



PNM Energy Efficiency Program

2010 Annual Report

Public Service Company of New Mexico (PNM)

April 1, 2011

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Introduction

PNM submits this annual report on the Energy Efficiency Program (“Program”) for calendar year 2010. This annual report relies on the independent evaluator measurement and verification report (“M&V Report”) which is submitted as a separate document: “DSM Portfolio Evaluation, Public Service Company of New Mexico, Program Year 2010”, prepared by ADM Associates, Inc. (“ADM”).

The programs evaluated in this annual report include programs that were approved by the New Mexico Public Regulation Commission (“NMPRC” or “Commission”) on May 19, 2009 in the final order in Case No. 08-00204-UT. This report covers all costs incurred in the implementation of the programs and all customer participation in the programs from January 1, 2010 through December 31, 2010.

The following programs are included in this annual report:

- (1) Residential Lighting: Customers receive instant discounts on compact fluorescent light bulbs (“CFLs”) purchased at over 130 participating retail outlets.
- (2) Refrigerator Recycling: Residential and commercial customers receive a \$30 rebate for recycling a qualifying refrigerator or freezer. PNM provides free pick-up and recycles more than 95 percent of the materials at an Albuquerque recycling center established specifically for this program.
- (3) School CFL Exchange: PNM has partnered with the Sierra Club and Interfaith Power and Light (“IPL”) to distribute CFL bulbs. In addition to visiting schools, the Sierra Club and IPL also distribute bulbs at various community events.
- (4) ENERGY STAR Home Rebate: Homebuilders receive incentives for every home they build to ENERGY STAR standards, which are at least 15 percent more efficient than standard homes.
- (5) Low-Income Refrigerator Replacement and CFL Installation: Income-qualified customers receive new ENERGY STAR[®]-qualified refrigerators and CFLs installed by a contractor. New Mexico Mortgage Finance Authority (“MFA”) administers this program as part of their Energy\$mart program.
- (6) Easy Savings (formerly Energy Wise): PNM low-income customers receive a kit that contains six CFL bulbs of their choice, a low-flow showerhead and other items including educational information on low-cost ways to save energy. The kits are delivered by mail and through participating agencies.
- (7) Commercial Comprehensive: This flagship program for non-residential customers is composed of three sub-programs. The New Construction program offers incentives for completing new construction projects that are more energy efficient than what is required by New Mexico building code; the Retrofit Rebate program allows customers to select options from a menu and receive a specific rebate per unit, or they

can propose a system improvement that is not included on the pre-set menu and that delivers verifiable savings; and the small business or QuickSaver™ program which provides small business customers (less than 100 kW demand) with an attractive, low-cost option for directly installing energy saving measures.

- (8) **Load Management:** The PNM Load Management program is composed of two components; Power Saver and Peak Saver. PNM Power Saver controls refrigerated air conditioning units in participating homes and small businesses during periods of peak demand. Participants receive an incentive check each cooling season. PNM Peak Saver is designed to help large commercial customers reduce the amount of energy they require during peak demand periods. Participants are paid an annual incentive based on the amount of peak demand managed by the program.
- (9) **Market Transformation:** This program promotes the adoption of energy efficient products and services with the goal of inducing lasting behavioral changes in the marketplace. The program funds educational and community outreach activities and broad-based energy efficiency promotional efforts. Emerging technologies, such as direct/indirect advanced evaporative cooling, are also promoted under this program.
- (10) **Self-Direct:** This program allows large customers (with energy usage greater than 7 million kWh per year) to receive credits for energy efficiency made at its facilities. Credits for approved self-direct programs may be used to offset up to seventy percent of the energy efficiency tariff rider. (There were no participants in this program in 2010).

Program Results Summary

This is the third annual report on the PNM Energy Efficiency Program. The following is a short summary of the overall results.

- The overall Program was cost effective as measured by the Total Resource Cost test (TRC). The TRC for the portfolio of programs was 2.22.
- The total annual net savings after free rider and other adjustments based on independent measurement and verification was 58.9 GWh at the customer meter or 63.1 GWh including system losses.
- The load management programs were very successful in recruiting customer participants with total capacity under the programs of 69 MW at the end of 2010.
- Total program expenses were about \$16.6M.
- The average cost per kWh of lifetime energy savings from the energy efficiency programs was 1.89¢.

