

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF EL PASO)
ELECTRIC COMPANY'S 2010)
PROCUREMENT PLAN PURSUANT)
TO THE RENEWABLE ENERGY ACT)
AND NMAC 17.9.572.16)
_____)**

CASE NO. 10-00 -UT

DIRECT TESTIMONY

OF

EVAN D. EVANS

JULY 1, 2010

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1 I. **INTRODUCTION AND QUALIFICATIONS**

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

3 A. My name is Evan D. Evans. My business address is 100 N. Stanton, El Paso, Texas
4 79901.

5
6 **Q. HOW ARE YOU EMPLOYED?**

7 A. I am employed by El Paso Electric Company ("EPE" or "Company") as Assistant
8 Vice President - Regulatory Services and Rates.

9
10 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL**
11 **BACKGROUND AND EXPERIENCE.**

12 A. I graduated from Texas Tech University with a Bachelor of Business Administration
13 Degree in Finance in May 1980. Upon graduation, I was employed as a Rate Analyst
14 at West Texas Utilities Company, a wholly-owned subsidiary of Central and South
15 West Corporation ("CSW"), which was acquired by American Electric Power
16 Company ("AEP") in June 2000. I was employed with various CSW subsidiaries and
17 later with AEP until September 2000. During my 20-year career with CSW and AEP,
18 I held a variety of professional analytical, consultant and management positions in the
19 rates, regulatory services and marketing and business development areas.

20 During my employment with CSW and AEP, I was heavily involved in the
21 areas of costing and pricing. I prepared numerous wholesale and retail cost-of-
22 service studies filed with the Federal Energy Regulatory Commission and the Public

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1 Utility Commission of Texas (“PUCT”). I participated in the development of
2 marginal cost and avoided cost studies used for rate design, for determining payments
3 for power purchased from cogenerators and in analyzing marketing programs. I also
4 had extensive involvement in designing retail and wholesale rates and in performing
5 system loss analyses.

6 In October, 2000 I joined C.H. Guernsey & Company, which is an employee-
7 owned, professional consulting firm offering engineering, architectural, economic and
8 construction management services to utilities, industries and government agencies
9 throughout the United States and internationally. While employed with
10 C.H. Guernsey, I managed the firm’s Dallas regional office and served as a consultant
11 to electric utility industry clients in a variety of areas, including regulatory
12 compliance, integrated resource planning, electric utility cost of service issues, rate
13 studies, financial analysis, economic feasibility analysis, retail electric choice and
14 wholesale power supply contract negotiations.

15 In September, 2006, I left C.H. Guernsey and accepted the position of
16 Director – Regulatory Services with EPE. I was promoted to Assistant Vice President
17 Regulatory Services and Rates in July, 2008.

18

19 **Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES WITH EPE.**

20 A. My primary responsibilities include coordination and management of regulatory
21 filings, management of regulatory accounting, and direction of the rate design, cost
22 analysis and energy efficiency activities for the Company.

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1 **Q. HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE UTILITY**
2 **REGULATORY BODIES?**

3 A. Yes, I have previously presented testimony before the New Mexico Public Regulation
4 Commission (“NMPRC” or “Commission”), Georgia Public Service Commission, the
5 Oklahoma Corporation Commission and the PUCT.

6

7

II. **PURPOSE OF TESTIMONY**

8 **Q. WHAT ARE THE PURPOSES OF YOUR TESTIMONY?**

9 A. The purposes of my testimony are to address portions of EPE’s 2010 Procurement
10 Plan relating to the application of the Reasonable Cost Threshold (“RCT”) and non-
11 governmental cap, and EPE’s proposals for customer-installed distributed generation
12 (“DG”) programs. The New Mexico Renewable Energy Act (“Act”) requires EPE to
13 file annually a Procurement Plan that sets forth EPE's plan for compliance with the
14 Act. EPE's 2010 Procurement Plan is presented in EPE's Application and the Direct
15 Testimony of Ricardo Acosta. EPE Witness Acosta's testimony specifically
16 addresses EPE's purchases from selected projects to meet EPE's RPS requirements for
17 2011 and 2012. He also addresses EPE’s plans for meeting the minimum percentage
18 requirements by resource type required by the Commission’s Renewable Energy
19 Rule 17.9.572 NMAC (“Rule”) beginning in 2011.

20

21

22

My testimony presents the cost of procurement in the next two calendar years
for the renewable energy resources EPE is using to comply with its Renewable
Portfolio Standard (“RPS”) obligations. I address whether EPE anticipates reducing

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1 the RPS due to the RCT and how that determination was made. My testimony
2 provides estimates of the impact of the costs on all customers' aggregated overall
3 annual electric charges that EPE will incur to comply with the Act and the
4 Commission's Rule. I also address whether EPE anticipates reducing the amount of
5 renewable energy to be provided in calendar years 2011 and 2012 to account for
6 statutory caps associated with non-governmental customers with consumption
7 exceeding ten million kilowatt hours ("kWh") per year, and how that determination
8 has been made.

9 In addition, my testimony sets forth EPE's proposed changes to its Small
10 System Renewable Energy Certificate Purchase ("Small System REC") Program and
11 its Medium System Renewable Energy Certificate Purchase ("Medium System
12 REC") Program, which offers incentives to customers who install renewable energy
13 generating units of 10 kW AC or less and renewable energy generating units of
14 greater than 10 kW AC to 100 kW AC, respectively, that interconnect with EPE's
15 system at the distribution level.

16
17 **III. RENEWABLE ENERGY PORTFOLIO COSTS**

18 **Q. PLEASE OUTLINE THE FILING REQUIREMENTS FOR EPE'S**
19 **ESTIMATED COSTS ASSOCIATED WITH ITS 2010 PLAN.**

20 **A.** The Act and Rule require that EPE's 2010 Plan estimate procurement costs for
21 renewable energy resources in the next calendar year needed to comply with the RPS.

22 The Act and Rule also require that EPE determine whether the RCT will be exceeded

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1 in 2011 and 2012; and whether the cap for individual large, nongovernmental
2 customers requires that the RPS obligation for 2011 and 2012 be reduced.

3
4 **Q. HAS EPE ESTIMATED THE COSTS ASSOCIATED WITH MEETING THE
5 RENEWABLE ENERGY PORTFOLIO REQUIREMENTS?**

6 A. Yes. EPE has calculated the estimated overall net cost of meeting the RPS
7 requirements for 2011 and 2012 based on EPE's 2010 Procurement Plan. In
8 calculating the impacts to customers for 2011 and 2012, I have used the total
9 estimated costs for REC procurement and the net cost of the purchased energy and
10 renewable energy certificates (RECs) from the renewable resources discussed by EPE
11 Witness Acosta. Mr. Acosta developed costs for energy from each project as part of
12 his evaluation of the already approved REC purchases, as well as additional
13 renewable resource projects. EPE's costs include RECs from Public Service
14 Company of New Mexico ("PNM") at the previously approved contractual levels, the
15 previously approved purchase of energy and RECs from the Southwest
16 Environmental Center ("SWEC"), the previously approved and proposed new
17 purchases of wind RECs from Southwestern Public Service Company ("SPS"), the
18 purchase of energy and RECs from New Mexico SunTower, LLC, ("SunTower")
19 beginning in 2011 and through RECs purchased pursuant to EPE's Small System
20 REC and Medium System REC programs. However, under certain conditions, the in-
21 service date for the SunTower project can be extended to 2012.

22 EPE has included in its 2010 Plan costs associated with the additional price of

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1 \$0.015 per kWh EPE is paying to Camino Real Landfill Gas to Energy Facility
2 ("CRLEF") for RECs pursuant to the amended contract, which was approved in
3 NMPRC Case No. 09-00259-UT. However, EPE is not including any other costs
4 associated with the energy purchase of NMPRC Rule 570 renewable energy from the
5 CRLEF, which is a renewable Qualifying Facility ("QF"). EPE is required to
6 purchase energy from a QF under EPE's avoided cost rates, in the ordinary course of
7 business.

8 The calculation of the total net cost of the Company's 2010 Procurement Plan
9 and the total net cost impact applicable to all kWh sales are shown in Exhibit EDE-1.

10

11 **Q. HOW WILL THE COSTS TO PROCURE RECS UNDER EPE'S 2010 PLAN**
12 **BE RECOVERED?**

13 A. EPE will recover the costs of RECs acquired with the purchase of renewable energy
14 through its monthly FPPCAC calculation. EPE will defer, with carrying costs, all
15 other costs associated with its Procurement Plan for recovery in a general rate
16 proceeding.

17

18 IV. REASONABLE COST THRESHOLD IMPACTS

19 **Q. DID EPE COMPARE ITS PROCUREMENT COSTS WITH THE RATE**
20 **CLASS CALCULATIONS TO EVALUATE THE COST THRESHOLD**
21 **IMPACT TO CUSTOMERS?**

22 A. Yes. The total incremental cost (in \$/kWh) of EPE's 2010 Plan is added to total

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1 billing for New Mexico retail customers for 2011 and 2012, and compared to
2 calculated billing prior to the inclusion of the renewable resource acquisition costs.
3 This is shown is Exhibit EDE-2. The same process was applied to evaluate the
4 impact to large, nongovernmental customers. Exhibit EDE-3 shows the percentage
5 impact to those customers' charges. As stated below, Exhibits EDE-2 and EDE-3
6 demonstrate that EPE's Procurement Plan costs are well within the statutory and
7 Commission-established limits.

8

9 **Q. HOW DID EPE CALCULATE THE INCREMENTAL COSTS OF THE**
10 **RENEWABLE RESOURCES?**

11 A. The incremental cost included the entire cost of the unbundled RECs plus the
12 incremental cost of the bundled renewable resources. The incremental cost of the
13 bundled renewable resources was calculated as the levelized cost of the renewable
14 resource less the levelized capacity cost of a comparable non-renewable technology,
15 less associated non-fuel fixed and variable costs, and less the levelized fuel-related
16 cost for the non-renewable technology. This calculation was performed consistent
17 with the consensus language from the workshops in NMPRC Case No. 08-00198-UT,
18 Inquiry into a Standard Methodology for Determining Renewable Energy Costs for
19 the Purpose of 17.9.572.11 NMAC.

