 2 details the Company's current forecast for the estimated incremental cost of the three 100 MW wind projects that are being used to determine the additional cost of new renewable energy generation. Exhibit 6-1 is a modified form of KJH-1, filed in 08A-260E, used for the determination of the first Windsource premium. The incremental annual cost of the proposed renewable energy generation, the difference in annual cost between the modified RES Plan and modified No-RES Plan, is shown in the column labeled "2" in Exhibit 6-1. The total incremental cost of the renewable generation over the five year period is \$93,921,534. The annual quantity of additional renewable energy that is forecast to be produced by the addition of the proposed renewable resources is shown in the column labeled "3" on Exhibit 6-1 and totals 4,207,709 MWh. To determine the average incremental cost of future renewable energy resources the Company divides the total incremental cost by the total incremental renewable energy ($\$93,921,534 / 4,207,709$) as shown at the bottom of column 4 of Exhibit 6-1. The average incremental cost per MWh of the proposed renewable energy is \$22.32/MWh. We used this average of the per MWh incremental cost of the renewable energy portfolio as the starting point to develop the Windsource premium.

Once the average cost of acquiring additional renewable energy is established, the Windsource premium is designed to charge Windsource customers the extra cost of serving their electric loads with levels of renewable resources that are greater than the percentage levels already inherent in the calculation of other

tariff charges. As the Commission approved in Docket No. 08A-260E, the Windsource premium was designed in this way, so that the Windsource customer is already paying the full tariff rates for their electricity usage such that the Windsource premium is above the customer's base rates. This would include paying the full base rates, the ECA, the RESA, and all other adjustment clauses (with the exception of the Air Quality Improvement Rider – which, by stipulation, the Company credits the Windsource customer in connection with Windsource energy).

Included in these base rates, the RESA and the ECA is the cost of the system average amount of renewable energy that the Company has acquired for all customers. Because the Windsource customers will be paying for approximately 12% of their energy from renewable sources in 2012 and 2013 through other tariff rates, the Windsource premium should be priced to collect only the costs of renewable resources in addition to these percentage levels. For example, customers who want 100-% of their energy from renewable resources, should only pay a premium that reflects the difference between the cost of a portfolio with 12% renewable energy and a portfolio with 100% renewable energy. Exhibit 6-1 shows the Company's calculation of the Windsource premium and the credit of the 12% renewable energy that is already included in retail rates.

In developing the per MWh charge for the expanded Windsource program, the Company projected that the majority of potential Windsource customers would subscribe to the 100% level. As approved by the Commission in Docket No. 08A-260E, the Windsource premium is calculated as if all customers are 100% subscribers, in an effort to be able to effectively and easily communicate to customers the cost premium of the Windsource premium for the program, without having to make customized calculations for each customer. To develop this Windsource per MWh premium that is quoted to customers, the Company takes

the average incremental cost of renewable energy on a MWh basis, multiplies this amount by the quantity of non-renewable energy that is projected to serve the retail customers during the coming year (in this case 100% minus 12% or 88%) and spreads those incremental costs over the total Windsource sales. As shown in Exhibit 6-1, by spreading the Company's forecasted five-year average incremental cost of \$22.32 per MWh for the 88% of remaining customer energy need, we obtain the Windsource premium on a per MWh basis of \$19.64/MWh ($\$22.32/\text{MWh} * 0.88 = \$19.64/\text{MWh}$, Exhibit 6-1 outlines the mathematical steps in the calculation of this Windsource premium).

In summation, the newly modeled Windsource premium of \$19.64 per MWh is approximately 9% less than the current premium of \$21.58 per MWh but falls within the 20% tolerance level approved by the Commission for the adjustment of the Windsource premium, as shown in Exhibit 6-1. Ultimately, the Windsource premiums are credited to the RESA account to allow for the acquisition of more renewable energy.

Section 7 – Retail Rate Impact and Budget

Commission Rule 3661 establishes the parameters for determining the retail rate impact of implementing the Renewable Energy Standard (“RES”). Rule 3661(a) states that the net rate impact of Public Service's actions to comply with the RES shall not exceed two percent of the total electric bill annually for each retail customer. Under C.R.S. §40-2-124(1) (g) (I): "...the commission shall establish a maximum retail rate impact for this section of two percent of the total electric bill annually for each customer. The retail rate impact shall be determined net of new alternative sources of electricity supply reasonably available at the time of the determination."