The following table shows the total number of customer participants, the annual energy and demand savings, the lifetime energy savings and the total costs for each of the programs for calendar year 2010.

Program	Participants or Units	Annual Savings (kWh)	Annual Savings (kW)	Lifetime Savings (kWh)	Total Program Costs
Refrigerator Recycling	8,239	7,312,412	1,179	35,719,501	\$ 1,293,092
Residential Lighting	994,445	20,583,370	2,783	144,083,589	\$ 1,748,973
Energy Star Homes	714	830,586	596	16,611,727	\$ 518,795
School CFL Exchange	17,164	341,564	39	2,390,945	\$ 31,437
Commercial Comprehensive	475	26,104,137	4,902	286,540,649	\$ 4,953,624
Easy Savings	7,251	2,390,391	220	18,051,937	\$ 433,080
LI Fridge and CFL	10,462	1,245,419	145	17,279,456	\$ 524,494
Advanced Evap Cooling*	2	3,876	3	62,016	\$ -
Lrg. Customer Self-Direct**	-	-	-	-	\$ -
Load Management	32,247	131,400	69,139	131,400	\$ 6,781,633
Market Transformation	NA	NA	NA	NA	\$ 322,017
Total	1,070,999	58,943,155	79,006	520,871,220	\$ 16,607,144

* Costs included in Market Transformation ** No participants in 2010

The table below shows the net present value of the lifetime energy savings and the program costs. The ratio of the benefits to the costs is the total resource cost ratio or TRC.

Programs	Efficiency Rule Adder	NPV of Total Economic Benefits	NPV of Total Program Costs	Benefit - Cost Ratio (TRC)
Refrigerator Recycling	\$ 263,209	\$ 2,914,414	\$ 1,201,600	2.43
Residential Lighting	\$ 1,047,648	\$ 11,461,139	\$ 3,766,774	3.04
Energy Star Homes	\$ 122,748	\$ 3,230,835	\$ 1,834,102	1.76
School CFL Exchange	\$ 17,337	\$ 212,713	\$ 44,842	4.74
Commercial Comprehensive	\$ 2,078,958	\$ 24,146,922	\$ 11,621,257	2.08
Easy Savings	\$ 162,532	\$ 2,168,067	\$ 547,589	3.96
LI Fridge and CFL	\$ 155,109	\$ 1,515,189	\$ 624,808	2.43
Advanced Evap Cooling	\$ 465	\$ 9,520	\$ 3,389	2.81
Lrg. Customer Self-Direct	\$ -	\$ -	\$ -	NA
Load Management	\$ 494,129	\$ 8,510,886	\$ 4,436,370	1.92
Market Transformation	\$ -	\$ -	\$ 295,312	NA
Total	\$ 4,342,136	\$ 54,169,684	\$ 24,376,042	2.22

Tariff Collections

The information in this section is presented in compliance with the NMPRC Energy Efficiency Rule which requires utilities to file on April 1 of each year a “reconciliation of tariff-rider collections from the prior year, along with an adjustment to the rider as necessary to make up under- or over-collections”¹.

The direct costs of implementing the Program are recovered through the Energy Efficiency Fee on customers’ bills. Beginning with the first billing cycle of August 2009, the Energy Efficiency Fee was set at 1.881 percent of bills, as approved in Case No. 08-00204-UT. PNM reported a

¹ NMPRC Energy Efficiency Rule 17.7.2.12.C(5).

year-end under collection of \$72,932 in its annual report for program year 2009². During calendar year 2010, PNM collected a total of \$13,929,180. Actual expenses for calendar year 2010 were \$16,607,144, which results in a total under-collection of \$2,750,897. PNM has submitted the documentation for a tariff rider adjustment to account for this under collection, including Advice Notices and supporting testimony, concurrently with this report.

Beginning with the first billing cycle of January 2011, PNM began collecting an interim incentive/disincentive adder (“Adder”) as approved in NMPRC Case No. 10-00127-UT. The total amount of the approved Adder was \$4,164,965 or 0.56 percent of customers’ bills and was based on projected energy savings in 2010. PNM has calculated a new Adder amount based on the actual savings as validated by the M&V Report. The revised Adder amount is \$4,342,136 which represents an increase of \$177,171 from the current amount. The documentation and supporting testimony for an adder adjustment based on this amount is included in the tariff rider adjustment filing submitted concurrently with this report.