20

21 **Q. PLEASE DESCRIBE THE COSTS OF THE NON-RENEWABLE**
22 **TECHNOLOGY ALTERNATIVES THAT WERE USED IN THE**

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1 **CALCULATION.**

2 A. The calculation of the costs for non-renewable technology alternatives for biomass
3 generation applications was based on the costs and operating characteristics for a
4 2-on-1 combined cycle from the EPRI Technical Assessment Guide and the Energy
5 Information Administration's ("EIA") March 2010 Annual Energy Outlook price
6 forecast for natural gas delivered to electric generation facilities. The forecasted
7 levelized cost of this generation is \$91.123 per MWh.

8 The calculation of the costs for non-renewable technology alternatives for
9 solar generation applications was based on the costs and operating characteristics for
10 a GE LMS100 gas turbine from the EPRI Technical Assessment Guide and the EIA's
11 March 2010 Annual Energy Outlook price forecast for natural gas delivered to
12 electric generation facilities. The forecasted levelized cost of this generation is
13 \$159.93 per MWh. In addition, due to a variety of factors, including the inability to
14 dispatch the generation and the fact that solar generation's full capacity is not
15 available all hours of the day, EPE credits solar generation with 85 percent of its rated
16 capacity for resource planning purposes. Consequently, the forecasted levelized cost
17 of a gas turbine is multiplied by 85 percent.

18

19 **Q. WILL EPE'S PROCUREMENT COSTS FOR 2011 AND 2012 EXCEED THE**
20 **RCT?**

21 A. No. As shown in Exhibit EDE-2, EPE's estimated costs of its 2010 Plan to meet the
22 2011 and 2012 RPS requirements will not exceed the RCT standard for those years.

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1

2 **Q. HAVE YOU EVALUATED THE RCT ANALYSIS THAT STAFF**
3 **DEVELOPED AND PROPOSED IN NMPRC CASE NOS. 10-00015-UT AND**
4 **10-00037-UT?**

5 A. Yes. In those cases the Staff recommended the rejection of the RCT analysis
6 approach developed in the levelized/avoided cost methodology proposed in Case
7 No. 08-00198-UT and proposed an RCT analysis that calculated the RCT based upon
8 bill impacts. In their analysis the Staff did not credit the renewable resource additions
9 with any capacity value, but only credited them with offsets for fuel or purchased
10 power costs.

11

12 **Q. IS THE APPROACH PROPOSED BY THE STAFF IN NMPRC CASE**
13 **NOS. 10-00015-UT AND 10-00037-UT REASONABLE FOR EPE IN THIS**
14 **CASE?**

15 A. No, it is not. EPE is currently constructing additional generation capacity and is
16 purchasing capacity to meet its growing loads. EPE will rely on the capacity from the
17 renewable resources to meet a portion of its resource planning needs. This is
18 reflected in EPE's NMPRC-approved Integrated Resource Plan, which was filed with
19 the NMPRC on July 16, 2009, and in EPE's latest Loads and Resource Plan, which is
20 attached as Exhibit EDE-4.

21

22 Therefore, it is appropriate to use the cost methodology proposed in Case
No. 08-00198-UT, which includes the capacity and energy cost of new generation. In

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1 EPE's RCT analysis, as the basis for its evaluation of the RCT, EPE used the EPRI
2 TAG costs for a combustion turbine, an 87 MWGE LMS100, and a 288 MW
3 combined cycle that were included in EPE's approved Integrated Resource Plan.
4

5 **Q. DOES THE ACT AND RULE REQUIRE EPE TO REDUCE ITS RPS**
6 **REQUIREMENTS IF THE COSTS EXCEED A CERTAIN DOLLAR OR**
7 **PERCENTAGE AMOUNT FOR LARGE NONGOVERNMENTAL**
8 **CUSTOMERS?**

9 A. Yes. The Act and Rule require EPE to reduce, as necessary, the kWh of renewable
10 energy procured for large, nongovernmental customers if the additional cost of the
11 RPS obligation, inclusive of all interconnection and transmission costs, exceeds the
12 lower of 2.0 percent or \$99,000 for 2011, and the lower of 2.25 percent or \$101,079
13 for 2012. The limit of \$101,079 for 2012 reflects the application of NMPRC
14 Rule 17.9.572.10 (C) NMAC and applying a forecasted change in the consumer price
15 index, urban (CPI-U) of 2.10 percent to the 2011 value of \$99,000.
16

17 **Q. IS EPE PROPOSING TO REDUCE ITS RENEWABLE ENERGY**
18 **REQUIREMENTS IN 2011 OR 2012 FOR LARGE, NONGOVERNMENTAL**
19 **CUSTOMERS?**

20 A. No. Based on EPE's forecasted customer energy consumption and the estimated
21 procurement price of renewable resources for 2011 and 2012, as provided by EPE
22 Witness Acosta, EPE will not need to reduce its renewable energy requirements in

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1 2011 or 2012 to limit procurement for large, nongovernmental customers. The
2 additional cost of the RPS will not cause the individual annual charges to these
3 customers to exceed the statutory limitations. Exhibit EDE-3 demonstrates that EPE's
4 large, nongovernmental customers will not reach the cap established in the Act and
5 Rule.

6

7 **Q. HOW DID EPE DETERMINE THAT THE RPS REQUIREMENTS NEED**
8 **NOT BE REDUCED?**

9 A. To determine whether a reduction would be necessary, either for the overall RCT or
10 for individual nongovernmental customers, EPE has assumed that base rates in effect
11 on the day of the procurement plan filing will be in effect for 2011 and 2012, as
12 required by NMPRC Rule 572. For the purposes of EPE's 2010 Procurement Plan,
13 EPE's evaluation is based on EPE's current rates that went into effect in January,
14 2010, together with the Fuel and Purchased Power Adjustment Clause ("FPPCAC")
15 charges that were charged during 2009, as required by the Rule, but adjusted for
16 changes to the fuel component of base rates in EPE's new rates.

17

18 **V. SMALL SYSTEM REC PURCHASE PROGRAM**

19 **Q. PLEASE DISCUSS EPE'S PROPOSED MODIFICATIONS TO THE SMALL**
20 **SYSTEM REC PROGRAM.**

21 A. Pursuant to the Final Order approving EPE's 2009 Plan in NMPRC Case No. 09-
22 00259-UT, the Commission expanded participation in the Company's Small System

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1 REC program from only solar renewable generation rated 10 kW or less to also
2 include wind generation rated 10 kW or less. The Company does not believe it is
3 necessary to make any changes to the structure or the applicability of this program at
4 this time. Therefore, the only changes to the Small System REC Purchase Program
5 from that which was approved in NMPRC Case No. 09-00259-UT is to update the
6 price paid to solar and wind facilities to reflect the results of a payback calculation
7 based on current costs for small PV facilities and small wind facilities and based upon
8 current retail rates and other information. The proposed revised tariff for the Small
9 System REC Purchase Program is provided in Exhibit EDE-5. Upon approval by the
10 Commission of the updated prices, EPE will file the revised tariff as a compliance
11 advice notice filing.

12
13 **Q. PLEASE DISCUSS THE SMALL RENEWABLE DG FACILITIES**
14 **CURRENTLY CONNECTED TO EPE'S SYSTEM AND THE**
15 **PARTICIPATION IN EPE'S CURRENT SMALL SYSTEM REC PROGRAM.**

16 **A.** Currently, 132 customer-owned small renewable DG facilities are connected to EPE's
17 system and participating in the Small System REC Program. Of these facilities, 129
18 are solar generation QFs and three of these systems are wind generation QFs.

19 In addition, another 34 small solar QFs are under construction or otherwise in
20 the process of completing the steps necessary to participate in the program. The
21 construction on all 34 systems and the completion of the process to participate in the
22 program should be completed this summer. Furthermore, the Company is regularly

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1 responding to inquiries from additional customers interested in installing small PV or
2 wind generation systems.

3 The total peak capacity for all the currently installed and participating systems
4 is 438.4 kW and the total peak capacity for the systems under construction is
5 97.7 kW. The increase in small DG renewable systems connected to EPE's system
6 has been significant since EPE's program became effective as of March 1, 2009. At
7 the time EPE filed its 2008 Plan, the Company had 23 customer-installed systems,
8 including two wind generation systems, in New Mexico. At the time EPE filed its
9 2009 Plan, the number of customer-installed systems in New Mexico had increased to
10 45. Therefore, 87 new customer-installed facilities have connected to EPE's system in
11 the last 12 months, which reflects a 193% increase.

12

13 **Q. WHAT IS EPE'S PROJECTED PARTICIPATION IN THE SMALL SYSTEM**
14 **REC PROGRAM AND THE PROJECTED NUMBER OF RECS PROVIDED**
15 **BY THE PROGRAM?**

16 **A.** EPE projects it will have at least 166 systems participating in the Small System REC
17 Program by the end of 2010. In addition, EPE expects the number of participants to
18 increase by 60 systems per year, or an average of 5 new systems per month, in 2011
19 and 2012.

20

21 **Q.** **PLEASE EXPLAIN YOUR PROPOSED UPDATE TO THE INCENTIVE**
22 **PRICE FOR SOLAR GENERATION FACILITIES PARTICIPATING IN THE**

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1 **PROGRAM.**

2 **A.** The proposed incentive price for small solar generation facilities is \$0.098 per kWh
3 for a guaranteed period of 12 years. The proposed incentive price calculation is
4 provided on Exhibit EDE-6. The Company calculated the incentive price to reflect
5 the payback calculation for the average size facility currently connected to EPE's
6 system, the estimated current costs for small PV facilities installed, current federal
7 and state tax incentives, and the fact that the vast majority of current facilities are
8 owned by and connected to Residential Service customers.

9

10 **Q. WHAT IS THE BASIS OF THE ESTIMATED CURRENT INSTALLED**
11 **COSTS FOR SMALL PV FACILITIES USED IN THE INCENTIVE PRICE**
12 **CALCULATION FOR SOLAR GENERATION QFs PARTICIPATING IN**
13 **THE SMALL SYSTEM REC PROGRAM?**

14 **A.** EPE surveyed customers currently participating in the Small System REC Program
15 and obtained information on the installed cost of 15 systems that have connected to
16 EPE in the last 12 months. Exhibit EDE-7 provides the installed cost information of
17 the 15 respondents that connected to EPE since June 2009 and indicates that the
18 median installed cost of the systems was \$7.28 per Watt. The lowest installed cost
19 was \$6.52 per Watt and the highest installed cost was \$8.14 per Watt.