Rule 3661(h) sets forth the basic method for calculating the retail rate impact. This rule details how Public Service will use its computer models to determine the difference in costs between two alternative scenarios of electric resources over the RES Planning Period. The first scenario (“RES Plan”) includes the *new* eligible energy that is added during the RES Planning Period. The second scenario (the "No RES Plan") is comprised of those "non-renewable resources reasonably available" that are necessary to replace the *new* Eligible Energy Resources in the RES Plan to meet the Company's capacity and energy requirements. Commission proposed Rule 3661(h)(III) considers all Eligible Energy Resources whose acquisition commenced prior to July 2, 2006 to be considered “sunk” resources that are to be included in both the RES Plan and the No RES Plan, such that they do not factor into the calculation of the overall incremental costs of the Eligible Energy Resources.

In addition, for those Eligible Energy Resources whose incremental cost have been locked-down in a previous compliance plan or other proceeding, only the locked-down incremental cost of those resources will be included in calculating the retail rate impact. Table 7-5 identifies the Eligible Energy Resources that are included in determining the retail rate impact calculations and whether their

incremental costs have been locked down in a previous proceeding or are being proposed to be locked down in this proceeding. To the extent the incremental cost of an Eligible Energy Resource has been locked down, these resources are then included in both the RES and No RES plans and only the locked down incremental cost is added to the RES plan for the purpose of establishing the retail rate impact. Table 7-5 identifies the incremental cost of the locked-down resources on a per MWh basis and also the expected total cost that would be added back to the RES plan for the purpose of determining the retail rate impact.

Once all of the Eligible Energy Resources that have not been locked down have been identified, the RES model can be run and compared to the No RES model run to determine the cost allocated to the RESA and to determine the retail rate impact. Traditionally the Company has identified the costs of the No RES plan as the system Avoided Cost. When determining the retail rate impact, the difference between the No RES plan costs (avoided cost) and the RES plan costs (cost with the renewable resources) results in the incremental cost above avoided cost. This additional cost of the Eligible Renewable Resources, above avoided cost, is the cost that is funded by the RESA and is included in the calculation of the retail rate impact. The avoided costs are the costs that would have been experienced without the addition of any Eligible Renewable Resources and are called "ECA Costs".

Since the Company filed its resource plan in 2007, the Company has acquired a number of Eligible Energy Resources. As presented in Table 7-5, The Company has acquired the following Eligible Energy Resources:

- 2007/08 Solar*Rewards
- 2009 Solar*Rewards
- 2010/11 Solar*Rewards
- Greater Sandhill 18 MW PV solar
- San Luis Solar 30 PV solar

Northern Colorado Wind I 151 MW wind
Northern Colorado Wind II 23 MW wind
Cedar Point Wind 250 MW wind
Cedar Creek II 250 MW wind
2011 Wind RFP 200 MW wind
Other miscellaneous small resources

A review of the Eligible Energy Resources indicates that the 2007/08 Solar*Rewards incremental costs were locked down for the life of those assets in Docket No. 08A-532E by Decision Nos. C09-1037 and R09-0549. The 2009 Solar Rewards, Northern Colorado Wind I and the Northern Colorado Wind II incremental costs were locked down in Docket No. 09A-772E by Decision No. R10-0586. As a result, the incremental costs of these resources are not being re-examined in this filing and have been included in the retail rate impact analysis based on their previously approved incremental costs. The remaining Eligible Energy Resources (2010/11 Solar Rewards, Greater Sandhill, San Luis Solar, Cedar Point Wind, Cedar Creek II and the 200 MW from the 2011 Wind RFP) have been included in the RES – No RES plan model comparison to identify their incremental cost, above avoided cost, and to be included in the RESA and the retail rate impact analysis. Table 7-5 identifies the incremental cost of these resources based on the modeling used in the 2012 RES Compliance Plan filing. As provided by Rule 3661(h)(V), these incremental costs will be locked down for a period that extends to the point where the Company receives a final order on the 2015 RES Compliance Plan filing that will be submitted in October 2015 in conjunction with the Company's 2015 Resource Plan filing.