Regulatory Proceedings

On September 15, 2010 PNM filed a new program plan with the Commission (Case No. 10-00280-UT). A hearing was held February 23 – 25, 2011 and a Commission decision is pending.

On November 29, 2010 the Commission issued a final order in Case 10-00127-UT approving the collection of a disincentive/incentive adder based on PNM’s projected energy efficiency program savings for calendar year 2010. Collection of the adder began with the first billing cycle of the January 2011 billing month.

Independent Evaluation

Background and Purpose

The Rule requires that an independent evaluator conduct measurement and verification (“M&V”) assessments of all energy efficiency and load management programs. The Energy Efficiency Evaluation Committee, appointed by the Commission, selected ADM Associates (“ADM”) as the state-wide independent evaluator and this selection was approved by the Commission on March 3, 2009. ADM conducted independent evaluation of the programs for calendar year 2010 and their M&V Report includes data from January 1, 2010 through December 31, 2010. PNM worked closely with ADM to provide them with the data necessary to complete the 2010 M&V Report. This included rebate processing and participant files, budget data by program and avoided-cost information.

The primary purpose of the independent evaluation is to assess the cost effectiveness of the programs using the TRC test, which includes a thorough analysis of achieved savings and free rider estimation. A secondary purpose of the evaluation is to perform a basic process evaluation of the Program to determine customer satisfaction with how the programs operated and provide suggestions to improve delivery to customers.

² PNM Energy Efficiency Program 2009 Annual Report – Amended, November 1, 2010, p. 6.

Summary of Findings and PNM Comments

All of the programs evaluated were found to be cost effective and the total Program portfolio was found to be cost effective. The results of the M&V analysis will be used to adjust a number of technical assumptions made by PNM regarding Program performance, including the average savings per unit and the effective useful life of measures. The M&V Report also contains many other findings and recommendations in terms of improving the marketing and customer satisfaction of programs. A summary of some of the more important findings and recommendations along with comments from PNM is provided below.

- 1) **Each of the programs that ADM evaluated was found to be cost effective and the total portfolio of the PNM Energy Efficiency Program was cost effective.**
- 2) **The Low Income CFL & Refrigerator Replacement program was determined to have a net realization rate of 126% and ADM determined that the PNM assumption of 100% net-to-gross-ratio (NTGR) was reasonable (the NTGR reflects the level of free-ridership in a program).**

PNM RESPONSE:

Survey and installation data were sufficient so that ADM could calculate CFL savings based upon wattage and room of installations, with the latter used to determine annual hours of operation. This resulted in higher realized kWh savings. Moreover, ADM revised the kW savings upward. This revision was based on differences between the PNM region and data used in the Lawrence Berkeley National Laboratory Energy Data Sourcebook for the Residential Sector.

- 3) **ADM recommended that the Low Income CFL & Refrigerator Replacement program would potentially benefit from an additional 75,000 kWh of savings if low-flow showerheads were provided. This recommendation is based on survey data from the Easy Savings program where approximately 16 percent of the low income participant pool has electric water heating.**

PNM RESPONSE:

PNM will consider recommending the addition of this measure in future Program filings.

- 4) **Survey respondents in the Low Income Refrigerator Replacement and CFL Installation program expressed dissatisfaction with the lack of “warm” lighting and the length of the waiting period prior to installation. One wheelchair-bound applicant could not receive a refrigerator through the program because under-shelf units were not available.**

PNM RESPONSE:

PNM will work with MFA to evaluate options for including lower Kelvin temperature (“warm”) CFL bulbs and under-shelf refrigerators. PNM will also review the wait times with MFA and look for ways to improve the process.

- 5) **The Easy Savings program resulted in a net realization rate of 158%. ADM's conclusion was based on survey data, program tracking data and hours of use data from ADM monitoring and other metering studies.**

PNM RESPONSE:

PNM used a deemed value when assuming lighting savings when the program was filed; moreover, the program filing did not assume any electric savings from the installation of showerheads. Subsequent survey data revealed a saturation of electric water heating of approximately 16% and longer lighting hours of use. PNM will use the ADM findings in subsequent program filings.

