# BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF EL PASO	)		
ELECTRIC COMPANY'S 2014	)		
PROCUREMENT PLAN PURSUANT	)		
TO THE RENEWABLE ENERGY ACT	)	<b>CASE NO. 14-00</b>	-UT
AND 17.9.572 NMAC	)	•	
	j		

**DIRECT TESTIMONY** 

**OF** 

RICARDO ACOSTA

MAY 1, 2014

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1		I. <u>INTRODUCTION AND QUALIFICATIONS</u>
2	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
3	A.	My name is Ricardo Acosta, and my business address is 100 N. Stanton, El Paso,
4		Texas 79901.
5		
6	Q.	HOW ARE YOU EMPLOYED?
7	A.	I am employed by El Paso Electric Company ("EPE" or "the Company") as
8		Director of the Resource and Delivery Planning Department.
9		
10	Q.	PLEASE SUMMARIZE YOUR EDUCATIONAL AND BUSINESS
11		BACKGROUND.
12	A.	I graduated from The University of Texas at El Paso with a Bachelor of Science
13		Degree in Mechanical Engineering in 1975 and a Master of Science Degree in
14		Mechanical Engineering in 1977. Upon graduation, I was employed by Rockwell
15		International in El Segundo, California until January 1980.
16		In January 1980, I began working for EPE as a Planning Engineer with
17		duties including generation and fuels planning, regulatory compliance and
18		economic evaluation of generation and fuel alternatives. This activity included
19		forecasting fuel prices and the development of EPE's PROMOD base case for use
20		in Company planning activities and regulatory filings and proceedings. In
21		January 1989, I was promoted to Supervisor-Resource Planning. In October
22		2005, I was promoted to Manager-Resource Planning. In May 2010, I became
23		Director of Resource and Delivery Planning

1	Q.	PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES WITH EPE.
2	A.	My current duties include the management and supervision of the Company's
3		generation expansion planning and renewable energy procurement.
4		
5	Q.	HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE
6		UTILITY REGULATORY BODIES?
7	A.	Yes, I previously presented testimony before the City of El Paso Public Utility
8		Regulatory Board, the Public Utility Commission of Texas, and the New Mexico
9		Public Regulation Commission ("NMPRC" or "Commission").
10		
11		II. PURPOSE OF TESTIMONY
12	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
13	A.	The purpose of my testimony is to present EPE's 2014 Procurement Plan ("2014
14		Plan").
15		
16	Q.	WHAT INFORMATION IS INCLUDED IN EPE'S RPS PLAN?
17	A.	The Commission's Renewable Rule, effective May 31, 2013, requires that the
18		following information be included in EPE's RPS Plan, as applicable:
19		1) testimony and exhibits providing a full explanation of the utility's
20		determination of the plan year and next plan year renewable portfolio
21		standard and reasonable cost threshold;

1	2)	the cost of procurement in the plan year and the next plan year for all new
2		renewable energy resources required to comply with the renewable
3		portfolio standard selected by the utility pursuant to Section 13 of this rule;
4	3)	the amount of renewable energy the public utility plans to provide in the
5		plan year and the next plan year required to comply with the renewable
6		portfolio standard;
7	4)	testimony and exhibits demonstrating how the cost and amount specified in
8		Paragraphs (2) and (3) of this subsection were determined;
9	5)	testimony and exhibits demonstrating the plan year and next plan year
10		procurement amounts and costs based on revenue requirements expected to
11		be recovered by the utility;
12	6)	testimony and exhibits demonstrating the plan year and next plan year
13		procurement amounts and costs if complying with a fully diversified
14		renewable portfolio standard is limited by the reasonable cost threshold;
15	7)	testimony and exhibits demonstrating the plan year and next plan year
16		procurement amounts and costs based on revenue requirements expected to
17		be recovered by the utility if limited by the reasonable cost threshold;
18	8)	testimony and exhibits that demonstrate that the proposed procurement is
19		reasonable as to its terms and conditions considering price, costs of
20		interconnection and transmission, availability, dispatchability, renewable
21		energy certificate values and portfolio diversification requirements;

1		9) testimony and exhibits regarding the amount and impact of renewable
2		energy that can be added in any given year without adding generating
3		resources for load following or system regulation purposes;
4		10) testimony and exhibits demonstrating that the portfolio procurement plan is
5		consistent with the integrated resource plan and explaining any materia
6		differences; and
7		11) demonstration that the plan is otherwise in the public interest.
8		
9	Q.	WHAT DOES YOUR TESTIMONY ADDRESS?
10	A.	My testimony addresses EPE's 2015 and 2016 renewable energy portfolio
11		standard ("RPS") requirements and set forth EPE's proposed 2014 Plan to mee
12		EPE's RPS and diversity requirements for 2015 and 2016. I also address EPE's
13		previously authorized partial waiver of its 2015 Total RPS and variances to the
14		2015 Wind and Biomass/Other diversity requirements. The Commission granted
15		the waiver and variances because any new procurement costs would exceed the
16		Reasonable Cost Threshold. For similar reasons, I request an additional partia
17		waiver for 2016 and similar variances for 2016. I also address certain information
18		contained in EPE's Annual RPS Report, in compliance with the Commission's
19		Final Order in NMPRC Case No. 13-00223-UT ("2013 Final Order").
20		I summarize the estimated costs of compliance to meet the RPS
21		requirements for 2015 and 2016, including diversity targets in 2015 and 2016, and
22		discuss and conclude that EPE's proposed 2014 Plan for 2015 and 2016 is

reasonable as to price, availability, dispatch flexibility, certificate values and

23

1		diversity. I also address how the impact of DG resources is incorporated into
2		EPE's modeling process when calculating avoided costs under the Rule for
3		purposes of determining whether EPE's RPS compliance costs will be within the
4		RCT.
5		
6	Q.	ARE OTHER WITNESSES ADDRESSING ELEMENTS OF EPE's 2014
7		PROCUREMENT PLAN?
8	A.	Yes. EPE Witness James Schichtl will offer testimony to present EPE's
9		calculation of the Commission's RCT and evaluation of whether EPE's proposed
10		2014 Plan would require EPE to reduce its RPS requirement because of
11		limitations of the RCT or the large customer cap. Mr. Schichtl also addresses
12		EPE's Small, Medium and Large System Renewable Energy Certificate Purchase
13		Programs. He estimates the number and cost of renewable energy certificates
14		("RECs") associated with those programs, and addresses issues and costs
15		associated with making REC payments directly to the owners of third-party
16		provided systems, pursuant to the 2013 Final Order. Mr. Schichtl also addresses
17		EPE's calculation of carrying costs on deferred RPS procurement amounts, also in
18		compliance with the 2013 Final Order.
19		
20	-	III. OVERVIEW OF EPE'S RPS REQUIREMENTS
21	Q.	CAN YOU PROVIDE AN OVERVIEW OF THE STATUTORY AND
22		REGULATORY RENEWABLE ENERGY REQUIREMENTS WHICH
23		EPE MUST MEET?