One new project that will not result in an incremental cost for retail rate impact study is the 30 MW Cogentrix concentrating PV solar project. In the 2009 All-Source RFP the Commission recognized this resource as a Section 123 resource. Rule 3661(h)(III) provides that Section 123 resources are to be

included in both the RES Plan and the No RES Plan model runs, thus eliminating any contribution to the incremental cost calculation by the Section 123 resources. As of April 30, 2011, the RESA deferred account had a under recovered (negative) balance of \$ \$69,053,159¹. In Docket No. 09A-602E, the Hybrid REC Trading case, the Parties² to that docket recently filed a Joint Motion of All Parties to Amend Decision to seek Commission approval to apply the customer's share of the margins not needed for current Section 123 resources to the RESA balances. Applying the existing and projected share of the customer's REC margins through the first two months of 2012, the Company estimates that \$55.5 million will be applied to the RESA balance.

Rule 3661(e) states that for purposes of calculating the retail rate impact, Public Service "shall use the same methodologies and assumptions it used in its most recently approved electric resource plan under the Commission's Electric Resource Planning Rules, unless otherwise approved by the Commission." Public Service has used the same methodologies and assumptions in conducting the analyses for this 2012 RES Compliance Plan as the Company used in Docket No. 07A-447E, Public Service's most recently approved electric resource plan, except for the carbon cost assumptions (as discussed below). For example, as the Company has done in all prior RES Compliance Plans, in estimating the costs of the RES Plan and the No RES Plans the Company has used the same coal forecast and gas forecast *methodologies* that the Commission approved in Decision No. C08-0929 in Docket No. 07A-447E, but the forecasted *values* have been updated for 2011. Table 7-3 sets forth the calculations of the retail rate impact analysis.

The carbon assumptions approved by the Commission in Docket No. 07A-447E assumed carbon regulation would be enacted in 2010; such regulation was not enacted and the prospects for near term carbon regulation appear to be slim.

¹ At the end of 2010, the RESA deferred account had a negative balance of \$46,574,129

² The Parties in this docket were the Commission Staff, OCC, Governors Energy Office, Western Resource Advocates and Public Service Company

Due to the uncertainties related to the timing associated with possible carbon emission regulation, the Company did *not* include any carbon cost imputations in the model runs and other calculations set forth on Table 7-3. However, as discussed later, Public Service also presents with this Compliance Plan, as Table 7-4, a sensitivity case that assumes the same carbon imputation costs (\$20 per ton, escalating at 7% annually) as approved in the 2007 Colorado Resource Plan but on a delayed implementation schedule of 2014. Consistent with the assumptions used and approved in the Clean Air Clean Jobs Act proceeding, Public Service is presenting a similar view in this proceeding with carbon costs starting in 2014.

The Commission approved the Company's prior RES Compliance Plans, which calculated a proposed RESA level based upon the funding needs for the *full* RES Planning Period, taking into account the Company's need to collect funds in advance of the years where there are significant increases in the percentages of the Renewable Energy Standard. Public Service uses that same methodology in this 2012 RES Compliance Plan to calculate the RESA needed to fund the Company's Plan through 2021.

The Company's RES Plan also acquires Eligible Energy in advance of the years needed to comply with the RES. Acquiring resources that are more than the minimums under the RES is expressly allowed by statute. C.R.S. §40-2-124(1)(g)(l) permits a utility to acquire more than the minimum amount of Eligible Energy Resources and Renewable Energy Credits required by the RES, so long as the retail rate impact does not exceed the maximum two percent allowed by law. As is shown by Table 7-3, the Company continues to estimate that these resources can be acquired for an incremental rate impact of no more than two percent over the RES Planning Period.