- 6) **Builder feedback to ADM indicated they were very satisfied with how the Energy Star Home program operated and that customer perception of the Energy Star label significantly helped with their marketing efforts. Builders also indicated that customers were most interested in the following measures to reduce electric consumption: R-60 ceiling insulation, R-31 wall insulation, Energy Star rated appliances, and high efficiency central-air conditioners.**

PNM RESPONSE:

With the adoption of the 2009 New Mexico Energy Code, effective July 2011, the Energy Star Home program will no longer be cost effective as a program offering; however, considering the customers interest in high-efficient appliances, PNM is investigating the possibility of some mid-stream approach to make Energy Star appliances and other energy efficient measures available to homebuilders.

- 7) **The PNM Power Saver evaluation determined that there was an inherent bias in unit capacity and usage patterns between the curtailment and control groups used to determine the effective load drop per unit (kW factor). Therefore, ADM proposed that a "within-group" bias adjustment be used where the curtailment group is compared to itself based on similar day's operation prior to the event.**

PNM RESPONSE:

Based on ADM's evaluation PNM and Converge agreed upon an adjustment to the kW factor for the residential segment. However, for the commercial segment, since there had been significant participation drop-off of the metered population, the 2009 kW factor was used as a proxy.

ADM is involved at the outset of the 2011 demand response program year to assist in the design of a curtailment and control population that will eliminate the need for a bias adjustment in future years.

- 8) **ADM's survey of the Residential Lighting program participants indicated that approximately 63% of participants learned of the available rebate in-store, implying PNM could improve marketing efforts such as bill inserts and advertisements to better reach potential lighting purchasers. ADM also found that over 80 percent of customers were satisfied with the quality of light and energy savings.**

PNM RESPONSE:

PNM's lighting implementer APT has research that indicates that most lighting purchases are a result of going to a home improvement store for other shopping needs. Consequently, PNM has done limited advertising outside of the point of purchase displays. However, since bill messaging is shown to be an effective means of communication (for example, in the residential refrigerator recycling program), PNM will explore other means of advertising.

- 9) **ADM recommended that applying more accurate baseline savings values and a higher NTGR would improve savings estimates in the Residential Lighting program. The program achieved a net realization rate of 126% with a NTGR of 82%.**

PNM RESPONSE:

PNM will adjust the savings and free-ridership assumptions to be consistent with the ADM results.

- 10) **ADM found that installation patterns did not match the pattern implicitly assumed by PNM, in which it is assumed that customers would install in high-usage areas first. ADM found that 58% of purchased CFLs were installed in low-use areas.**

PNM RESPONSE:

PNM will speak to the implementer to review ADM's recommendation that materials could be added to the CFL displays detailing the difference of savings from a CFL installed in a living room or kitchen versus a bedroom or bathroom.

- 11) **ADM found the effective useful life of a typical CFL bulb is currently seven years compared to the eight years assumed by PNM.**

PNM RESPONSE:

PNM has adjusted the life of all CFL measures to be consistent with the ADM recommendation.

- 12) **The Refrigerator Recycling Program was found to be cost effective and the savings-per-refrigerator was higher in 2010 than originally estimated; however, the lifetime savings have been reduced as a result of updated information on the remaining useful life of recycled refrigerators.**

PNM RESPONSE:

PNM accepted the per-unit savings found by ADM and incorporated them into the actual savings reported for 2010 and the savings projected for 2011. The revised lifetime (Remaining Useful Life) of 5 years for refrigerators and 4 years for freezers will be used for future forecasts and TRC calculations.

- 13) ADM found that the savings calculation methodology used in the Commercial Comprehensive program for multi-family housing facilities was incorrect, with realization of approximately 18% for these facilities. PNM corrected this for subsequent multi-family housing applications, and revised what they had expected for the projects completed prior to the correction of savings calculations.**

PNM RESPONSE:

PNM will determine if there is a process available whereby early detection of program issues can be corrected in a more timely fashion. ADM determined more accurate hours of use estimates based on monitoring data for the following sectors: multi-family housing; hotel/motel; schools/K-12; and parking lot lighting. PNM will work with KEMA, PNM's third-party contractor for the Commercial Comprehensive program, to revise expected savings in their work papers and future reports.