20 In EPE's incentive price calculation, EPE used an installed cost of \$6.95 per
21 Watt, which reflects the installed cost per kW at the breakpoint between the lowest
22 priced quartile of the sample. This reflects the fact that the installed cost for PV

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1 systems has declined significantly since the Small System REC Program was initially
2 approved in December 2008 and the costs are generally expected to continue to
3 decline. This declining cost trend is reflected in Exhibit EDE-8, which contains a
4 graph of the combined retail cost of solar modules and inverters by month in the U.S.
5 for the period of January 2009 through June 2010.

6

7 **Q. WHY DID EPE DEVELOP ITS PROPOSED INCENTIVE PRICE FOR**
8 **SOLAR GENERATION TO NOT PROVIDE 100% PAYBACK OF THE**
9 **SYSTEM COSTS OVER THE PROPOSED CONTRACT TERM?**

10 **A.** The Company does not believe it is appropriate to require non-participating
11 customers who either cannot afford to purchase or lease a system or elect to not do so
12 to guarantee that participants will receive 100% payback of the system costs over the
13 contract term, particularly when the expected average service life of these systems are
14 significantly longer than the term under which the price is guaranteed. Therefore, it is
15 reasonable for those who can afford to purchase or lease solar generating systems to
16 be required to recover some portion of their investment from economic benefits
17 received after the guaranteed incentives have ended. Nevertheless, as noted on
18 Exhibit EDE-6, customers should fully recover their investment in only 2.4 years
19 after the end of their contract term, but with more than 15 years of average remaining
20 service life for their systems. Consequently, although the participants should have
21 fully recovered their investment, they will continue to receive economic benefits on
22 their investment for several more years.

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1

2 **Q. PLEASE EXPLAIN YOUR PROPOSED UPDATE TO THE INCENTIVE**
3 **PRICE FOR WIND GENERATION FACILITIES PARTICIPATING IN THE**
4 **PROGRAM.**

5 A. The incentive price calculation is provided on Exhibit EDE-9. The Company
6 calculated the incentive price to reflect the payback calculation for the average size
7 wind turbine currently connected to EPE's system, the estimated current costs for
8 small wind generation facilities, current federal and state tax incentives, and the fact
9 that most currently connected facilities are owned by and connected to Residential
10 Service customers.

11 The cost for small wind generation facilities was based upon the quoted
12 package price for a 2.0 kW wind turbine, which is approximately equal to the size of
13 the average customer-owned wind turbine currently connected to EPE's system in
14 New Mexico. In addition, the calculation reflects the 30 percent federal tax credit
15 available to wind turbines pursuant to the Energy Improvement and Extension Act of
16 2008 and that there is no state income tax credit offered to small wind generation
17 facilities. The calculation resulted in a proposed guaranteed incentive price for small
18 wind generation facilities of \$0.076 per kWh fixed for a period of 12 years.

19

20 **Q. IS EPE REQUESTING THE RIGHT TO LIMIT THE NUMBER OF**
21 **CUSTOMERS ALLOWED TO PARTICIPATE IN THE SMALL SYSTEM**
22 **REC PURCHASE PROGRAM AT THIS TIME?**

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1 A. No, not at this time.

2

3 **Q. WHAT ARE SOME OF THE BENEFITS OF EPE'S SMALL SYSTEM REC**
4 **PURCHASE PROGRAM?**

5 A. A primary benefit of the Purchase Program is that it has increased the total amount of
6 renewable energy produced on or delivered to EPE's system by encouraging retail
7 customers to install renewable energy systems and to maintain existing systems.
8 Another important benefit is that it helps develop distributed generation to comply
9 with the current requirements of the Rule and to provide operational benefits for
10 EPE's system. Another benefit of this program is that through encouraging the
11 installation of small DG systems, it can reduce EPE's forecasted annual system peak
12 load requirements.

13

14 **Q. HOW WILL THE PURCHASE PROGRAM ENCOURAGE CUSTOMERS TO**
15 **INSTALL AND MAINTAIN RENEWABLE ENERGY SYSTEMS?**

16 A. Participating customers will be able to sell to EPE the RECs created when their small
17 system produces energy. This will help the customers defray some of the costs of
18 installing and maintaining the system and will reduce the expected payback period for
19 customers' investment in systems. The combination of the Purchase Program and the
20 benefits derived from net metering should provide customers with incentives to
21 ensure their systems are properly maintained and producing the maximum energy
22 possible.

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1

2 **Q. WHAT IS THE AMOUNT EPE PROJECTS TO PAY PROGRAM**
3 **PARTICIPANTS FOR REC PURCHASES?**

4 **A.** Based upon the average size of the systems currently connected to EPE and the
5 expected capacity factors for the applications, it is estimated that EPE will pay the
6 typical small PV participant approximately \$618 per year and will pay the typical
7 small wind generation participant approximately \$333 per year.

8

9 **Q. WHAT ARE THE FINANCIAL BENEFITS CUSTOMERS WILL RECEIVE**
10 **FOR PARTICIPATING IN THE SMALL SYSTEM REC PURCHASE**
11 **PROGRAM?**

12 **A.** The value obtained by a customer under net metering is based on EPE's retail rate
13 tariff. Currently, for a Residential Service customer, the value of net metering is
14 \$0.11672 per kWh of a customer's generation that offsets the customer's
15 consumption during a given month and the value for a non-demand metered Small
16 Commercial Service customer is \$.14657 per kWh. In addition, these customers
17 receive an incentive price per kWh that EPE pays the customer for RECs purchased
18 from the customer.

19

20 **Q. HOW DOES EPE COMPENSATE PROGRAM PARTICIPANTS FOR THEIR**
21 **RECS?**

22 **A.** RECs are purchased by EPE from each participant as part of the regular monthly

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1 billing process. Participants receive a monthly statement documenting the number of
2 kWh produced by the system, the number of RECs purchased by EPE, the purchase
3 price per REC and the total price of RECs purchased from the participant by EPE
4 during that billing period.

5 REC purchase payments are applied as a credit to the participant's electric bill
6 on a monthly basis. If the amount paid for the RECs is greater than the total of the
7 customer's monthly electric service plus kWh charges, but less than \$30, the balance
8 of the REC payment is carried forward as a credit for the following month's bill. If
9 the balance exceeds \$30, EPE sends the customer a check for the entire balance.

10

11 **Q. WHAT FEES AND CHARGES DOES EPE IMPOSE TO PARTICIPATE IN**
12 **THE PROGRAM?**

13 **A.** Participants are charged in accordance with EPE's interconnection agreements. The
14 only other fee or charge to participants in the program is the \$50 application fee
15 included in the program Application. This fee is intended to cover the cost of
16 processing the application and the cost of installing the second meter required for the
17 program. Currently interconnected customers only pay the one-time fee to join the
18 Purchase Program.

19

20 **Q. DOES EPE REQUIRE THAT A SECOND METER BE INSTALLED?**

21 **A.** Yes. A second meter is required because the total number of RECs created by the
22 customer-owned renewable system is counted by measuring the total kWh output of

**EL PASO ELECTRIC COMPANY
DIRECT TESTIMONY OF
EVAN D. EVANS**

1 the customer's system. To measure the total output of the system an additional meter
2 must be installed at the output of the customer-owned system.

3

4 **Q. WHO IS RESPONSIBLE FOR PROVIDING THE METER SOCKET AND**
5 **WIRING FOR THE SECOND METER?**

6 **A.** The Small PV Program participant is responsible for installing the meter socket and
7 all wiring for the second meter. EPE provides and installs the second meter.

8

9 **Q. WHAT ARE THE PROPOSED COSTS FOR THE PURCHASE PROGRAM?**

10 **A.** EPE estimates the cost of the program in 2011 to total approximately \$126,285 and
11 the cost for the program in 2012 is estimated to be \$163,316.

12

13 **VI. MEDIUM SYSTEM REC PURCHASE PROGRAM**

14 **Q. PLEASE DESCRIBE THE COMPANY'S MEDIUM SYSTEM REC**
15 **PURCHASE PROGRAM.**

16 **A.** The Medium System REC Purchase Program is similar to the Small System REC
17 Purchase program, except that it is available for systems with a maximum rated
18 output from 10 kW to 100 kW.

19 In addition, the proposed incentive prices for Medium System REC Purchase
20 Program systems differ from the prices for small systems because these prices were
21 developed based upon the costs for solar and wind facilities of that size.

22 EPE offers the program through the Commission-approved Medium System

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1 Renewable Energy Certificate Purchase tariff. The updated tariff, which is attached
2 as Exhibit EDE-10, is modified from the tariff approved in NMPRC Case
3 No. 09-00259-UT only to reflect updated prices. Upon approval by the Commission
4 of the updated prices, EPE will file the revised tariff as a compliance advice notice
5 filing. EPE offers the tariff in conjunction with the use of the approved Application
6 to Participate in Purchase Program for Medium System RECs (“Medium System
7 Application”) between EPE and individual customers, which EPE is not proposing to
8 modify. The Medium System Application sets forth the terms of program
9 participation. Customers are also required to interconnect their facilities in
10 accordance with the Commission’s QF interconnection rules and agreements.

11

12 **Q. WHAT INCENTIVE PRICE PER KWH IS EPE PROPOSING TO PAY**
13 **PARTICIPANTS UNDER THE MEDIUM SYSTEM REC PROGRAM?**

14 **A.** The Company proposes to pay solar generation participants \$0.124 per kWh and wind
15 generation participants \$0.024 per kWh.

16

17 **Q. PLEASE EXPLAIN HOW THE PROPOSED INCENTIVE PRICE FOR**
18 **SOLAR GENERATION WAS DEVELOPED.**

19 **A.** The incentive price for solar generation for the Medium System REC Purchase
20 Program was developed similar to the calculation for solar generation in the Small
21 System REC Purchase Program. The calculation is provided on Exhibit EDE-11.
22 The Company calculated the incentive price to reflect the payback calculation based

**EL PASO ELECTRIC COMPANY
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1 upon the estimated current costs for a 50 kW AC PV facility, expected operating
2 characteristics for a PV system, current federal tax incentives, and the expectation
3 that these facilities will typically be owned by and connected to corporate customers
4 served under EPE's General Service rate.

5

6 **Q. PLEASE EXPLAIN HOW THE PROPOSED INCENTIVE PRICE FOR WIND**
7 **GENERATION WAS DEVELOPED.**

8 **A.** The incentive price for solar generation for the Medium System REC Purchase
9 Program was developed similar to the calculation for solar generation in the Small
10 System REC Purchase Program. The calculation is provided on Exhibit EDE-12.
11 The Company calculated the incentive price to reflect the payback calculation based
12 upon the quoted turn-key price for a 50 kW AC wind turbine, expected performance
13 characteristics for the wind turbine, current federal tax incentives, and the expectation
14 that these facilities will typically be owned by and connected to corporate customers
15 served under EPE's General Service rate.