A. Yes. The New Mexico Renewable Energy Act ("Act" or "REA") and the NMAC Rule 17.9.572, Renewable Energy as a Source of Electricity ("Rule") require that a percentage of EPE's New Mexico retail jurisdictional energy sales be supplied by renewable energy resources, represented by RECs. Under the REA, RECs can be acquired with or without the associated energy, and can be acquired, held, traded, or sold over a four year period prior to being retired. The RPS requirement for the period 2011 through 2014 is 10 percent of retail jurisdictional energy sales. Thereafter, EPE must meet an RPS requirement of 15 percent from 2015 through 2019, and 20 percent beginning in 2020. However, EPE is not required to meet the full RPS if the costs would exceed the RCT, nor is EPE required to meet the full diversity percentages of the Rule if the procurement costs would exceed the RCT or if resource types are not reasonably available.

# Q. DOES EPE'S 2014 PLAN FOLLOW THE COMMISSION'S CURRENT RENEWABLE ENERGY RULE?

16 A. Yes. EPE's 2014 Plan for 2015 and 2016 follows the Commission's Rule. Certain
17 amendments to the Rule were approved in NMPRC Case 11-00218-UT to
18 establish a uniform RCT methodology and to adjust the Commission's resource
19 diversity targets. The new Rule became effective on May 31, 2013. Pursuant to
20 the RCT methodology of the new Rule, EPE has determined that any additional
21 cost for new procurements for 2015 and 2016 would exceed the RCT. EPE is
22 therefore not proposing any additional procurement for 2015 and 2016.

	As discussed by EPE Witness Schichtl, use of the Rule's RCT
	methodology shows that the cost of EPE's current renewable portfolio, as
	approved by the Commission in Case No. 11-00218-UT and prior procurement
	cases, exceeds the newly-defined RCT. Because any additional procurement
	would result in a portfolio which further exceeds the limitations set in Act and the
	Rule, EPE's 2014 Plan does not include proposals for new renewable energy or
	REC purchases which would increase the cost of the portfolio. In the 2013 Final
	Order, the Commission recognized the RCT limitations and granted EPE a 2015
	waiver to the full RPS requirements as well as granted certain variances to full
	diversity in 2015 because of RCT limitations and unavailability of such resources
	at reasonable cost.
Q.	DOES THE ACT REQUIRE ANNUAL REPORTING FOR RPS
	COMPLIANCE?
A.	Yes. Concurrently with its RPS Procurement Plan filing, EPE files it annual
	report each year. EPE's RPS Report filed on May 1, 2014 with the Commission
	shows how EPE complied with the Act's requirements for calendar year 2013.
Q.	HOW ARE EPE'S PROCUREMENT ACTIONS DOCUMENTED?
A.	RECs are used to demonstrate compliance with the requirements of the Act. EPE
	acquires RECs, with or without physical delivery of the associated energy,
	towards its RPS requirement for each year and ensures the RECs are registered

and retired with the regional tracking system known as Western Renewable

1		Energy Generation Information System ("WREGIS"). RECs represent the
2		renewable energy attributes, on a kWh basis, of the production of energy from
3		generating facilities that utilize renewable energy resources. One REC is equal to
4		1,000 kWh. The RECs acquired by EPE are normally expressed in
5		megawatt-hour ("MWh") units. One MWh is equal to 1,000 kWh or one REC.
6		The energy associated with the RECs EPE acquires is contracted for delivery into
7		New Mexico. EPE uses and retires the acquired RECs through WREGIS within
8		four years of their creation.
9		
10	Q.	DOES EPE'S ANNUAL REPORT ALSO INCLUDE OUTAGE
11		INFORMATION ON THE QUALIFYING FACILITY CAMINO REAL
12		LANDFILL ENERGY FACILITY ("CRLEF") PROJECT?
13	A.	Yes. In EPE's 2013 RPS filing, EPE asked the Commission to eliminate a monthly
14		reporting requirement for Camino Real Landfill Energy Facility ("CRLEF"), a
15		biogas qualifying facility, the Commission imposed in NMPRC Case No. 10-
16		00200-UT. The Commission granted EPE's request but required EPE to include
17		data on the number of days in each month that CRLEF was out-of-service as part of
18		EPE's annual RPS Report. EPE has included that information in its 2013 report.
19		
20	Q.	DOES EPE USE ITS OWN RENEWABLE GENERATING RESOURCES
21		TO MEET RPS REQUIREMENTS?
22	A.	No. EPE uses the renewable resources it owns for EPE's voluntary renewable
23		energy customer programs. EPE owns and operates a relatively small-scale

1		commercial wind generation facility, and very small, demonstration-size solar
2		photovoltaic ("PV") facilities.
3		
4	Q.	HAS EPE CALCULATED ITS RENEWABLE ENERGY RESOURCE
5		REQUIREMENTS FOR 2015 AND 2016?
6	A.	Yes. Unless reduced to stay within the large customer class, EPE's RPS
7		requirements for 2015 and 2016 would be fifteen percent of EPE's New Mexico
8		jurisdictional energy sales. EPE calculated these requirements based on its latest
9		Long-Term Load Forecast dated March 10, 2014. Exhibit RA-1 shows the
10		calculation of EPE's estimated RPS requirements for 2015 and 2016.
11		EPE's 2015 total New Mexico retail jurisdictional energy sales are
12		forecasted to be 1,766,055,012 kilowatt-hours ("kWh"). Fifteen percent of EPE's
13		2015 sales would be 264,908,252 kWh.
14		EPE's 2016 total jurisdictional sales are forecasted to be
15		1,798,037,753 kWh. Fifteen percent of EPE's 2016 sales would be
16		269,705,663 kWh.
17	N.	
18	Q.	IS EPE REDUCING ITS RPS REQUIREMENTS FOR 2015 AND 2016 IN
19		ORDER TO STAY WITHIN THE LARGE CUSTOMER CAP?
20	A.	No. EPE does not need a reduction in 2015 or 2016 to its total RPS requirement
21		to stay within the large customer cap, as addressed by EPE Witness Schichtl.
22		