- 14) ADM suggested a number of process related improvements for the Commercial Comprehensive Program. When working with large amounts of data, the format and organization of documents becomes increasingly important. Much of the information was in the form of scanned PDF documents, which were then transcribed into Excel files for analysis. This process was time consuming and could have been mitigated if the original Excel files had been provided.**

PNM RESPONSE:

PNM will work with KEMA to have excel data files provided that contain all of the necessary data elements that ADM requires such as participant emails, detailed project information and participant tracking data. In particular, QuickSaver participant emails will be requested to be tracked.

- 15) PNM's Commercial Comprehensive program would benefit from standardizing guidelines for aggregating multiple facilities into a single application.**

PNM RESPONSE:

PNM will work with KEMA to develop aggregation guidelines and eliminate "choke points" as identified by ADM and their customer research.

- 16) The Retrofit Rebates program could benefit by adding more prescriptive elements.**

PNM RESPONSE:

PNM will work with KEMA to analyze elements (such as LED lighting applications) identified through ADM customer feedback to further improve the program.

- 17) ADM's Commercial Comprehensive Market Evaluation - Section 7**

PNM RESPONSE:

Through ADM's evaluation process, a market evaluation was prepared to determine the effectiveness of the program in terms of market saturation and industry distribution. The analysis shows where the programs are performing most effectively in terms of total

available market as well as identifying opportunities and noting areas for improvement. PNM will utilize this information in conjunction with KEMA's marketing plan to best promote the programs.

Energy Efficiency Rule Reporting Requirements

This section of the annual report follows the reporting requirements and section headings as specified in the NMPRC Energy Efficiency Rule Section 17.7.2.13.C(1 – 8).

C. (1) Independent Measurement and Verification Report

PNM contracted with ADM to conduct the independent evaluation of its energy efficiency programs. The M&V Report is submitted as a separate document along with this annual report.

C. (2) Program Expenditures Not Included in the M&V Report

The expenditures for the Program in 2010 as of December 31, 2010 were \$16,607,144. These expenditures include all expenses incurred by PNM to develop and implement the individual programs. The same total Program expenditure data was provided to ADM to be included in the M&V Report.

C. (3) Budgeted Funds Not Spent in Calendar Year 2010

Projected annual Program budgets for program years 2009 – 2011 were included in PNM's 2008 Program Plan that was approved by the Commission in Case 08-00204-UT on May 19, 2009. The second year budget (program year 2010) was \$17,248,986. Total expenses as of December 31, 2010 were \$16,607,144. Therefore, \$641,842 of the projected budget was not spent in calendar year 2010. The following table shows the budgeted amounts, the actual expenditures and the variances.

Cost Category	2010 Program Year Budget	Actual	Variance
Administration	\$ 1,155,124	\$ 1,309,267	\$ 154,143
Promotion	\$ 550,000	\$ 200,867	\$ (349,133)
M&V	\$ 647,255	\$ 381,766	\$ (265,489)
Incentives	\$ 7,527,491	\$ 7,037,776	\$ (489,715)
Third Party Costs	\$ 7,369,116	\$ 7,677,469	\$ 308,353
Total	\$ 17,248,986	\$ 16,607,144	\$ (641,842)

C. (4) Material Variances in Program Costs

Total actual expenditures in program year 2010 were about 4 percent below the projected 2010 program year budget. The individual program variations are primarily due to higher or lower participation than was originally projected in the 2008 Plan. Market transformation costs were lower due to less general energy efficiency advertising expenditures than originally proposed in the 2008 Plan.

Program	2010 Program Year Budget	2010 Actual Costs	Percent Variance
Refrigerator Recycling	\$ 1,529,540	\$ 1,293,092	-15%
Residential Lighting	\$ 1,558,015	\$ 1,748,973	12%
Energy Star Homes	\$ 516,189	\$ 518,795	1%
School CFL Exchange	\$ -	\$ 31,437	
Commercial Comprehensive	\$ 5,485,818	\$ 4,953,624	-10%
Easy Savings	\$ 591,695	\$ 433,080	-27%
LI Fridge and CFL	\$ 956,236	\$ 524,494	-45%
Load Management	\$ 5,990,768	\$ 6,781,633	13%
Market Transformation	\$ 620,725	\$ 322,017	-48%
Total	\$ 17,248,986	\$ 16,607,144	-4%

C. (5) Tariff Reconciliation

(Please see Tariff Collections section above, beginning on page 5)

C. (6) Program-Specific Metrics

The following tables present program-specific information, including forecasted savings, actual achieved savings, number of participants, net participant costs, cost-per-kWh of saved energy, economic benefits realized in 2010 and the economic benefits to be expected over the life of the measures. The labeling of items a) through g) corresponds to the items listed in section 17.7.2.13.C (6) of the Rule. Please see the above section for the utility costs by program (part of item (c) in the Rule) and Appendix A for avoided cost information which responds to item (d) in the Rule. Please note that all energy savings are reported as the savings at the customer meter. Total savings to PNM would include additional savings of about seven percent to account for system losses.