16

17 **Q. WHY IS THE PROPOSED INCENTIVE PRICE FOR WIND GENERATION**
18 **SIGNIFICANTLY LOWER THAN THE PRICE FOR SOLAR**
19 **GENERATION?**

20 **A.** The primary factors that lead to the lower proposed incentive price for wind
21 generation are: 1) a significantly lower estimated after-tax installed cost of \$4.50 per
22 Watt compared to \$6.26 per Watt; 2) a higher assumed net capacity factor for wind

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1 generation; and 3) no expected degradation in system efficiency over the 12-year
2 term.

3

4 **Q. WHAT RENEWABLE SYSTEMS ARE ELIGIBLE TO PARTICIPATE IN**
5 **THE PURCHASE PROGRAM?**

6 **A.** New and existing renewable energy systems utilizing solar or wind generation, rated
7 at 10 kW AC to 100 kW AC qualify to participate. To be eligible, these systems must
8 have an interconnection agreement with EPE in compliance with NMPRC Rule 568,
9 be interconnected with EPE, and have completed the Application to Participate in
10 Purchase Program for Medium System RECs.

11

12 **Q. ARE CUSTOMERS REQUIRED TO PARTICIPATE IN THE PURCHASE**
13 **PROGRAM IN ORDER TO INTERCONNECT WITH EPE'S SYSTEM?**

14 **A.** No.

15

16 **Q. WHAT ARE THE BENEFITS TO A MEDIUM SYSTEM PROGRAM**
17 **PARTICIPANT, INCLUDING NET METERING OF THEIR ELECTRICITY**
18 **USAGE?**

19 **A.** The value obtained by a customer under net metering is based on EPE's retail rate
20 tariff. It is expected that participating customers will be served under the Company's
21 Small Commercial, General Service, Large Power Service or City & County Service
22 rates. For an average General Service customer, the value of net metering for 2011 is

**EL PASO ELECTRIC COMPANY
DIRECT TESTIMONY OF
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1 approximately \$0.10597 per kWh of a customer's generation that offsets the
2 customer's consumption during a given month. The proposed incentive price for
3 participating customer-installed solar generation systems will be \$0.124 and the
4 proposed incentive price for wind generation systems \$0.024. Consequently, the
5 projected 2011 total value to a net metered customer of the RECs and energy
6 produced by a participating solar generation facility will be approximately \$0.22997
7 per kWh and the total value to a participating wind generation facility is \$0.12997.

8
9 **Q. HOW DOES EPE COMPENSATE PROGRAM PARTICIPANTS FOR THEIR**
10 **RECS?**

11 **A.** RECs are purchased by EPE from each participant as part of the regular monthly
12 billing process. Participants receive a monthly invoice documenting the number of
13 kWh produced by the system, the number of RECs purchased by EPE, the purchase
14 price per REC and the total price of RECs purchased from the participant by EPE that
15 billing period.

16 REC purchase payments are applied as credits to the participants' electric bills
17 on a monthly basis. If the amount paid for the RECs is greater than the total of the
18 customer's monthly electric service plus kWh charges, but less than \$30, the balance
19 of the REC payment will be carried forward as a credit for the following month's bill.
20 If the balance exceeds \$30, EPE will send the customer a check for the entire balance.

21
22 **Q. WHAT FEES AND CHARGES DO EPE IMPOSE TO PARTICIPATE IN THE**

**EL PASO ELECTRIC COMPANY
DIRECT TESTIMONY OF
EVAN D. EVANS**

1 **PROGRAM?**

2 **A.** Participants are charged in accordance with EPE's interconnection agreements. The
3 only other fee or charge to participants in the program will be the \$50 application fee
4 included in the program Application. This fee is intended to cover the cost of
5 processing the application and the cost of installing the second meter required for the
6 program. Currently interconnected customers will pay the one-time fee to join the
7 Purchase Program.

8

9 **Q. DOES EPE REQUIRE THAT A SECOND METER BE INSTALLED?**

10 **A.** Yes. A second meter is required because the total number of RECs created by the
11 customer-owned renewable system is counted by measuring the total kWh output of
12 the customer's system. To measure the total output of the system an additional meter
13 must be installed at the output of the customer-owned system.

14

15 **Q. WHO IS RESPONSIBLE FOR PROVIDING THE METER SOCKET AND**
16 **WIRING FOR THE SECOND METER?**

17 **A.** The Medium System REC Program participant is responsible for installing the meter
18 socket and all wiring for the second meter. EPE will provide and install the second
19 meter. The cost of the meter is included in EPE's total program costs.

20

21 **Q. WHAT IS EPE'S CURRENT PROJECTED PARTICIPATION IN THE**
22 **MEDIUM SYSTEM REC PROGRAM AND THE PROJECTED NUMBER OF**

**EL PASO ELECTRIC COMPANY
DIRECT TESTIMONY OF
EVAN D. EVANS**

1 **RECS PROVIDED BY THE PROGRAM?**

2 **A.** EPE does not currently have any facilities in New Mexico that are participating in the
3 Medium System REC program. However, EPE has received a number of inquiries by
4 potential participants in the Medium System REC Purchase Program, EPE projects
5 that to add one participant in the Medium System REC Purchase Program per year
6 during 2010 and 2011.

7

8 **Q.** **WHAT ARE THE PROPOSED COSTS FOR THE MEDIUM SYSTEM REC**
9 **PURCHASE PROGRAM?**

10 **A.** EPE estimates the cost of the program in 2011 to total approximately \$7,395 and the
11 cost for the program in 2012 is estimated to be \$13,311.

12

13

VII. CONCLUSION

14 **Q.** **PLEASE SUMMARIZE THE IMPACTS OF ESTIMATED COSTS**
15 **ASSOCIATED WITH EPE'S 2010 PROCUREMENT PLAN ON**
16 **CUSTOMERS.**

17 **A.** EPE's estimated costs of meeting the Act's renewable energy requirements for 2011
18 and 2012 through the purchase of RECs with and without related energy will not
19 cause EPE to reduce kWh purchases for large, nongovernmental customers or to
20 exceed the reasonable cost threshold standard set by the Commission for those years.
21 EPE will recover the costs of renewable purchases that include energy and associated
22 RECs through its FPPCAC on a monthly basis; all other costs of EPE's Procurement

**EL PASO ELECTRIC COMPANY
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EVAN D. EVANS**

1 Plan, including RECs purchased without associated energy, will be deferred with
2 carrying costs for later recovery in a general rate proceeding.

3

4 **Q. ARE EPE'S PROPOSED CHANGES TO THE SMALL SYSTEM REC**
5 **PURCHASE PROGRAM AND THE MEDIUM SYSTEM REC PURCHASE**
6 **PROGRAM REASONABLE AS TO THEIR TERMS AND COSTS, BASED ON**
7 **THE ACT AND RULE?**

8 A. Yes. EPE's Small System REC Purchase Program and its Medium System REC
9 Purchase Program have already shown that they encourage the development of
10 distributed generation on EPE's system and are expected to continue to encourage
11 that development. In addition, these programs will provide EPE with reasonably-
12 priced RECs that will help EPE to meet minimum percentage targets established by
13 the Commission.

14

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

16 A. Yes.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF EL PASO)
ELECTRIC COMPANY'S 2010)
PROCUREMENT PLAN PURSUANT)
TO THE RENEWABLE ENERGY ACT)
AND NMAC 17.9.572.16)
_____)

CASE NO. 10-00 ____-UT

AFFIDAVIT

STATE OF TEXAS)
) ss
COUNTY OF EL PASO)

Evan D. Evans hereby deposes and states under oath that the information contained in the foregoing Direct Testimony of Evan D. Evans, together with the exhibits attached thereto, is true and accurate based on my personal knowledge and belief.

SIGNED this 28th day of June, 2010.


EVAN D. EVANS

Subscribed and sworn to before me this 28th day of June, 2010.



My Commission expires:
01/14/2012



EL PASO ELECTRIC COMPANY
Calculated Incremental Cost and Factors for
Renewable Resource Procurement for the 2011 and 2012 Procurement Years

Line No.	Description	Reference	2011	2012
<u>REC Purchases without Energy</u>				
1	PNM Wind REC Purchase	Exhibit RA-1	\$ 1,002,251	\$ -
2	SPS REC Purchase	Exhibit RA-1	900,000	700,000
3	Total REC Purchases without Energy (Net of No Avoided Costs)	Sum (1 + 2)	\$ 1,902,251	\$ 700,000
<u>CRLEF Project Biomass REC Purchase</u>				
4	CRLEF Project REC Purchase	Exhibit RA-1	\$ 159,000	\$ 182,850
5	2010 Levelized Fixed Cost per MWh of Combined Cycle (1)	Workpaper	\$ 24.628	\$ 24.628
6	MWh Purchased from CRLEF	Exhibit RA-1	10,600	12,190
7	Total Avoided Fixed Cost of Combined Cycle	Line 5 * Line 6	\$ 261,058	\$ 300,217
8	Net Incremental CRLEF Costs above Avoided Costs	Line 4 - Line 7	\$ (102,058)	\$ (117,367)
<u>Solar Energy Purchases</u>				
9	SWEC Solar Energy Purchases	Exhibit RA-1	\$ 1,493	\$ 1,508
10	Hatch Solar Energy Purchases	Exhibit RA-1	1,279,162	1,632,783
11	NRG SunTower Solar Energy Purchases	Exhibit RA-1	-	5,582,310
12	SunEdison Solar Energy Purchases	Exhibit RA-1	-	5,869,119
13	Small & Medium System REC Purchase Programs - Solar	Workpaper	133,470	176,417
14	Total Solar Energy Purchases	Sum (9 thru 13)	\$ 1,414,125	\$ 13,262,137
15	2010 Levelized Avoided Cost per MWh of Combustion Turbine (2)	Workpaper	\$ 159.932	\$ 159.932
16	MWh Solar Energy Purchases	Exhibit RA-1	11,840	115,261
17	Total Avoided Cost of Combustion Turbine	Line 15 * Line 16	\$ 1,893,643	\$ 18,433,921
18	Net Incremental Solar Energy Costs above Avoided Costs	Line 14 - Line 17	\$ (479,518)	\$ (5,171,784)
<u>Wind Energy Purchases</u>				
19	Small & Medium System REC Purchase Programs - Wind	Workpaper	\$ 210	\$ 210
20	Applicable Avoided Costs		-	-
21	Net Incremental Wind Energy Costs above Avoided Costs	Line 19 - Line 20	\$ 210	\$ 210
22	Total Annual Incremental Cost of Renewable Procurement Plan	Sum(3, 8, 18 & 21)	\$ 1,320,885	\$ (4,588,941)

NOTE:

(1) Levelized Fixed Cost per MWh of 2X1 7EA Combined Cycle based on EPRI TAG calculation.