1	Q.	UNDER THE CURRENT RULE, IS DIVERSITY OF RESOURCE TYPE
2		REQUIRED?
3	A.	Yes. The Commission has established specific diversity targets for the RPS.
4		Under the Rule published in 2013, no less than 30 percent of the RPS must be met
5		with wind energy, no less than 20 percent must be met with solar energy and no
6		less than 5 percent must be met with other renewable energy technologies such as
7		biomass, geothermal or landfill gas. In addition, the Rule requires renewable DG
8		of three percent of the RPS beginning in 2015 and thereafter. RECs obtained
9		through EPE's customer-installed QF programs can be applied to meet either
10		EPE's distributed generation requirement or the specific resource's diversity
11		requirement.
12		
13	Q.	HAS EPE CALCULATED THE MINIMUM AMOUNTS FOR EACH
13 14	Q.	HAS EPE CALCULATED THE MINIMUM AMOUNTS FOR EACH RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO
	Q.	
14	Q.	RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO
14 15	Q.	RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE
14 15 16		RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE CURRENT RULE?
<ul><li>14</li><li>15</li><li>16</li><li>17</li></ul>		RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE CURRENT RULE?  Yes. In 2015 and 2016, EPE estimates its RPS would need to include the
<ul><li>14</li><li>15</li><li>16</li><li>17</li><li>18</li></ul>		RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE CURRENT RULE?  Yes. In 2015 and 2016, EPE estimates its RPS would need to include the following minimum amounts from the identified resource types to meet the
14 15 16 17 18		RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE CURRENT RULE?  Yes. In 2015 and 2016, EPE estimates its RPS would need to include the following minimum amounts from the identified resource types to meet the specified diversity requirements:
14 15 16 17 18 19 20		RESOURCE TYPE THAT EPE'S PORTFOLIO WOULD NEED TO INCLUDE TO MEET THE DIVERSITY REQUIREMENTS UNDER THE CURRENT RULE?  Yes. In 2015 and 2016, EPE estimates its RPS would need to include the following minimum amounts from the identified resource types to meet the specified diversity requirements:  Resource 2015 2016

1		Distributed Generation: 7,947,248 kWh 8,091,170 kWh
2		These amounts represent the diversity percentages listed above.
3		
4	Q.	DOES EPE'S PROPOSED 2014 PROCUREMENT PLAN REQUEST ANY
5		WAIVERS FROM THE COMMISSION?
6	A.	Yes. Although the REA and Commission Rule state that a utility "shall not be
7		required to add renewable energy to its portfolio" when costs exceed the RCT, the
8		Rule requires the utility to request a waiver of the RPS for the applicable plan
9		year. The Commission approved a waiver from the full RPS for 2015 in NMPRC
10		Case No. 13-00223-UT. EPE requests a similar waiver for 2016 because costs of
11		any new procurement needed to meet its 2016 RPS obligation would exceed the
12		RCT.
13		
14	Q.	IS EPE ALSO REQUESTING A VARIANCE FROM THE
15		COMMISSION'S RULE WITH REGARD TO DIVERSITY TARGETS?
16	A.	Yes. The Rule states that a utility "shall not be required to provide a fully
17		diversified portfolio" when doing so would conflict with the RCT. The
18		Commission approved variances from a fully diversified portfolio in 2015 for
19		EPE in NMPRC Case No. 13-00223-UT. EPE is requesting variances for 2016
20		from the full requirements of Wind diversity and Biomass/Other diversity.
21		

1	Q.	HAS EPE COMPLIED WITH THE ANNUAL PROCUREMENT
2		PROCESS FOR MEETING RPS REQUIREMENTS?
3	A.	Yes, EPE complied with all the requirements delineated earlier in my testimony.
4		
5		IV. EPE'S 2014 PROCUREMENT PLAN
6	Q.	PLEASE SUMMARIZE EPE'S 2014 PROCUREMENT PLAN.
7	A.	EPE's 2014 Procurement Plan relies on renewable energy resources and
8		associated RECs previously approved by the Commission to meet its 2015 and
9		2016 RPS obligations. As explained in greater detail below, EPE's 2014 Plan is
10		designed to meet the majority of statutory RPS obligations through REC
11		acquisitions pursuant to previously approved agreements with Southwest
12		Environmental Center ("SWEC"), CRLEF, Southwestern Public Service
13		Company ("SPS"), NRG ("SunTower Project"), NextEra Energy Resources
14		("Hatch Project"), SunEdison, and First Solar ("Macho Springs") as well as
15		through EPE's approved incentive programs for customer-installed Qualifying
16		Facility ("QF") projects. Exhibit RA-2 provides a table summarizing the
17		procurement of existing agreements.
18		The Commission approved EPE's existing agreements and related cost
19		recovery in NMPRC Case Nos. 05-00355-UT, 05-00231-UT, 06-00365-UT,
20		07-00360-UT, 08-00219-UT, 09-00259-UT, 10-00200-UT, 11-00263-UT,
21		12-00217-UT, and 13-00223-UT.