Rule 3661(h)(III) requires investor-owned Qualifying Retail Utilities to include in the retail rate impact calculation only those Eligible Energy Resources whose acquisition commenced on or after July 2, 2006. The Company used this rule in

the RES Plan – No RES Plan modeling. Commission Rule 3661(h)(V) requires that the ongoing annual net incremental costs of Eligible Energy Resources that have been locked down before October 31, 2015 not be reset until the Commission issues a final decision regarding the Company's Compliance Plan filed on October 31, 2015. Public Service has followed this rule in modeling the retail rate impacts presented in Tables 7-3, 7-4 and 7-5 of this Compliance Plan, which reflect the lock down of previously locked down resources³ and the proposed locking down of the incremental cost of the Cedar Creek II, Cedar Point Wind, Greater Sandhill, San Luis Solar, the 2010/11 On-Site Solar Rewards and the 200 MW wind project selected in the 2011 Wind RFP through December 31, 2016, which is when the Company estimates the Commission will issue its final decision on the RES Compliance Plan filed October 31, 2015.

Retail Rate Impact Analyses

Table 7-3 and 7-4 represent the retail rate impact calculations similar to the retail rate impact calculations presented in prior Compliance Plans. Table 7-3 is based on the gas and coal forecast, methodologies used in the Resource Plan, Docket No. 07A-447E with the exception of the assumption related to carbon. On Table 7-3, the Company estimates that it can eliminate the negative RESA balance in 2017. Due to the uncertainties associated with the expected implementation date of carbon regulation, the Company has included Table 7-4, in which carbon regulation is not expected to commence until 2014. With this changed carbon assumption, the RESA balance becomes over recovered (positive balance) in 2017.

The ability for the Company to bring the RESA back into balance is highly dependent on the market conditions that are used to determine the incremental costs of the renewable resources. Public Service is requesting in the 2012 RES Compliance Plan, consistent with Commission rules, to lock down the incremental cost of the resources that were selected in conjunction with the 2007

³ Previously locked down resources include SunE Alamosa, Northern Colorado Wind I and II, Solar*Rewards through September 2009

Colorado Resource Plan, without locking down any carbon costs. If approved, the negative RESA balance would be eliminated in 2017. Going forward, the direction of the RESA balance will depend on the evaluation of the incremental costs of the renewable resources that will become un-locked in 2017. This RESA analysis will most likely be conducted in conjunction with the 2015 Resource Plan proceeding. Based on the market and modeling assumptions at that time (2015 or 2016), Public Service will then be able to predict the future course of the RESA account.

Looking at the current Strategist model and using today's assumptions, the Company's existing portfolio of renewable generation, would become cost effective (no incremental cost) in approximately 2018 without a carbon proxy cost and in 2014 with a \$20 per ton carbon proxy cost. As a result, Public Service has also provided on Table 7-3 and 7-4 in columns Z and AA a sensitivity case that is based on the RESA charge being reduced to zero in 2018 in Table 7-3 and in 2014 in Table 7-4. The purpose of these sensitivity analyses is to demonstrate the options, such as additional acquisition of renewable resources or reducing customer costs related to the RESA, that may be available in the future as the RESA account becomes more balanced. The ability of the Company to reduce its RESA charge will be highly dependent on market conditions in 2015 or 2016 and whether the Company selects additional renewable resources in the 2011 Resource Plan. Going forward, it is very questionable if new renewable resources can be cost effective if they do not get the benefit of the Federal Production Tax Credit. Currently the production tax credit for wind is set to expire at the end of 2012 and at the end of 2016 for solar resources.

The current and projected negative RESA balance is primarily the result of the increasing costs and participation of the on-site solar programs and greater incremental costs associated with wind energy volume that was added as a result of the 2009 All-Source solicitation. The primary driver for the negative RESA balance through 2011 was the up-front incentives provided in the

Solar*Rewards program. With the modifications to this program going forward, using pay for performance contracts instead of up-front payments, the Company does not anticipate the Solar*Rewards program costs to be a significant issue for the RESA account in 2012 and beyond.

The primary driver for the near term RESA account continuing to become more negative in 2012 through 2014, is the incremental cost of the renewable resources selected in the 2009 All-Source solicitation. As these resources get placed into service in 2011 through 2013, the incremental cost of these resources significantly impacts the RESA account. Table 7-5 demonstrates the impact of these individual resources on the RESA account for the years 2012 through 2016. However, over time these resources become cost effective if gas prices continue to rise.