(2) Levelized Cost per MWh of GE LMS100 Combustion Turbine based on EPRI TAG calculation and fuel cost projection from March 2010 EIA Annual Energy Outlook forecast of natural gas prices for delivery to electric generation (Released 12-2009).

EL PASO ELECTRIC COMPANY
Calculated Incremental Cost and Factors for
Renewable Resource Procurement for the 2011 and 2012 Procurement Years

Line No.	Description	2011	2012
1	Forecasted New Mexico Jurisdictional MWH Sales at Meter (1)	1,685,406	1,757,908
2	New Mexico System Loss Factor (2)	1.080062	1.080062
3	Forecasted New Mexico Jurisdictional MWH Sales at Supply	1,820,343	1,898,650
4	Total Annual Incremental Cost of Renewable Resource Purchases	\$ 1,320,885	\$ (4,588,941)
	New Mexico System Incremental Cost Factor for Renewable Resource		
5	Procurement Applicable to all kWh sales, \$/kWh	\$ 0.00073	\$ (0.00242)
6	Loss adjusted for secondary voltage delivery	\$ 0.00073	\$ (0.00244)
7	Loss adjusted for primary voltage delivery	\$ 0.00072	\$ (0.00238)
8	Loss adjusted for transmission voltage delivery	\$ 0.00068	\$ (0.00228)

Notes:

(1) EPE's 2010 Forecast of New Mexico Jurisdiction kWh Sales

(2) EPE's Filed Eighteenth Revised Rate No. 18, NMPRC Case No. 09-00171-UT

EL PASO ELECTRIC COMPANY
Procurement Plan Pursuant to the Renewable Energy Act
Estimated Total Billing Impact for
2011 and 2012 Procurement Years

Description	Projected Annual kWh	Projected Annual Revenues	Procurement Plan Impact	Adjusted Annual Revenues	% Increase	Reasonable Cost Threshold	Amount in Excess of RCT
2011 Total New Mexico Retail	1,685,405,729	\$ 192,318,935	\$ 1,320,885	\$ 193,639,820	0.69%	2.00%	0%
2012 Total New Mexico Retail	1,757,908,188	\$ 200,592,073	\$ (4,588,941)	\$ 196,003,133	-2.29%	2.25%	0%

EL PASO ELECTRIC COMPANY
Procurement Plan Pursuant to the Renewable Energy Act
Estimated Customer Billing Impacts on Large Non-Governmental Customers
for 2011 and 2012 Procurement Years

2011 Procurement Year

Line No.	Customer	Service Voltage	2009 Annual kWh	2010 Annual Bill	Procurement Year Billing	Portfolio \$ Impact	Amount Above \$ Threshold	Portfolio % Impact	Percent Above Threshold	
1	Customer 1	Primary	18,607,762	\$ 1,180,408	\$ 1,193,728	\$ 13,320	\$ 99,000	1.12%	2.00%	
2	Customer 2	Secondary	15,928,175	\$ 1,402,106	\$ 1,413,755	\$ 11,649	\$ -	0.82%	0%	
3	Customer 3	Secondary	11,860,432	\$ 1,150,962	\$ 1,159,636	\$ 8,674	\$ -	0.75%	0%	
4	Customer 4	Secondary	10,466,893	\$ 855,559	\$ 863,214	\$ 7,655	\$ -	0.89%	0%	
5	Customer 5	Secondary	9,701,871	\$ 679,308	\$ 686,403	\$ 7,095	\$ -	1.03%	0%	
6	Total			\$ 5,268,343	\$ 5,316,736	\$ 48,392	\$ -			
7	NM kWh Sales at Meter 2011									
8	1,685,405,729									
9	1,820,342,682									
10	2011 Renewable Portfolio Incremental Cost									
11	\$ 1,320,885									
12	NM System Incremental Charge for Renewable Resources									
	\$ 0.00073									
	Loss Adjusted for Secondary Voltage Delivery									
	\$ 0.00073									
	Loss Adjusted for Primary Voltage Delivery									
	\$ 0.00072									

2012 Procurement Year

Line No.	Customer	Service Voltage	2009 Annual kWh	2010 Annual Bill	Procurement Year Billing	Portfolio \$ Impact	Amount Above \$ Threshold	Portfolio % Impact	Percent Above Threshold	
13	Customer 1	Primary	18,607,762	\$ 1,180,408	\$ 1,136,042	\$ (44,366)	\$ 101,079	-3.76%	2.25%	
14	Customer 2	Secondary	15,928,175	\$ 1,402,106	\$ 1,363,306	\$ (38,800)	\$ -	-2.77%	0%	
15	Customer 3	Secondary	11,860,432	\$ 1,150,962	\$ 1,122,071	\$ (28,891)	\$ -	-2.51%	0%	
16	Customer 4	Secondary	10,466,893	\$ 855,559	\$ 830,062	\$ (25,497)	\$ -	-2.98%	0%	
17	Customer 5	Secondary	9,701,871	\$ 679,308	\$ 655,675	\$ (23,633)	\$ -	-3.48%	0%	
18	Total			\$ 5,268,343	\$ 5,107,155	\$ (161,188)	\$ -			
19	NM kWh Sales at Meter 2012									
20	1,757,908,188									
	1,898,649,833									
21	2012 Renewable Portfolio Incremental Cost									
22	\$ (4,588,941)									
23	NM System Incremental Charge for Renewable Resources									
	\$ (0.00242)									
	Loss Adjusted for Secondary Voltage Delivery									
	\$ (0.00244)									
	Loss Adjusted for Primary Voltage Delivery									
	\$ (0.00238)									

El Paso Electric Company

Loads & Resources Scenario 5.11.10

2011 - 2020

ST2 solar LMS100 LNDP CC LMS100 CC LMS100 CC

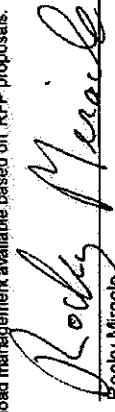
	Year									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1.0 GENERATION RESOURCES ⁽¹⁾	1,791	1,791	1,878	1,893	2,136	2,060	2,043	2,063	2,160	2,267
1.1 RIO GRANDE	229	229	184	229	184	184	184	138	138	138
1.2 NEWMAN	762	762	762	762	686	686	686	459	459	288
1.3 FOUR CORNERS	104	104	104	104	104	104	-	-	-	-
1.4 COPPER	62	62	62	62	62	62	62	62	62	62
1.5 PALO VERDE	633	633	633	633	633	633	633	633	633	633
1.6 WIND/BIO MASS (renewables)	1	1	1	16	16	16	16	21	21	21
1.7 NEW BUILD (local)	-	-	87	87	375	375	462	750	837	1,125
1.0 TOTAL GENERATION RESOURCES	1,791	1,791	1,978	1,893	2,136	2,060	2,043	2,063	2,160	2,267
2.0 RESOURCE PURCHASES	49	83	100	134	134	134	234	234	234	234
2.1 MARKET BLOCK PURCHASE	40	40	40	40	40	40	40	40	40	40
2.2 RENEWABLE PURCHASE (Solar PV Project)	-	34	51	85	85	85	85	85	85	85
2.3 OTHER RENEWABLE PURCHASE	9	9	9	9	9	9	9	9	9	9
2.4 SPP DISPATCHABLE PURCHASE	-	-	-	-	-	-	-	-	-	-
2.5 PURCHASE	-	-	-	-	-	-	-100	-	-	-
3.0 TOTAL NET RESOURCES (1.0 + 2.0)	1,840	1,874	1,978	2,027	2,270	2,194	2,277	2,297	2,384	2,501
4.0 SYSTEM DEMAND ⁽³⁾	1,603	1,630	1,686	1,751	1,816	1,879	1,940	1,994	2,049	2,104
4.1 NATIVE SYSTEM DEMAND	1,682	1,745	1,816	1,886	1,957	2,026	2,094	2,155	2,216	2,278
4.2 COGENERATION	(16)	(22)	(26)	(31)	(36)	(42)	(48)	(54)	(60)	(66)
4.3 LINE LOSSES	2	2	2	2	2	2	2	2	2	2
4.4 INTERRUPTIBLE SALES	(65)	(65)	(66)	(66)	(67)	(67)	(68)	(69)	(69)	(70)
4.5 LOAD MANAGEMENT ⁽⁴⁾	-	(30)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)
5.0 TOTAL SYSTEM DEMAND (4.0)	1,603	1,630	1,686	1,751	1,816	1,879	1,940	1,994	2,049	2,104
6.0 MARGIN OVER TOTAL DEMAND (3.0 - 5.0)	237	244	292	276	454	315	337	303	335	397
7.0 PLANNING RESERVE 15%	240	245	263	263	272	282	291	299	307	316
8.0 MARGIN OVER RESERVE (6.0 - 7.0)	(3)	(1)	39	13	182	33	46	4	28	81
9.0 DEMAND PLUS RESERVE (6.0 + 7.0)	1,843	1,875	1,939	2,014	2,088	2,161	2,231	2,293	2,356	2,420

Generation Additions
 Newman 5 second phase (148MW) in 2011
 Gas Peaker LMS100 (87MW) in 2013
 Landfill Gas Project (15MW) in 2014
 Combined Cycle (288MW) in 2015
 LMS100 (87MW) in 2017
 Combined Cycle (288MW) in 2018
 LMS100 (87MW) in 2019
 Combined Cycle (288MW) in 2020

Unit Retirements
 Rio Grande 6 (45MW) - December 2014
 Rio Grande 7 (46MW) - December 2017
 Newman 2 (76MW) - December 2015
 Newman 1 (74MW) - December 2019
 Newman 4 (227MW) - December 2017
 Newman 3 (97MW) - December 2019

Notes:

1. Generation unit retirements are based on findings in Burns & McDonnell studies for Rio Grande and Newman units dated April 2010.
2. Purchases based on existing and estimated future purchases including renewable purchases to meet RPS requirements.
3. System Demand based on Long-term and Budget Year Forecast issued March 18, 2010.
 Includes state-required energy efficiency targets for conservation, energy efficiency and load management.
 Interruptible load reflects current and contracts and includes new contract with Western Refinery.
4. Load Management reflects estimates not in Long-term and Budget Year Forecast but rather new load management available based on RFP proposals.