22

1	Q.	WILL EPE SUBSTANTIALLY COMPLY WITH THE RPS
2		REQUIREMENTS FOR 2015 AND 2016 USING PREVIOUSLY
3		APPROVED RESOURCES?
4	A.	EPE anticipates that it will substantially comply with its 2015 and 2016 total RPS
5		obligations. Because the REA and Commission Rule do not impose the full RPS
6		obligation on a utility if costs would exceed the RCT, EPE requests a waiver from
7		full RPS compliance in 2016. EPE's waiver request is detailed below.
8		
9	Q.	PLEASE PROVIDE A BRIEF DESCRIPTION OF THE PREVIOUSLY
10		APPROVED RESOURCES.
11	A.	In 2007, EPE entered into a 20-year PPA to purchase energy and weighted value
12		RECs from the SWEC solar PV project. The SWEC project is a six kW solar PV
13		commercial project with an estimated capacity factor of 23 percent, located in
14		Las Cruces, New Mexico, which became operational in March 2008.
15		Also in 2007, EPE entered into a QF agreement with CRLEF, which
16		provides weighted value biomass RECs. The CRLEF project is a biogas QF that
17		was designed for a net capacity of three MW; however, due to fuel limitations, the
18		project currently provides a maximum net capacity of approximately one MW.
19		CRLEF is located in Sunland Park, New Mexico, and uses methane gas from a
20		landfill to fuel its generating facility. The first phase of this project became
21		operational in June of 2008.
22		EPE's REC purchases from SWEC and CRLEF are adjusted in accordance
23		with a weighting system previously implemented by the Commission in its Rule

prior to 2008; CRLEF's RECs have a two-for-one value and SWEC's RECs have a three-for-one value. None of the other RECs acquired by EPE are weighted. In 2007, the Commission issued its final order in NMPRC Case 07-00157-UT, wherein the Commission discontinued this weighting system, but determined that utilities could continue to apply the prior REC weighting to projects and renewable energy PPAs that had already been approved by the Commission.

Because EPE is required, in the ordinary course of business, to purchase all energy produced from a QF such as CRLEF at EPE's avoided cost rates, EPE has not included the cost of the underlying energy purchases from CRLEF as a cost of RPS compliance. As part of its approved 2009 Plan, EPE began paying CRLEF for the RECs generated by the project at a price of \$0.015/kWh in order to ensure the continued viability of the project, which provides portfolio diversity along with economical two-for-one weighted biomass RECs. These costs are included as a cost of EPE's RPS compliance.

In 2010, EPE entered into an agreement with SPS which will deliver wind RECs to EPE during the period 2011 through 2015.

In 2010, the Commission approved a 20 MW solar PV project in Santa Teresa, New Mexico. This project came online in July 2011 and will deliver energy and RECs to EPE through a 20-year PPA with NRG.

Also in 2010, EPE entered into two other PPAs. The Hatch Solar Project is a five MW facility that provides energy and associated RECs to EPE through a long-term agreement with the Village of Hatch. EPE also entered into a long-term agreement with SunEdison for a total of 22 MW of capacity that provides

1		EPE with energy and RECs from two facilities located at two different sites in
2		New Mexico. The first facility is a 12 MW project located in Las Cruces, which
3		came on-line on May 2, 2012. The second is a 10 MW facility located in
4		Chaparral, New Mexico, which became operational on June 25, 2012.
5		In 2012, EPE entered in a long-term PPA with First Solar, referred to as
6		the Macho Springs Project. The Macho Springs Project is a 50MW solar facility
7		located near Deming, New Mexico that will provide energy and RECs to EPE for
8		20 years, allocated to Texas and New Mexico. This project will become
9		operational on May 1, 2014. The Commission has approved the use of Macho
10		Springs for RPS purposes.
11		The previously-approved renewable resources for EPE's RPS were all
12		reviewed in previous procurement plans and found to be reasonable and within
13		the RCT as calculated previously.
14		
15	Q.	HOW IS EPE'S 2014 PLAN AFFECTED BY ITS CURRENT RCT
16		STANDING?
17	A.	If approved, EPE's 2014 Plan will require a waiver for a small portion of EPE's
18		total RPS obligations in 2015 and 2016 to avoid exceeding the RCT. Further
19		EPE will not meet full diversity requirements in 2015 and 2016 because to do so
20		would exceed the RCT, and because there are technical constraints and
21		unavailability of certain resources at reasonable cost. The waiver and variances
22		for 2015 were previously granted in the 2013 Final Order. As shown by

Mr. Schichtl, any additional procurement cost for EPE's renewable portfolio

23

1		would exceed the RCT, and thus any additional procurement is not required.
2		Because any additional procurement would further increase costs above the RCT,
3		EPE is requesting to be excused from additional renewable procurement in 2016,
4		consistent with the Commission's rulings for EPE's 2015 plan year, and asks that
5		it be granted any necessary waivers and variances pursuant to the Rule.
6		
7	Q.	FOR PURPOSES OF THE 2014 PLAN, DID EPE NEED TO
8		DEMONSTRATE WHETHER ANY PROPOSED PROCUREMENTS ARE
9		REASONABLE AS TO TERMS AND CONDITIONS CONSIDERING
10		PRICE, COSTS OF INTERCONNECTION AND TRANSMISSION,
11		AVAILABILITY, DISPATCHABILITY, REC VALUES AND PORTFOLIO
12		DIVERSIFICATION REQUIREMENTS?
13	A.	No. Because EPE is not proposing any new procurement actions, the requirement
14		to show the reasonableness of the terms and conditions of any proposed
15		procurements is not applicable.
16		
17	Q.	HAS EPE EVALUATED THE AMOUNT AND IMPACT OF
18		RENEWABLE ENERGY THAT CAN BE ADDED IN ANY GIVEN YEAR
19		WITHOUT ADDING GENERATING RESOURCES FOR LOAD
20		FOLLOWING OR SYSTEM REGULATION PURPOSES?
21	A.	Because EPE's Plan does not propose to add any new renewable resources due to
22		RCT limitations, EPE did not study whether hypothetical renewable energy
23		procurements in the plan years would necessitate load following or system

1		regulation. All of EPE's current procurements have been approved in previous
2		proceedings. The most recent addition of a solar purchase from First Solar
3		through a PPA, Macho Springs, was approved in Case No. 12-00386, and did not
4		require additional generating resources for load following or system regulation
5		purposes.
6		
7	Q.	IS EPE'S PLAN CONSISTENT WITH ITS INTEGRATED RESOURCE
8		PLAN ("IRP")?
9	A.	Yes. EPE's IRP incorporates the requirements of the Act in its planning process
10		and includes the procurements that were approved as of the date the most recent
11		IRP was filed in 2012.
12		
13	Q.	ARE THERE ANY MATERIAL DIFFERENCES BETWEEN EPE'S PLAN
14		AND ITS INTEGRATED RESOURCE PLAN?
15	A.	No. There are no material differences between EPE's 2014 Plan and the current
16		IRP. Consistent with the IRP, EPE has completed negotiations and obtained
17		regulatory approval for the 50 MW solar Macho Springs contract scheduled to be
18		on-line in 2014 that was included in the action plan portion of the IRP. Also
19		consistent with the IRP action plan, EPE presented a potential biomass purchased
20		power agreement to the Commission in its 2012 RPS Plan, which was not
21		approved by the Commission because the cost of the project was not considered
22		reasonable.