Tables 7-3 and 7-4 are set up as follows: Column A identifies the calendar year. Column B, "On-Site Solar Costs," includes the estimated cost of the Company's On-Site solar programs. Column C, "NEW Central Solar Costs," identifies the projected costs of the Central Solar resources. Column D, "Wind Energy Costs," sets forth the projected costs of wind energy resources and Windsource related costs. Column E, "NEW Other Renewables Costs," includes costs of the non-solar, non-wind, "new" Renewable Resources, which includes geothermal, landfill resources, biomass, and others.

Column F, "Total Renewable Energy Costs," is the summation of the costs included in Columns B, C, D, and E. The costs identified in Column F represent the total costs to the Company of the "new" Eligible Energy Resources that are in the RES Plan, and not in the No RES Plan, plus the costs of the former Windsource facilities that are now recovered through the RESA, pursuant to Commission orders in Docket No. 08A-260E.

Column G, "RESA Rider Revenue," is an estimate of the annual revenue that the Company will recover from retail customers, using the percentage Renewable Energy Standard Adjustment assumed for each year.

Column I, "REC Margins," identifies the customer's share of the forecasted margins the Company may earn from the sale or trading of RECs during 2009. The Company does not have any projections for REC margins for later years, but any sales made could provide additional revenue to support renewable resource acquisition.

Column J was intentionally left blank. Column K, "Modeled Incremental Costs," are the cost differences in each year between the RES Plan and the No RES Plan as determined by the Strategist modeling and as set forth on Tables 7-1 and 7-2. This column includes the modeled incremental Windsource costs.

Column L, "Ongoing Incremental Costs", shows the net costs and benefits of the operational Eligible Energy Resources that were locked down in prior proceedings.

Column M, "Purchased RECs," shows the amount of money the Company has contracted to spend for RECs needed to meet the solar requirement in early years of the Renewable Energy Standard.

Column N contains the program and administrative costs associated with the RESA. Column O shows the program and administrative costs related to the Windsource Program.

Column P, "Total RES Renewable Energy Costs," is the sum of columns F and L and represents the total cost of the renewable resources included in the RES and No RES comparison in addition to the on-going costs of the resources that have already been locked down.

Column Q, “Total Incremental,” is the combination of the Modeled Incremental costs and the Ongoing Incremental Costs (Columns J, K, and L)

Column R, “RES ECA Costs,” predicts the total costs that hit the ECA, which are the Total Renewable Energy Costs minus the Total Incremental Costs. These are the avoided costs of the non-renewable resources that are in the No RES Plan that are displaced by renewable resources in the RES Plan.

Column S, “Wholesale Jurisdictional Split” credits against the deferred balance the projected revenue for this eligible energy that the Company expects to collect from its wholesale customers under its existing wholesale rates at their load ratio share.

Column T, “Total RESA Revenue,” is the combination of the revenues that credit the RESA balance. This includes the RESA Rider Revenues (Column G), the Windsource Premium Credits (Column H) and the REC Margins (Column I), and the Wholesale Jurisdictional Split (Column S).

Column U, “Total RESA Costs,” indicates the total costs that are debited from the RESA. This includes the Modeled Incremental Costs (Column K), the Ongoing Incremental Costs (Column L), the Purchased REC Costs (Column M), the RESA Program and Administrative Costs (Column N), and the Windsource Program and Administrative Costs (Column O).

Column V, “Annual Excess/Deficiency,” identifies the calculated difference between the Revenue collected and the costs.

Column W, “Interest,” shows the amount of interest accrued on the balance in the RESA-funding account using the Weighted Average Cost of Capital (“WACC”).

Column X, "Annual Excess/Deficiency w/Interest," shows the total Annual Excess or Deficiency with the Interest included.

Column Y, "Rolling Balance (Deferred)," shows the running accrual of surpluses or deficits in the RESA account from year to year over the entire RES Planning Period.