 Rocky Miracle
 Senior Vice President, Corporate Planning and Development

**EL PASO ELECTRIC COMPANY
SECOND REVISED RATE NO. 33
CANCELLING FIRST REVISED RATE NO. 33**

X
X

SMALL SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

Page 1 of 3

APPLICABILITY:

This Small System Renewable Energy Certificate ("REC") Purchase Rate is available to customers owning renewable generation rated 10 kW or less pursuant to NMPRC Rule 570. Participation by type of renewable energy facility is subject to approvals of the NMPRC. Service under this schedule requires an executed Standard Interconnection Agreement for Qualifying Facilities 10 kW or Less and a completed Application to Participate in Purchase Program for Small System Renewable Energy Certificates.

TERRITORY:

Areas served by the Company in Dona Ana, Sierra, Otero and Luna Counties.

DEFINITIONS:

Small System Renewable Energy Certificate, or Small System REC, is a document proving that the renewable energy, in kilowatt hours, has been generated from a renewable generating facility. Small System RECs are measured in the same units as the energy generated.

A REC meter is a separate meter measuring the energy output of the Customer's renewable resource distributed generation.

TERMS OF SERVICE:

Small System RECs will be purchased by the Company on a monthly basis for energy generated by the Customer's renewable distributed generation facility and measured by a separate REC meter as recorded at the time of the monthly meter reading.

Customer is responsible for installing the REC meter can/base, identified and labeled as "REC Meter". The REC meter base shall be physically located near the Company's billing meter. The Company will provide and install the metering for the REC socket/meter box.

If the ownership of the property on which the system is located is transferred, the new owner of the property may opt in under the same terms of the REC program as the original installation. X
The term of the agreement shall expire 12 years after the original installation. X

In order to qualify for participation in the current year incentive program, participants must meet the following requirements before the end of the calendar year: X
X

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

**EL PASO ELECTRIC COMPANY
SECOND REVISED RATE NO. 33
CANCELLING FIRST REVISED RATE NO. 33**

X
X

SMALL SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

Page 2 of 3

- 1. Complete the Application for Sale of Small System Renewable Energy Certificates, including submission of full payment of the application fee. X
- 2. Provide EPE a fully executed Interconnection Agreement. X
- 3. Provide EPE a copy of the qualifying facility self-certification form filed with the FERC. X

MONTHLY PURCHASE RATE:

Small System Renewable Energy Certificate (REC) Purchase

For contracts for solar systems (10 kW and less) effective on or after January 1, 2011:

\$0.098 per kilowatt hour X

For contracts for wind turbine systems (10 kW and less) effective on or after January 1, 2011: X

\$0.076 per kilowatt hour X

This rate will be applicable for a period of 12 years from the initiation of service pursuant to this rate for all contracts effective on or after January 1, 2011. X

ACCESSIBILITY:

Equipment used to meter Small System RECs must be physically accessible as specified by the Company. The meter socket/meter box shall be installed in accordance to the Company's Rules and Regulations, identified and labeled "REC Meter", and located near the Company's billing meter.

TERMS OF PAYMENT:

Small System REC payments to the Customer will commence in the billing period after the execution of a Standard Interconnection Agreement and after the process of the Application to Participate in Purchase Program for Small System Renewable Energy Certificates is completed. The Customer will receive monthly information on their monthly electric bill documenting the KWH generated by their renewable distributed generation system, the RECs purchased at the Purchase Rate and the payment for RECs during the billing period.

Small System REC purchase payments will normally be applied as a credit to Customer

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

**EL PASO ELECTRIC COMPANY
SECOND REVISED RATE NO. 33
CANCELLING FIRST REVISED RATE NO. 33**

X
X

SMALL SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

Page 3 of 3

monthly bills. If the amount paid for the Small System RECs is more than the total of the Customer's monthly bill by up to \$30.00, the resulting credit will be carried forward to be applied toward the following month's bill. If the Small System REC payment balance results in a customer credit above \$30.00, that balance will be paid directly to the Customer.

The Company's Rules and Regulations apply to service under this rate.

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

EL PASO ELECTRIC COMPANY
Payback Calculation for
Small System REC Purchase Program - PV Generation
(Residential and Small Commercial)

Required Incentive Rate per kWh **\$ 0.098**

A	B	C	D	E	F	G	H	I	J
Year	kWh	Average EPE Rates (\$/kWh)	(B*C) Avoided EPE Charges	(D*U) Associated Sales Taxes and Fees	(D + E) Total Electric Bill Reductions	(K*O*P) Inverter Replacement Fund and O&M	PMT(W,X,Y) Annual Investment Recovery	(H - G - F) Total Annual Payback Requirements	(B*Z) Incentive Payments
1	6,306	\$ 0.12078	\$ 762	\$ 69	\$ 830	\$ (229)	\$ 1,549	\$ 948	\$ 618
2	6,275	\$ 0.12440	\$ 781	\$ 70	\$ 851	\$ (229)	\$ 1,549	\$ 928	\$ 615
3	6,243	\$ 0.12814	\$ 800	\$ 72	\$ 872	\$ (229)	\$ 1,549	\$ 906	\$ 612
4	6,212	\$ 0.13198	\$ 820	\$ 74	\$ 894	\$ (229)	\$ 1,549	\$ 885	\$ 609
5	6,180	\$ 0.13594	\$ 840	\$ 76	\$ 916	\$ (229)	\$ 1,549	\$ 863	\$ 606
6	6,149	\$ 0.14002	\$ 861	\$ 77	\$ 938	\$ (229)	\$ 1,549	\$ 840	\$ 603
7	6,117	\$ 0.14422	\$ 882	\$ 79	\$ 962	\$ (229)	\$ 1,549	\$ 817	\$ 599
8	6,086	\$ 0.14855	\$ 904	\$ 81	\$ 985	\$ (229)	\$ 1,549	\$ 793	\$ 596
9	6,054	\$ 0.15300	\$ 926	\$ 83	\$ 1,010	\$ (229)	\$ 1,549	\$ 769	\$ 593
10	6,022	\$ 0.15759	\$ 949	\$ 85	\$ 1,035	\$ (229)	\$ 1,549	\$ 744	\$ 590
11	5,991	\$ 0.16232	\$ 972	\$ 88	\$ 1,060	\$ (229)	\$ 1,549	\$ 718	\$ 587
12	5,959	\$ 0.16719	\$ 996	\$ 90	\$ 1,086	\$ (229)	\$ 1,549	\$ 692	\$ 584
	<u>73,594</u>		<u>\$ 10,494</u>	<u>\$ 944</u>	<u>\$ 11,438</u>	<u>\$ (2,752)</u>	<u>\$ 18,589</u>	<u>\$ 9,903</u>	<u>\$ 7,212</u>

NPV	\$ 8,349	\$ (2,037)	\$ 13,761	\$ 7,449	\$ 5,355
Total Recovery			\$ 11,666		
Amount to be recovered beyond 12-year contract life.			\$ 2,095	15%	
Expected remaining service life of system at 30-year average life of modules			18.0		
Years to recover remaining balance based on energy savings			2.4		
Remaining years of service life after balance is recovered			15.6		

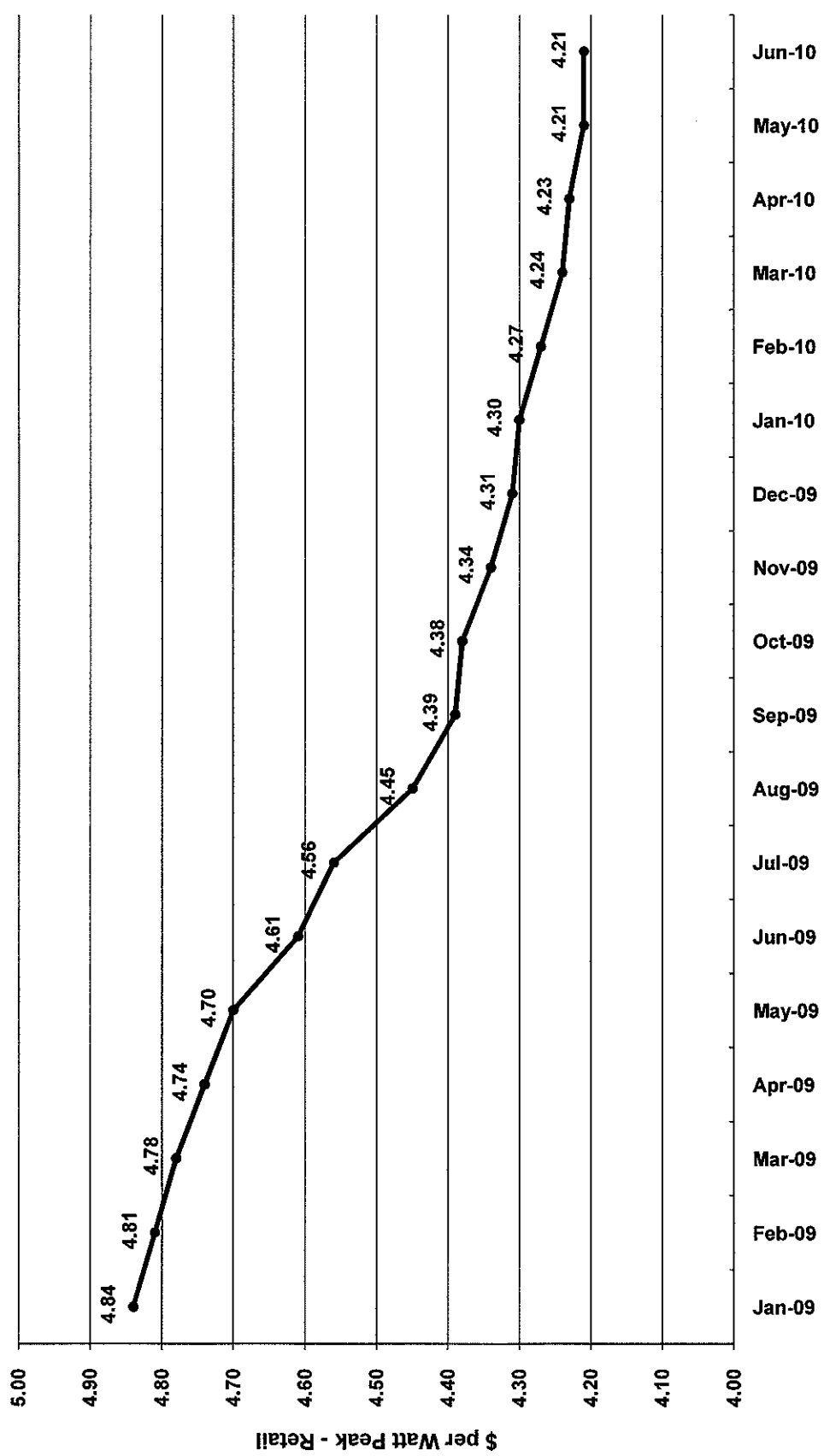
Calculation Inputs and Assumptions:

K	Cost per Watt	\$ 6.95	(Breakpoint of lowest price quartile in EPE sample)
L	Federal Tax Incentive	30%	
M	New Mexico Tax Incentive	10%	
N	After-Tax Cost per Watt	\$ 4.17	
O	Inverter Replacement Fund and O&M	1.00%	
P	Average Size (Watts)	3,300	
Q	Efficiency Adjusted Capacity Factor	22%	
R	Average Annual Hours	8,766	
S	Annual Module Degradation	0.50%	
T	Current Average Rate per kWh	\$ 0.12078	(Avg Rate for Residential and Non-Demand Comm Service)
U	Sales Tax and Franchise Fee Rate	9.00%	
V	Projected Rate Escalation	3.00%	
W	Discount Rate	4.96%	(Moody's May 2010 Corporate Aaa Bond Yield)
X	Guaranteed Contract Period (Years)	12	
Y	Net System Cost	\$ 13,761	
Z	REC Purchase Price	\$ 0.098	

EL PASO ELECTRIC COMPANY
Sample Installed Costs for
Solar Photovoltaic Installations on EPE System

Line	Contractor/Facility ID	Location	Net Metering Application Received	kW	Cost	\$/Watt	
<u>Contractor 1</u>							
1	Solar Facility 1	El Paso	26-May-10	2.00	\$ 15,000	\$ 7.50	
2	Solar Facility 2	El Paso	26-May-10	5.04	\$ 33,667	\$ 6.68	
3	Solar Facility 3	El Paso	30-Mar-10	2.07	\$ 13,500	\$ 6.52	
4	Solar Facility 4	El Paso	11-Feb-10	4.02	\$ 31,000	\$ 7.71	
5	Solar Facility 5	El Paso	24-Jul-09	3.87	\$ 27,090	\$ 7.00	
<u>Contractor 2</u>							
6	Solar Facility 6	Las Cruces	26-May-10	5.13	\$ 40,000	\$ 7.80	
7	Solar Facility 7	Las Cruces	9-May-10	4.94	\$ 40,000	\$ 8.10	
8	Solar Facility 8	Las Cruces	9-May-10	5.32	\$ 37,000	\$ 6.95	
<u>Contractor 3</u>							
9	Solar Facility 9	Las Cruces	15-Dec-09	1.94	\$ 15,000	\$ 7.73	
10	Solar Facility 10	Las Cruces	21-May-10	1.72	\$ 14,000	\$ 8.14	
<u>Contractor 4</u>							
11	Solar Facility 11	El Paso	7-Aug-09	1.47	\$ 10,700	\$ 7.28	
12	Solar Facility 12	El Paso	20-May-10	4.40	\$ 35,000	\$ 7.95	
12	Solar Facility 13	El Paso	20-May-10	4.84	\$ 33,000	\$ 6.82	
13	Solar Facility 14	El Paso	30-Mar-10	1.84	\$ 13,000	\$ 7.07	
13	Solar Facility 15	El Paso	20-May-10	3.96	\$ 28,000	\$ 7.07	
14	Median Installed Cost per Watt					\$	7.28
14	Minimum Installed Cost per Watt					\$	6.52
15	Maximum Installed Cost per Watt					\$	8.14

Solar Module Retail Price Index Module Size - 125 Watts and Higher Source: Solarbuzz.com - June 2010



EL PASO ELECTRIC COMPANY
Payback Calculation for
Small System REC Purchase Program - Wind Generation
(Residential and Small Commercial)

Required Incentive Rate per kWh **\$ 0.076**

A	B	C	D	E	F	G	H	I	J
Year	kWh	Average EPE Rates (\$/kWh)	(B*C) Avoided EPE Charges	(D*U) Associated Sales Taxes and Fees	(D + E) Total Electric Bill Reductions	(K*O*P) Inverter Replacement Fund and O&M	PMT(W,X,Y) Annual Investment Recovery	(H - G - F) Total Annual Payback Requirements	(B*Z) Incentive Payments
1	4,383	\$ 0.12078	\$ 529	\$ 48	\$ 577	\$ (130)	\$ 1,027	\$ 580	\$ 333
2	4,383	\$ 0.12440	\$ 545	\$ 49	\$ 594	\$ (130)	\$ 1,027	\$ 563	\$ 333
3	4,383	\$ 0.12814	\$ 562	\$ 51	\$ 612	\$ (130)	\$ 1,027	\$ 545	\$ 333
4	4,383	\$ 0.13198	\$ 578	\$ 52	\$ 631	\$ (130)	\$ 1,027	\$ 527	\$ 333
5	4,383	\$ 0.13594	\$ 596	\$ 54	\$ 649	\$ (130)	\$ 1,027	\$ 508	\$ 333
6	4,383	\$ 0.14002	\$ 614	\$ 55	\$ 669	\$ (130)	\$ 1,027	\$ 488	\$ 333
7	4,383	\$ 0.14422	\$ 632	\$ 57	\$ 689	\$ (130)	\$ 1,027	\$ 468	\$ 333
8	4,383	\$ 0.14855	\$ 651	\$ 59	\$ 710	\$ (130)	\$ 1,027	\$ 448	\$ 333
9	4,383	\$ 0.15300	\$ 671	\$ 60	\$ 731	\$ (130)	\$ 1,027	\$ 426	\$ 333
10	4,383	\$ 0.15759	\$ 691	\$ 62	\$ 753	\$ (130)	\$ 1,027	\$ 405	\$ 333
11	4,383	\$ 0.16232	\$ 711	\$ 64	\$ 775	\$ (130)	\$ 1,027	\$ 382	\$ 333
12	4,383	\$ 0.16719	\$ 733	\$ 66	\$ 799	\$ (130)	\$ 1,027	\$ 359	\$ 333
52,596			\$ 7,513	\$ 676	\$ 8,189	\$ (1,564)	\$ 12,325	\$ 5,700	\$ 3,997

NPV	\$ 5,960	\$ (1,158)	\$ 9,124	\$ 4,322	\$ 2,959
Total Recovery			\$ 7,761		
Amount to be recovered beyond 12-year contract life.			\$ 1,363	15%	
Expected remaining service life of system at 30-year average life of turbine			18.0		
Years to recover remaining balance based on energy savings			2.0		
Remaining years of service life after balance is recovered			16.0		

Calculation Inputs and Assumptions:

K	Cost per Watt	\$ 6.52	(Bergey Windpower 2 kW Home.Sure Package Price)
L	Federal Tax Incentive	30%	
M	New Mexico Tax Incentive	0%	
N	After-Tax Cost per Watt	\$ 4.56	
O	Inverter Replacement Fund and O&M	1.00%	
P	Average Size (Watts)	2,000	
Q	Efficiency Adjusted Capacity Factor	25%	
R	Average Annual Hours	8,766	
S	Annual Module Degradation	0.00%	
T	Current Average Rate per kWh	\$ 0.12078	(Avg Rate for Residential and Non-Demand Comm Service)
U	Sales Tax and Franchise Fee Rate	9.00%	
V	Projected Rate Escalation	3.00%	
W	Discount Rate	4.96%	(Moody's May 2010 Corporate Aaa Bond Yield)
X	Guaranteed Contract Period (Years)	12	
Y	Net System Cost	\$ 9,124	
Z	REC Purchase Price	\$ 0.076	

**EL PASO ELECTRIC COMPANY
FIRST REVISED RATE NO. 34
CANCELLING ORIGINAL RATE NO. 34**

X
X

MEDIUM SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

APPLICABILITY:

This Medium System Renewable Energy Certificate ("REC") Purchase Rate is available to customers owning renewable generation rated more than 10 kW and up to 100 kW pursuant to NMPRC Rule 570. Participation by type of renewable energy facility is subject to approvals of the NMPRC. Service under this schedule requires an executed Interconnection Agreement for Generating Facilities with a Rated Capacity No Greater than 10 MW, and a completed Application to Participate in Purchase Program for Medium System Renewable Energy Certificates.

TERRITORY:

Areas served by the Company in Dona Ana, Sierra, Otero and Luna Counties.

DEFINITIONS:

Medium System Renewable Energy Certificate, or Medium System REC, is a document proving that the renewable energy, in kilowatt hours, has been generated from a renewable generating facility. Medium System RECs are measured in the same units as the energy generated.

A REC meter is a separate meter measuring the energy output of the Customer's renewable resource distributed generation.

TERMS OF SERVICE:

Medium System RECs will be purchased by the Company on a monthly basis for energy generated by the Customer's renewable distributed generation facility and measured by a separate REC meter as recorded at the time of the monthly meter reading.

Customer is responsible for installing the REC meter can/base, identified and labeled as "REC Meter". The REC meter base shall be physically located near the Company's billing meter. The Company will provide and install the metering for the REC socket/meter box.

If the ownership of the property on which the system is located is transferred, the new owner of the property may opt in under the same terms of the REC program as the original installation. The term of the agreement shall expire 12 years after the original installation.

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

**EL PASO ELECTRIC COMPANY
FIRST REVISED RATE NO. 34
CANCELLING ORIGINAL RATE NO. 34**

X
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MEDIUM SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

Page 2 of 3

In order to qualify for participation in the current year incentive program, participants must meet the following requirements before the end of the calendar year:

1. Complete the Application for Sale of Medium System Renewable Energy Certificates, including submission of full payment of the application fee.
2. Provide EPE a fully executed Interconnection Agreement.
3. Provide EPE a copy of the qualifying facility self-certification form filed with the FERC.