1		V. <u>COST OF EPE'S 2014 PROCUREMENT PLAN</u>
2	Q.	WHAT COSTS ARE ASSOCIATED WITH EPE'S 2014 PLAN?
3	A.	The costs associated with EPE's 2014 Plan include the cost to procure RECs and
4		any associated energy from various previously-approved suppliers, the cost to pay
5		the REC incentive prices to customers under EPE's customer-owned QF REC
6		Purchase Program, and the cost of complying with REC registration and tracking
7		through WREGIS, the regional system required to be used by the Commission.
8		
9	Q.	WHAT IS THE ESTIMATED COST TO MEET EPE'S 2015 AND 2016 RPS
10		OBLIGATIONS?
11	A.	The total cost associated with EPE's RPS obligations is \$16.4 million for 2015
12		and \$15.7 million for 2016. These cost estimates are detailed in Exhibit RA-2.
13		These costs are based on the terms of the contracts entered into by EPE in
14		previous years for REC only purchases, energy and associated REC purchases,
15		EPE's customer-sited DG REC purchase programs, and WREGIS services. The
16		procurement costs for EPE's existing renewable resources which are included in
17		EPE's 2014 Plan have already been approved by the Commission.
18		
19	Q.	ARE THE ESTIMATED COSTS REASONABLE?
20	Α.	Yes. Based on EPE's RPS requirements and the overall results of EPE's past
21		competitive-bid RFP processes, EPE's estimated costs to comply with the
22		requirements of the Act and Rule are reasonable, and the Commission has so
23		determined in EPE's previous procurement cases.

1	Q.	DO THE ESTIMATED COSTS INCLUDE DEFERRED REC COSTS
2		FROM JANUARY 1, 2009 THROUGH DECEMBER 31, 2013 AND
3		ASSOCIATED CARRYING CHARGES?
4	A,	No. The deferred REC costs from January 1, 2009 through December 31, 2013
5		and associated carrying charges are addressed by Mr. Schichtl.
6		
7	Q.	HOW DOES EPE DETERMINE WHETHER ITS PROCUREMENT
8		COSTS ARE WITHIN THE RCT?
9	A.	EPE relies on its Load Forecast process and uses PROMOD to determine whether
10		its procurement costs are above or within the RCT. The development of the RCT
11		and comparison of EPE's procurement costs to the RCT is addressed by
12		Mr. Schichtl.
13		
14	Q.	WHAT IS PROMOD?
15	A.	PROMOD IV is a proprietary large-scale program that simulates the economic
16		dispatch of the generating units and other resources in the EPE system. The input
17		data includes monthly EPE native load demand and energy forecasts, generating
18		unit characteristics, fuel prices and availability and unit maintenance schedules.
19		Generation unit characteristics include such factors as heat rate data, capacity
20		ratings, unit availability rates, and maintenance schedules. The simulation
21		performed by PROMOD IV evaluates the unit data, fuel and purchased power
22		costs, and availability of the units modeled in order to dispatch them in the most
23		economical manner to meet the expected demand. The data output includes

estimates of fuel usage and cost by unit, unit heat rates and generation, unit operation and maintenance expenses, and estimates of purchased power amounts and costs.

A.

### VI. REQUEST FOR 2016 RPS WAIVER

# 6 Q. IS EPE REQUESTING A WAIVER FROM MEETING ITS TOTAL RPS

#### IN 2015 AND 2016?

Yes. EPE already has an approved waiver for 2015 and is requesting a partial waiver of approximately 91,731,110 kWh of RECs for 2016 RPS amounts. The Rule requires EPE to file a two-year RPS Plan with data and proposed procurements for both 2015 and 2016. In NMPRC Case No. 13-00223-UT, EPE filed the information for a waiver from the full RPS requirements for 2015, and the Commission determined that it was necessary and appropriate to approve the 2013 Plan with any necessary waivers and variances for both of the plan years presented in EPE's 2013 RPS filing. In accordance with the waiver granted for 2015, EPE's RPS procurement will be approximately 99 percent of EPE's estimated 2015 RPS requirement.

As a result of the requested waiver for 2016, EPE will acquire approximately 177,974,553 kWh of RECs (approximately 66 percent of EPE's estimated 2016 RPS requirement) rather than the full RPS amount for 2016 of 269,705,663 kWh. The actual magnitude of the waiver will be a function of actual retail sales and renewable energy procured in 2016.

1	Q.	WHAT ARE THE REASONS FOR EPE'S REQUESTED WAIVER FOR
2		2016?
3	A.	As stated above, adding new resources under the new RCT Rule that went into
4		effect May 31, 2013 would cause EPE to exceed the revised RCT. Because
5		different RCT methodologies were applied in previous EPE cases, the cost of
6		EPE's already approved procurement actions are at or above the new threshold
7		recently set by the Commission in NMPRC Case No. 11-00218-UT. Under the
8		REA, EPE is not required to add resources if costs would exceed the RCT.
9		In addition, the total RPS percentage requirement increased from 10 to 15
10		percent in 2015, which increases total costs because of the need to acquire
11		additional RECs.
12		
13	Q.	WHAT SHOWING IS NECESSARY TO OBTAIN A WAIVER?
14	A.	The REA states that if a public utility finds that the cost of renewable energy
15		needed to comply with the RPS in a given year would be greater than the RCT,
16		the public utility is not required to incur that cost. EPE Witness Schichtl provides
17		the calculations that demonstrate EPE's procurement costs to meet its RPS in
18		2015 and 2016 will exceed the RCT. Because any additional procurement cost
19		would exceed the RCT, the REA excuses EPE from making those procurements.
20		
21	Q.	WHY IS IT NECESSARY TO GRANT EPE A WAIVER FROM MEETING
22		ITS TOTAL RPS REQUIREMENT FOR 2016?