Column Z and AA, are presented as a sensitivity analysis to demonstrate the impact of reducing the RESA charge in the future. For this sensitivity the RESA charge was reduced to zero beginning in 2018.

Request for Prudence Determination

In the Stipulation and Settlement Agreement, with respect to the Company's Solar*Rewards program approved by the Commission in Docket No. 11A-135E, the Company agreed "to request a Commission finding in every future Renewable Energy Standard Plan and Electric Resource Plan, where approval is sought in accordance with Section 40-2-124(1)(g)(B), C.R.S., on the specific amount of funds to be advanced from year to year to augment the amount collected from retail customers under the RESA that will be presumed prudent." The amount of funds that Public Service proposes to advance in the years 2012 through 2013 to augment the amounts collected from retail customers are set forth on Table 7-3 in Column V. Public Service requests a Commission finding that it is prudent for the Company to advance these funds.

Section 8 – Cost Recovery

Cost Recovery Mechanism

Public Service plans to use the same cost recovery and deferred accounting mechanisms for its 2012 Compliance Plan that the Commission approved for the 2010 Compliance Plan, namely, (1) the Electric Commodity Adjustment (“ECA”) to recover the costs of Eligible Energy that match the costs of the avoided non-renewable resources and (2) the Renewable Energy Standard Adjustment (“RESA”) to recover the costs of the Eligible Energy that are incremental to the costs of the avoided non-renewable resources and the program and administration costs.

By continuing to recover the incremental costs through the RESA, the RESA provides a ready check on whether the Company has complied with the two percent (2%) retail rate impact limit in Rule 3661(a).

In the 2009 and 2010 Compliance Plans the Company used the ECA deferred account as the true-up mechanism. Under this mechanism, the costs associated with the renewable energy facilities are initially charged in full against the ECA. Then, the Company determines, through modeling, the incremental costs of these resources, derived from the difference between the RES Plan and the No RES Plan, and transfers funds from the RESA deferred account to the ECA deferred account to reimburse the ECA for these incremental costs based on actual production. In this way, the RESA continues to provide for the incremental cost of Eligible Energy. The Commission approved this cost recovery mechanism in Decision No. C09-1037 in Docket No. 08A-532E and reaffirmed it in Decision No. R10-0586 and C10-1033.

For the locked down non-DG resources, the locked down incremental costs of the non DG Eligible Energy Resources are multiplied by the actual monthly

generation of the Eligible Energy Resources in megawatt hours for each Eligible Energy Resource subject to the RESA. The costs associated with the incremental costs are charged against the RESA by transferring an amount equal to the incremental costs from the RESA to the ECA. The avoided costs are the costs that would have been experienced without the addition of any Eligible Energy Resources and are called “ECA Costs”.

The exceptions to this accounting treatment are the rebates and REC payments made to Solar*Reward customers. These dollars are initially charged against the RESA deferred account. Then the modeled avoided “ECA Costs” related to the Solar*Rewards DG are transferred from the ECA deferred account to the RESA deferred account. The result is in the RESA paying only the incremental costs of the Solar*Rewards program.

The RESA will also be used to pay for the Purchased REC Costs and Program and Administrative Costs of Solar*Rewards and Solar*Rewards-Community. Wholesale Revenues received for the Eligible Energy assumed in the Compliance Plan will be credited against the RESA deferred balance. Also credited against the deferred RESA balance are the premiums paid by Windsource customers and REC margins that the Commission determines should be credited against the RESA Deferred Account.

House Bill 10-1001 recognized the authority of a utility to advance funds to the RESA prior to the collection from customers for the benefit of acquiring renewable resources in advance of funds being available. The General Assembly authorized the utility to charge interest on such advancements at the utility’s after tax weighted average cost of capital to the negative balance of the utilities RESA deferred balance. Currently as of the end of April 2011, Public Service’s deferred RESA balance is a negative \$69 million.

The Company and other parties to Docket No. 09A-02E (addressing a pilot period for Hybrid REC margins) have moved the Commission for permission for the Company to transfer certain REC Trading customer share margins to the RESA deferred account. The Company projects the transferred margins will be approximately \$55.5 million by the end of February 2012.