MONTHLY PURCHASE RATE:

Medium System Renewable Energy Certificate (REC) Purchase

For contracts for solar systems (over 10 kW and up to 100 kW) effective on or after January 1, 2011:

X

\$0.124 per kilowatt hour

X

For contracts for wind turbine systems (over 10 kW and up to 100 kW) effective on or after January 1, 2011:

X

\$0.024 per kilowatt hour

X

The Monthly Purchase Rate will not be paid for renewable energy generated in any month that is in excess of the amount of kWh consumed by the participating customer in that month.

This rate will be applicable for a period of 12 years from the initiation of service pursuant to this rate for all contracts effective on or after January 1, 2011.

X

ACCESSIBILITY:

Equipment used to meter Medium System RECs must be physically accessible as specified by the Company. The meter socket/meter box shall be installed in accordance to the Company's Rules and Regulations, identified and labeled "REC Meter", and located near the Company's billing meter.

TERMS OF PAYMENT:

Medium System REC payments to the Customer will commence in the billing period after the

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

**EL PASO ELECTRIC COMPANY
FIRST REVISED RATE NO. 34
CANCELLING ORIGINAL RATE NO. 34**

X
X

MEDIUM SYSTEM RENEWABLE ENERGY CERTIFICATE PURCHASE

execution of a Standard Interconnection Agreement and after the process of the Application to Participate in Purchase Program for Medium System Renewable Energy Certificates is completed. The Customer will receive monthly information on their monthly electric bill documenting the KWH generated by their renewable distributed generation system, the RECs purchased at the Purchase Rate and the payment for RECs during the billing period.

Medium System REC purchase payments will normally be applied as a credit to Customer monthly bills. If the amount paid for the Medium System RECs is more than the total of the Customer's monthly bill by up to \$30.00, the resulting credit will be carried forward to be applied toward the following month's bill. If the Medium System REC payment balance results in a customer credit above \$30.00, that balance will be paid directly to the Customer.

The Company's Rules and Regulations apply to service under this rate.

Advice Notice No. 218

Signature/Title _____

**David G. Carpenter
Senior Vice President-Chief Financial
Officer**

EL PASO ELECTRIC COMPANY
Payback Calculation for
Medium System REC Purchase Program - PV Generation
(Commercial and Industrial)

Required Incentive Rate per kWh **\$ 0.124**

A	B	C	D	E	F	G	H	I	J
Year	kWh	Average EPE Rates (\$/kWh)	(B*C) Avoided EPE Charges	(D*U) Associated Sales Taxes and Fees	(D + E) Total Electric Bill Reductions	(K*O*P) Inverter Replacement Fund and O&M	PMT(W,X,Y) Annual Investment Recovery	(H - G - F) Total Annual Payback Requirements	(B*Z) Incentive Payments
1	47,775	\$ 0.10597	\$ 5,063	\$ 456	\$ 5,518	\$ (1,564)	\$ 12,322	\$ 8,368	\$ 5,924
2	47,536	\$ 0.10915	\$ 5,188	\$ 467	\$ 5,655	\$ (1,564)	\$ 12,322	\$ 8,231	\$ 5,894
3	47,297	\$ 0.11242	\$ 5,317	\$ 479	\$ 5,796	\$ (1,564)	\$ 12,322	\$ 8,090	\$ 5,865
4	47,058	\$ 0.11580	\$ 5,449	\$ 490	\$ 5,940	\$ (1,564)	\$ 12,322	\$ 7,946	\$ 5,835
5	46,819	\$ 0.11927	\$ 5,584	\$ 503	\$ 6,087	\$ (1,564)	\$ 12,322	\$ 7,799	\$ 5,806
6	46,580	\$ 0.12285	\$ 5,722	\$ 515	\$ 6,237	\$ (1,564)	\$ 12,322	\$ 7,649	\$ 5,776
7	46,341	\$ 0.12653	\$ 5,864	\$ 528	\$ 6,391	\$ (1,564)	\$ 12,322	\$ 7,495	\$ 5,746
8	46,103	\$ 0.13033	\$ 6,009	\$ 541	\$ 6,549	\$ (1,564)	\$ 12,322	\$ 7,337	\$ 5,717
9	45,864	\$ 0.13424	\$ 6,157	\$ 554	\$ 6,711	\$ (1,564)	\$ 12,322	\$ 7,175	\$ 5,687
10	45,625	\$ 0.13827	\$ 6,308	\$ 568	\$ 6,876	\$ (1,564)	\$ 12,322	\$ 7,010	\$ 5,657
11	45,386	\$ 0.14241	\$ 6,464	\$ 582	\$ 7,045	\$ (1,564)	\$ 12,322	\$ 6,841	\$ 5,628
12	45,147	\$ 0.14669	\$ 6,623	\$ 596	\$ 7,219	\$ (1,564)	\$ 12,322	\$ 6,668	\$ 5,598
	557,531		\$ 69,748	\$ 6,277	\$ 76,025	\$ (18,765)	\$ 147,868	\$ 90,608	\$ 69,134

NPV	\$ 55,494	\$ (13,891)	\$ 109,463	\$ 67,859	\$ 51,329
Total Recovery			\$ 92,932		
Amount to be recovered beyond 12-year contract life.			\$ 16,531	15%	
Expected remaining service life of system at 30-year average service life of modules			18.0		
Years to recover remaining balance based on energy savings			2.9		
Remaining years of service life after balance is recovered			15.1		

Calculation Inputs and Assumptions:

K	Cost per Watt	\$ 6.26	90% of Small System Cost
L	Federal Tax Incentive	30%	
M	New Mexico Tax Incentive	0%	
N	After-Tax Cost per Watt	\$ 4.38	
O	Inverter Replacement Fund and O&M	1.00%	
P	Average Size (Watts)	25,000	
Q	Efficiency Adjusted Capacity Factor	22%	
R	Average Annual Hours	8,766	
S	Annual Module Degradation	0.50%	
T	Current Average Rate per kWh	\$ 0.10597	(Average Rate \$/kWh for General Service)
U	Sales Tax and Franchise Fee Rate	9.00%	
V	Projected Rate Escalation	3.00%	
W	Discount Rate	4.96%	(Moody's May 2010 Corporate Aaa Bond Yield)
X	Guaranteed Contract Period (Years)	12	
Y	Net System Cost	\$ 109,463	
Z	REC Purchase Price	\$ 0.124	

EL PASO ELECTRIC COMPANY
Payback Calculation for
Medium System REC Purchase Program - Wind Generation
(Commercial and Industrial)

Required Incentive Rate per kWh **\$ 0.024**

A	B	C	D	E	F	G	H	I	J
Year	kWh	Average EPE Rates (\$/kWh)	(B*C) Avoided EPE Charges	(D*U) Associated Sales Taxes and Fees	(D + E) Total Electric Bill Reductions	(K*O*P) Inverter Replacement Fund and O&M	PMT(W,X,Y) Annual Investment Recovery	(H - G - F) Total Annual Payback Requirements	(B*Z) Incentive Payments
1	109,575	\$ 0.10597	\$ 11,612	\$ 1,045	\$ 12,657	\$ (2,250)	\$ 17,730	\$ 7,323	\$ 2,630
2	109,575	\$ 0.10915	\$ 11,960	\$ 1,076	\$ 13,036	\$ (2,250)	\$ 17,730	\$ 6,944	\$ 2,630
3	109,575	\$ 0.11242	\$ 12,319	\$ 1,109	\$ 13,428	\$ (2,250)	\$ 17,730	\$ 6,552	\$ 2,630
4	109,575	\$ 0.11580	\$ 12,688	\$ 1,142	\$ 13,830	\$ (2,250)	\$ 17,730	\$ 6,150	\$ 2,630
5	109,575	\$ 0.11927	\$ 13,069	\$ 1,176	\$ 14,245	\$ (2,250)	\$ 17,730	\$ 5,735	\$ 2,630
6	109,575	\$ 0.12285	\$ 13,461	\$ 1,211	\$ 14,673	\$ (2,250)	\$ 17,730	\$ 5,307	\$ 2,630
7	109,575	\$ 0.12653	\$ 13,865	\$ 1,248	\$ 15,113	\$ (2,250)	\$ 17,730	\$ 4,867	\$ 2,630
8	109,575	\$ 0.13033	\$ 14,281	\$ 1,285	\$ 15,566	\$ (2,250)	\$ 17,730	\$ 4,414	\$ 2,630
9	109,575	\$ 0.13424	\$ 14,709	\$ 1,324	\$ 16,033	\$ (2,250)	\$ 17,730	\$ 3,947	\$ 2,630
10	109,575	\$ 0.13827	\$ 15,151	\$ 1,364	\$ 16,514	\$ (2,250)	\$ 17,730	\$ 3,466	\$ 2,630
11	109,575	\$ 0.14241	\$ 15,605	\$ 1,404	\$ 17,010	\$ (2,250)	\$ 17,730	\$ 2,970	\$ 2,630
12	109,575	\$ 0.14669	\$ 16,073	\$ 1,447	\$ 17,520	\$ (2,250)	\$ 17,730	\$ 2,460	\$ 2,630
<u>1,314,900</u>			<u>\$164,793</u>	<u>\$ 14,831</u>	<u>\$ 179,624</u>	<u>\$ (27,000)</u>	<u>\$ 212,759</u>	<u>\$ 60,135</u>	<u>\$ 31,558</u>

NPV	\$ 130,729	\$ (19,987)	\$ 157,500	\$ 46,759	\$ 23,361
Total Recovery			\$ 134,103		
Amount to be recovered beyond 12-year contract life.			\$ 23,397	15%	
Expected remaining service life of system at 30-year average service life of modules			18.0		
Years to recover remaining balance based on energy savings			1.5		
Remaining years of service life after balance is recovered			16.5		

Calculation Inputs and Assumptions:

K Cost per Watt	\$ 4.50	(Entegrity Wind Systems, EW50, 120' Tower + Install)
L Federal Tax Incentive	30%	
M New Mexico Tax Incentive	0%	
N After-Tax Cost per Watt	\$ 3.15	
O Inverter Replacement Fund and O&M	1.00%	
P Average Size (Watts)	50,000	
Q Efficiency Adjusted Capacity Factor	25%	
R Average Annual Hours	8,766	
S Annual Module Degradation	0.00%	
T Current Average Rate per kWh	\$ 0.10597	(Average Rate \$/kWh for General Service)
U Sales Tax and Franchise Fee Rate	9.00%	
V Projected Rate Escalation	3.00%	
W Discount Rate	4.96%	(Moody's May 2010 Corporate Aaa Bond Yield)
X Guaranteed Contract Period (Years)	12	
Y Net System Cost	\$ 157,500	
Z REC Purchase Price	\$ 0.024	