1	A.	It is necessary for the Commission to grant the waiver because the purpose of the
2		RCT and other caps for large nongovernmental customers is to ensure that the
3		cost of meeting the RPS is not unreasonably burdensome for customers. The
4		findings and purposes of the REA make clear that public utilities and their
5		ratepayers should be protected from costs that are above the thresholds set by the
6		REA and the Commission.
7		
8	Q.	IS EPE'S REQUESTED WAIVER OF FULL RPS REQUIREMENTS FOR
9		2016 COMPLIANT WITH THE ACT AND THE NEW RULE?
10	A.	Yes. The Act and Rule state that if the cost to procure energy and/or RECs is
11		greater than the RCT, a public utility will not be required to incur that cost or
12		procure that resource. The utility is to file for a waiver and explain why the utility
13		cannot procure resources at a cost less than the RCT and explain the efforts the
14		utility undertook to procure resources at a cost within the RCT.
15		
16	Q.	AS PART OF ITS 2014 RPS PLAN, HAS EPE IDENTIFIED ANY NEW
17		PROCUREMENT THAT COULD BE ADDED IN 2016 WITHOUT
18		EXCEEDING THE RCT?
19	A.	No. As part of EPE's 2013 RPS Plan, EPE was able to identify RECs (associated
20		with the Macho Springs energy purchases) that could be acquired at no additional
21		cost to EPE, beginning in 2015 and accordingly the Commission has approved
22		that acquisition in Case No. 13-00223-UT. However, EPE has not identified any
23		additional renewable energy or RECs that could be acquired to meet EPE's 2016

1		RPS obligation without exceeding the RCT. Further, in the 2013 Final Order, the
2		Commission determined that where it is unlikely that EPE's existing procurement
3		costs are unlikely to fall within the RCT, EPE need not seek additional renewable
4		resources and is excused from additional procurement under the Act.
5		
6		VII. REQUEST FOR DIVERSITY VARIANCES
7	Q.	DOES THE RULE EXCUSE COMPLIANCE WITH THE DIVERSITY
8		TARGETS UNDER CERTAIN CIRCUMSTANCES?
9	A.	Yes. The Rule does not require the full diversity targets to be met if the costs of
10		procurement would exceed the RCT. The Rule also permits utilities to seek
11		variances from the diversity targets particularly when there are technical constraints
12	•	or issues with availability of diverse resources. Additionally, the Commission's
13		order issued 2013 Final Order in NMPRC Case No. 11-00218-UT contemplates that
14		utilities may seek a variance from the diversity targets in light of the reconsideration
15		of diversity targets that will be addressed in NMPRC Case No. 13-00152-UT.
16		
17	Q.	WHAT SHOWINGS ARE REQUIRED TO BE MADE FOR A VARIANCE
18		FROM THE RULE'S DIVERSITY REQUIREMENTS?
19	A.	Although the Rule states that full diversity is not required if costs of additional
20		procurements will exceed the RCT, the Rule requires that an application for a
21		variance from the Rule identify the section of the Rule for which the variance is
22		requested, describe the situation that necessitates the exemption or variance; set
23		out the effect of complying with this Rule on the public utility and its customers if

the exemption or variance is not granted; define the result the request will have if granted; state how the exemption or variance will be consistent with the purposes of this rule; state why no other reasonable alternative is preferable; and state why the proposed alternative is in the public interest.

### 6 Q. DOES EPE HAVE ANY VARIANCES ALREADY GRANTED BY THE

### COMMISSION WITH REGARD TO THE RULE'S DIVERSITY

### **REQUIREMENTS?**

9 A. Yes. As part of EPE's 2013 Procurement Plan, the Commission granted EPE a
10 partial variance to the wind and biomass/other diversity requirements for 2015 in
11 Case No. 13-00223-UT, due to EPE being excused from undertaking any new
12 procurement due to RCT limitations.

A.

# Q. DOES EPE REQUIRE A FURTHER VARIANCE FROM THE

# BIOMASS/OTHER DIVERSITY REQUIREMENTS IN THE 2014 PLAN?

Yes. As a result of the RCT, EPE is requesting a partial diversity variance of approximately 10,839 Biomass/Other RECs in 2016, similar to the 2015 variance that was granted in the 2013 Plan. This variance is an estimate and the actual variance will depend on the performance of CRLEF during 2016. This partial variance is necessary because EPE is unable to procure a new biomass resource due to economics and its current RCT limitations. EPE anticipates it will meet a portion of the Biomass/Other diversity requirements with the RECs it will receive from CRLEF.

1	Q.	IS EPE REQUESTING A VARIANCE FROM THE 2016 WIND
2		DIVERSITY REQUIREMENT?
3	A.	Yes. Due to EPE's RCT limitations and the increased wind diversity requirement
4		under the Rule from 20 percent to 30 percent, EPE requests a wind variance of
5		approximately 80,912 RECs for 2016. This variance request is in addition to
6		EPE's existing partial wind variance for 2015, which was granted as part of the
7		2013 Plan. EPE's existing contracts to purchase wind RECs ends in 2015. The
8		elimination of the associated costs for wind RECs in 2016, however, will no
9		bring EPE's procurement costs below the RCT.
10		
11	Q.	WHAT WOULD THE EFFECT ON EPE AND ITS CUSTOMERS BE IF
12		THE REQUESTED VARIANCES ARE NOT GRANTED?
13	A.	If the variances are not granted, requiring EPE to obtain additional RECs for
14		purposes of meeting the Rule's diversity requirements would result in increased
15		costs to customers that would further exceed the RCT. Without the variance
16		customers would not be protected from additional costs above the RCT, contrary
17		to the findings and purposes of the REA.
18		Further, EPE could conceivably be subjected to Commission penalties for
19		failure to comply with the Rule's diversity requirement, even though the Rule
20		does not require compliance if the costs would exceed the RCT, or if full
21		diversification is prevented by technical constraints or limitations such as limited
22		availability of particular renewable resources at a reasonable price.