Regulatory Accounting for the RESA Program

In accordance with Accounting Standards Codification Topic 980 Regulated Operations (ASC 980), formerly referred to as Statement of Financial Accounting Standards No. 71 (SFAS 71), a deferred regulatory account has been established to record the revenue, costs, and accrued interest for the RESA program, which are reported to the Commission via the Company's monthly reports. In addition, transactions are captured to meet the program's regulatory reporting requirements. For example, work orders summarize costs by type and size of renewable resource (e.g. customer-sited solar <10 kW), and other segments of the account code detail the nature of the cost (labor, consulting, renewable energy credits) and the business area incurring the cost.

Costs booked to the deferred regulatory account are classified as either program or administrative costs. Program costs include, but are not limited to:

- Renewable Energy Credits (RECs)
- Rebates
- REC certification
- Meter sets for second meter
- Incremental energy costs

Administrative costs include, but are not limited to:

- Incremental labor, employee expenses
- Marketing
- IT software for REC database

- IT software for Solar*Rewards Community
- Billing costs
- Audit fees

Rule 3661(d) caps administrative costs at ten percent per year of the total annual collection. Public Service does not anticipate exceeding that cap.

Section 9 – Net Metering

Net Metering Service (Schedule NM) and Photovoltaic Service (Schedule PV) are available as optional services under applicable rate schedules. The net metering concept essentially remains the same as in the past. On January 28, 2011, Public Service filed Advice Letter 1581 to revise the Net Metering and RESA tariff sheets to comply with the passage of Colorado House Bill 10-1001, and the Commission's Renewable Energy Standard (RES) Rules. On March 23, 2011 the Company filed a separate Advice Letter 1584 to revise the Photovoltaic Service tariffs to comply with the Commission approved settlement in Docket 11A-135E, which was approved in Decision No. C11-0304.

By Amended Advice Letter 1581, filed March 3, 2011, and Second Amended Advice Letter 1581 the Company proposes to revise the Renewable Energy Standard Adjustment (RESA) to require customers who have installed PV systems and whose energy is net-metered to pay a RESA fair share monthly surcharge charge of \$1.03 to \$4.11 per month based upon the size of the installed PV system. This modification is needed to comply with Net Metering Rule 3664 (h) (II). The Company recently filed Third Amended Advice Letter 1581 to update the tariff sheets for those revisions to Schedule PV which are effective by Advice Letter 1584.

The changes to Schedule PV contained in the Advice Letter 1581, include: the date restrictions for the Renewable Energy Credit or "REC" as required in Commission Rule 3652(n); adding the RESA fair share calculation to the On-Site System or PV System section of the tariff; and adding information regarding the recording of RECs with the Western Renewable Energy Generation Information System (WREGIS) in the Renewable Energy Credit Payments section of the tariff as required in Commission Rule 3659(i). These changes are proposed to be effective June 1, 2011.

The Schedule PV tariff was also modified for changes as a result of the Commission-approved settlement in Docket No. 11A-135E for the restructuring of the Solar Rewards Rebate. The changes were proposed in Advice Letter 1584 and were approved by the Commission in Decision C11-0304, effective March 24, 2011. The tariff change is for owners of customer-owned Small PV systems, approved after March 21, 2011; those systems now require a production meter and the owner must pay the cost of the production meter. The cost of the production meter is determined by the Company as the meter component of the applicable service and facility charge currently in effect and will be deducted from the REC payments the Company pays to the customer, based on the customer's rate class.

House Bill 10-1342 established a new community solar gardens program that Public Service is committed to offering starting in 2011. The Company will call our program "Solar*Rewards-Community". The Solar*Rewards Community program described in Section 5 will provide customers with an opportunity to take advantage of solar generation without putting solar on their roof or property, but instead purchasing an interest in a larger solar PV system. The customer (subscriber) will be provided a "virtual net metering" credit on his electric bill commensurate with the solar generation production share of a solar project in which they participate. The Company is proposing a Solar*Rewards Community Service tariff ("Schedule SRC") that establishes the virtual net metering credit that will applied to subscriber's electric bill, based upon the service class under which the customer purchases electricity from the Company. Schedule SRC as proposed consists of five sections: (1) Applicability, (2) Definitions, (3) SRC Credit Rate Calculation, (4) SRC Credit Billing, and (5) Rules and Regulations. The Applicability section defines eligibility and specifically excludes area/street lighting or resale service customers from participation. The Definitions section defines all rates, terms and conditions of Schedule SRC, including definitions for Service Period, Demand-Side Management Component, SRC Allocation, SRC Non-base Rate Adjustments, SRC Producer, SRC Subscriber, Total Rate

Adjustment Component, TCA Component, Total Aggregate Retail Rate (TARR) and Transmission and Distribution costs.