1	Q.	WHAT WILL BE THE RESULT IF THE VARIANCE IS GRANTED?
2	A.	If the variance is granted, EPE will avoid increased costs to its customers from
3		attempting to secure additional RECs which will cause EPE's procurement costs
4		to further exceed the RCT.
5		
6	Q.	HOW IS THE VARIANCE CONSISTENT WITH THE PURPOSES OF
7		THE RULE?
8	A.	The requested variance is consistent with NMAC Rule 17.9.572.19 because the
9		Rule conditions the requirement for full diversification on the reasonable
10		availability and cost of a given resource type (in accordance with the Act), while
11		still requiring that the overall RPS requirements of the Act be met if doing so does
12		not cause EPE's procurement costs to exceed the RCT. EPE will meet a portion
13		of the requirements for a fully diversified portfolio.
14		EPE's portfolio will continue to be substantially diversified in 2016,
15		because EPE will continue to acquire energy and RECs from solar, biomass and
16		distributed renewable generation resources.
17		
18	Q.	ARE OTHER REASONABLE ALTERNATIVES AVAILABLE TO EPE?
19	A.	No. EPE cannot obtain additional resources without incurring additional costs
20		that will exceed the RCT.
21		

1	Q.	WHY IS IT IN THE PUBLIC INTEREST TO GRANT THE VARIANCE?								
2	A.	It is in the public interest to grant the variance because customers will continue to								
3		receive the overall benefits contemplated by the Act in having a diversity of								
4		renewable energy as part of EPE's existing resource portfolio, and customers will								
5		not be subject to higher costs that exceed the RCT.								
6										
7	Q.	WHAT IS THE ESTIMATED EXTENT OF EPE'S REQUESTED								
8		VARIANCES?								
9	A.	Exhibit RA-3 compares EPE's existing renewable portfolio for 2015 and 2016, by								
10		generation technology, to the minimum requirements shown above, as well as								
11		total RPS requirements. As the table shows, utilizing its existing portfolio EPE								
12		would require additional resources to meet diversity requirements for Wind and								
13		Biomass /Other in 2015 and 2016, if the cost of additional renewable resources								
14		did not exceed the RCT. Because the exact percentage of different renewable								
15		resources that will be used to meet EPE's RPS requirements for 2016 cannot be								
16		known at this time, EPE is requesting a variance that is not tied to a specified								
17		number of RECs.								
18										
19	Q.	WHEN DID THE CURRENT TARGETS BECOME EFFECTIVE?								
20	A.	The current diversity targets went into effect on May 31, 2013, after lengthy								
21		proceedings in NMPRC Case No. 11-00218-UT. The new Rule increased the								
22		diversity requirement for wind resources from 20 percent to 30 percent, and								

23

decreased the Biomass/Other requirement from 10 percent to 5 percent.

1		However, the Commission has pending proceedings in Case No. 13-00152-UT
2		that could result in further revisions to the diversity targets, among other things.
3		
4	Q.	PLEASE ADDRESS EPE'S BIOMASS/OTHER DIVERSITY.
5	A.	Currently, EPE procures biomass RECs from its QF customer, CRLEF. CRLEF's
6		biogas facilities are currently designed to produce approximately one MW from
7		its landfill site, with the potential to produce up to three MW. At a capacity of
8		one MW, the CRLEF facility would not provide EPE sufficient REC's to satisfy
9		its full diversity requirement. EPE estimates it will have a diversity requirement
10		for Biomass/Other of 13,245,413 kWh in 2015 and 13,485,283 kWh in 2016.
11		
12	Q.	IS CRLEF REQUIRED TO PRODUCE A MINIMUM AMOUNT OF RECS?
13	A.	No. Because CRLEF is a QF customer, it controls its own output and EPE cannot
14		require certain minimum deliveries. Further, CRLEF experienced significant
15		production problems during 2012 and 2013. As a result, CRLEF has invested
16		substantial resources in upgrades and equipment replacements. CRLEF has
1.7		informed EPE that after additional consultation with its equipment manufacturer,
18		it estimates it will be resuming production during the second quarter of 2014.
19		
20	Q.	HAS EPE INCLUDED DATA ON THE NUMBER OF DAYS IN EACH
21		MONTH THAT CRLEF WAS OUT-OF-SERVICE FOR 2013?
22	A.	Yes. Included in EPE's 2014 report in Attachment 6 is the data for the number of
23		days in each month that CRLEF was out of service in 2013.

1	Q.	WHAT WOULD BE REQUIRED OF EPE TO MEET ITS FULL WIND
2		DIVERSITY TARGETS FOR 2016?
3	A.	EPE would need to acquire new wind resources in order to fulfill the
4		Commission's expanded wind diversity requirement in 2015 and 2016. EPE
5		currently procures wind RECs from SPS, but this REC purchase agreement will
6		be expiring in 2015. EPE is estimating a diversity requirement for wind of
7		79,472,476 kWh in 2015; and 80,911,699 kWh in 2016, based on the Rule. EPE
8		used reasonable efforts in attempting to find and potentially acquire a low-cost
9		wind resource by reaching out to NextEra Energy Resources ("NextEra").
10		NextEra indicated they have Wind RECs that could be purchased by EPE, but
11		purchasing these RECs would increase costs above the RCT. Even with the
12		elimination of the current wind REC purchases, the purchase of new RECs from
13		NextEra would cause EPE to exceed the RCT and thus EPE is not proposing new
14		procurements at this time. EPE has also had discussions with SPS about
15		extending the Wind REC contract but again costs would exceed the RCT.
16		
17		VIII. <u>CONCLUSION</u>
18	Q.	PLEASE SUMMARIZE THE APPROVALS THAT EPE IS REQUESTING.
19	A.	Pursuant to the Act and Rule, EPE requests that the NMPRC approve its 2014
20		Plan and related cost recovery for reasonable costs consistent with the 2014 Plan.
21		EPE will continue to procure, in accordance with previously approved purchase
22		agreements:
23		energy and associated RECs from SWEC;

1		energy and RECs from CRLEF (pursuant to its modified QF agreement);
2		wind RECs from SPS (at the increased amounts);
3		solar energy and RECs from Hatch, NRG, and SunEdison;
4		RECs from Macho Springs; and
5		DG RECs from customers through EPE's REC Purchase Programs.
6		Due to RCT limitations under the REA and Rule, EPE requests a partial
7		waiver for its Total RPS requirement of approximately 91,731 RECs in 2016.
8		EPE also requests a partial wind variance of 80,912 RECs for 2016, as
9		well as a biomass variance of approximately 10,839 RECs for 2016.
10		The previously approved costs associated with EPE's existing RPS
11		procurements are \$16.4 million for 2015 and \$15.7 million 2016.
12		
13	Q.	IS EPE'S PROPOSED 2014 PROCUREMENT PLAN REASONABLE AS
14		TO ITS TERMS AND CONDITIONS CONSIDERING PRICE,
15		AVAILABILITY, DISPATCH FLEXIBILITY, ANY RENEWABLE
16		ENERGY CERTIFICATE VALUES AND DIVERSITY OF THE
17		RENEWABLE ENERGY RESOURCE?
18	A.	Yes. EPE's proposed 2014 Plan is reasonable taking into consideration these factors.
19		EPE's 2014 Plan consists of existing projects which provide significant diversity of
20		resource type from wind, biomass, and solar technologies and adhere to the
21		standards set forth in the Act and the Rule, as analyzed under the Commission
22		approved RCT and customer cap methodology. EPE proposes no new procurements
23		because the acquisition of additional resources would exceed the RCT.

1		The estimated costs associated with its procurement actions previously
2		have been approved by the Commission and EPE proposes to continue its cost
3		recovery through its FPPCAC for bundled purchases of renewable energy and
4		RECs, and through base rates for all other procurement costs.
5		As discussed above, EPE proposes projects that in combination are
6		reasonably priced, fit within EPE's dispatch flexibility parameters as applicable,
7		and add diversity to its portfolio. EPE's 2014 Plan, and the associated costs, are
8		reasonable and should be approved.
9		
10	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
11	A.	Yes, it does.

# BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF EL PASO ELECTRIC COMPANY'S 2014 PROCUREMENT PLAN PURSUANT TO THE RENEWABLE ENERGY ACT AND 17.9.572 NMAC	) ) ) CASE NO. 14-00UT ))
AFFI	DAVIT
STATE OF TEXAS )	
COUNTY OF EL PASO ) ss	
Ricardo Acosta hereby deposes and sta	ates under oath that the information contained in
the foregoing Direct Testimony of Ricardo	Acosta, together with the statements of facts
contained therein and any exhibits attached the	ereto, is true and accurate based on my personal
knowledge and belief.	
SIGNED this 24 day of April, 2014.	
RI	CARDO ACOSTA
Subscribed and sworn to before me this 24	lay of April, 2014.
	Rosa & Gaian
My Commission expires:	
3/23/2018	
ROSA G GARCIA NOTARY PUBLIC State of Texas Comm. Esp. 03/23/2018	

EPE's NEW MEXICO RENEWABLE PORTFOLIO STANDARD REQUIREMENT							
	(a)	(b)	(c) = (a*b)				
	New Mexico's Annual Renewable Energy Requirement	EPE's New Mexico Jurisdictional Retail Energy Sales Projection <sup>(1)</sup>	EPE's Renewable Energy Requirement				
(%)		(kWh)	(kWh)				
2015	15%	1,766,055,012	264,908,252				
2016	15%	1,798,037,753	269,705,663				

### Note:

<sup>1.</sup> EPE's New Mexico jurisdictional retail energy sales are based on EPE's Load Research Department's 2014 Load Forecast dated March 10, 2014.

PROCUREMENT PLAN YEAR RECS AND COSTS							
	2015			2016			
	(kWh)	RECs (MWh)	(\$)	(kWh)	RECs (MWh)	(\$)	
SWEC <sup>(1)</sup>	9,130	27	1,187	9,155	27	1,190	
CRLEF <sup>(1)</sup>	105,000	210	1,575	1,323,000	2,646	19,845	
NRG	52,485,185	52,485	6,689,237	52,222,759	52,223	6,655,791	
SunEdison	59,513,452	59,513	6,242,366	59,215,884	59,216	6,211,154	
Macho Springs <sup>(2)</sup>	30,353,638	30,354	0	30,201,761	30,202	0	
Hatch	9,989,000	9,989	1,188,691	10,512,000	10,512	1,250,928	
SPS	40,000,000	40,000	800,000	0	0	0	
REC Purchase Programs	19,515,138	19,515	1,494,388	23,148,684	23,149	1,571,361	
WREGIS		high year deals	4,215			3,395	
Total	211,970,543	212,094	16,421,659	176,633,243	177,975	15,713,664	

#### Notes:

- (1) Reflects application of weighting values, by renewable resource type, previously approved by the Commission (Biomass 2:1, Solar 3:1).
- (2) Macho Springs LTPPA was approved by the NMPRC on May 1, 2013, and is expected to begin commercial operation May 2014.

	Applied Renewable Energy by Technology <sup>(1)</sup>								
Year	RPS Metric	Wind	Solar	Biomass	Distributed Generation <sup>(3)</sup>	Total Renewable Energy			
2014 <sup>(2)</sup>	RECs Banked	10,492,000	39,166,000	-	<u>.</u>				
	RECs Procured	40,000,000	152,341,275	210,000	19,542,528	212,093,803			
	RECs Available	50,492,000	191,507,275	210,000	19,542,528	261,751,803			
	Minimum Requirement	30.0%	20.0%	5.0%	3.0%				
2015	kWh Required	79,472,476	52,981,650	13,245,413	7,947,248	264,908,252			
2010	Percentage Met	19.1%	72.3%	0.1%	7.4%	98.8%			
	Delta	-10.9%	52.3%	-4.9%	4.4%				
	RECs Applied	50,492,000	191,507,275	210,000	19,542,528	261,751,803			
	RECs Banked	~	_	_	ı				
	RECs Procured	_	152,152,404	2,646,000	23,176,149	177,974,553			
	RECs Available	-	152,152,404	2,646,000	23,176,149	177,974,553			
	Minimum Requirement	30.0%	20.0%	5.0%	3.0%				
2016	kWh Required	80,911,699	53,941,133	13,485,283	8,091,170	269,705,663			
2010	Percentage Met	0.0%	56.4%	1.0%	8.6%	66.0%			
	Delta	-30.0%	36.4%	-4.0%	5.6%				
	RECs Applied	_	152,152,404	2,646,000	23,176,149	177,974,553			
	RECs Banked	-	_	-	<del>-</del>				

### Note:

RECs are shown in kWhs.
 Estimated banked RECs may change due to amount actually applied in 2014.
 Distributed Generation RECs come from SWEC and Small and Medium System REC Purchase Programs.