The SRC Credit Rate Calculation section lists the variables used to calculate the SRC Credit. The SRC Credit Billing section details how the Company will calculate and apply the SRC Credit to each customer’s bills. The Rules and Regulations portion of the tariff details what is expected of the SRC Producer in such matters as contract compliance, equipment installation and maintenance and notification requirements related to service failure or damage to Company equipment.

House Bill 10-1342 provided that the QRU in developing the virtual net metering credit use the Total Aggregated Retail Rate (“TARR”) less delivery, integration and administrative costs. The SRC tariff determines the SRC Credit Rates by taking TARR for each customer class and subtracting certain riders, including TCA, DSM (both base rate DSM rate and DSMCA rate), and Transmission and Distribution. The SRC Credit Rate is calculated as follows:

Expressed in kWh or Equivalent kWh for TARR Rates, Deductions to TARR and Resulting Credit per Customer Class						
Customer Class	TARR (Total Aggregate Retail Rate)	T&D Cost	RESA	TCA	DSMCA Rider + DSM Cost in Base	Credit Per Customer Class
R	\$0.10113	\$0.02503	\$0.00198	\$0.00023	\$0.00511	\$0.06878
RD	\$0.09382	\$0.02113	\$0.00184	\$0.00009	\$0.00388	\$0.06688
C	\$0.09679	\$0.02119	\$0.00190	\$0.00023	\$0.00479	\$0.06869
SG & SGL	\$0.08903	\$0.01772	\$0.00175	\$0.00019	\$0.00367	\$0.06570
PG	\$0.07372	\$0.01221	\$0.00145	\$0.00017	\$0.00270	\$0.05719
TG	\$0.06042	\$0.00302	\$0.00118	\$0.00015	\$0.00186	\$0.05420

The Company also introduces the new tariff for net metering service for Solar*Rewards Community (“SRC”) subscribers. SRC programs are new programs that are a result of HB10-1342 for solar garden renewable retail distributed generation. The Commission Rules needed for enactment of HB 10-1342 are currently pending in the Rulemaking Docket No. 10R-674E. These charges will not go into effect until they are approved by the Commission and the Commission’s solar garden rules become effective.

Section 10 – Interconnection Requirements

Public Service is not proposing any additional changes to the interconnection requirements at this time.

In Docket No. 10R-243E, the 2010 RES Rulemaking, the Commission recommended no changes to Rule 3665. However in Decision No. C10-0952, the Commission recommended that interested parties meet and propose changes to Rule 3665. Public Service does agree to meet with the other parties to address whether changes are needed to the interconnection rules and supports Commission Staff leading meetings on interconnection-related matters.

Section 11 – Conclusion

Public Service has presented a comprehensive 2012 Renewable Energy Standard Compliance Plan for the Commission's consideration. Public Service respectfully requests that the Commission approve this plan as presented. In approving the overall plan, Public Service respectfully requests that the Commission specifically:

- Approve the proposed locked-down incremental costs of 2010-2011 Solar Rewards, Cedar Creek Wind, Cedar Point Wind, the 2011 Wind RFP 200 MW Wind and San Luis Solar PV, which costs would remain locked until the phase I decision in the Company's 2015 Colorado Resource Plan.
- Approve the Company's estimated level of advanced funds in 2012 and 2013 to augment RESA collections in those years as presented in Table 7-3 in Volume 2 Column V.
- Approve the Solar*Rewards Community tariff and the methodology for determining the credits provided customers under that tariff for their share of solar garden generation.
- Approve the Windsource premium rate.