Programs	(a) Forecasted Savings (kWh)	Achieved Savings (kwh)	Achieved Savings (kw)	Achieved Lifetime Savings (kWh)
Refrigerator Recycling	8,875,364	7,312,412	1,179	35,719,501
Residential Lighting	18,628,514	20,583,370	2,783	144,083,589
Energy Star Homes	465,314	830,586	596	16,611,727
School CFL Exchange	-	341,564	39	2,390,945
Commercial Comprehensive	23,360,050	26,104,137	4,902	286,540,649
Easy Savings	2,472,477	2,390,391	220	18,051,937
LI Fridge and CFL	2,234,005	1,245,419	145	17,279,456
Advanced Evap Cooling	-	3,876	3	62,016
Lrg. Customer Self-Direct	-	-	-	-
Load Management	-	131,400	69,139	131,400
Total	56,035,724	58,943,155	79,006	520,871,220

Programs	(b) Program Participants	Program Units	(c) Participant Costs	(e) Cost per kWh Saved	(f) 2010 Economic Benefits	(g) NPV of Total Economic Benefits
Refrigerator Recycling	8,239	8,239	\$ -	\$ 0.036	\$ 820,524	\$ 2,914,414
Residential Lighting	124,306	994,445	\$ 1,300,498	\$ 0.012	\$ 2,254,421	\$ 11,461,139
Energy Star Homes	714	714	\$ 1,353,409	\$ 0.031	\$ 242,585	\$ 3,230,835
School CFL Exchange	5,721	17,164	\$ -	\$ 0.013	\$ 36,719	\$ 212,713
Commercial Comprehensive	475	475	\$ 5,283,153	\$ 0.017	\$ 3,000,602	\$ 24,146,922
Easy Savings	7,251	7,251	\$ -	\$ 0.024	\$ 314,571	\$ 2,168,067
LI Fridge and CFL	1,186	10,462	\$ -	\$ 0.030	\$ 133,995	\$ 1,515,189
Advanced Evap Cooling	2	2	\$ -	NA	\$ 697	\$ 9,520
Lrg. Customer Self-Direct	-	-	\$ -	\$ -	\$ -	\$ -
Load Management	24,068	32,247	\$ -	NA	\$ 8,510,886	\$ 8,510,886
Total	171,962	1,070,999	\$ 7,937,061		\$ 15,314,999	\$ 54,169,684

The various categories are described below:

(a) Forecasted savings are based on the target participation levels for program year 2010 as contained in the 2008 Plan approved in NMPRC Case No. 08-00204-UT.

(a) Achieved savings were determined by applying the validated net savings per participant for each program, adjusted for the free-rider rate, times the number of participants. Unit savings rates were adjusted based on the results contained in the 2010 M&V Report.

(a) Achieved lifetime savings are annual savings times the effective useful life of the measure as determined in the 2010 M&V Report.

(b) Program participants are those who participated in calendar year 2010. For some programs this value is estimated based on the number of units.

(b) Program units are the number of measures installed or purchased.

(c) Participant costs are the costs to purchase and install the measures less the rebates customers received.

(e) The cost per kWh saved is determined by dividing the program cost by the lifetime energy saved.

(f) The 2010 economic benefit for each program was determined by multiplying the 2010 avoided cost of energy times the actual annual savings.

(g) The net present value of the total economic benefits was determined by taking the discounted value of the annual avoided costs times the annual savings over the effective useful life of each program measure.

C. (7) Non-Energy Benefits

The following tables show the estimated emission reductions and water savings associated with the portfolio of programs. The avoided emissions are determined by multiplying PNM's average jurisdictional emissions rates times the annual and lifetime energy saved by the portfolio of programs. The water savings are determined by multiplying the PNM average jurisdictional water consumption times the annual and lifetime energy savings.³

³ The electric emissions rates and water consumption rate are based on preliminary 2010 monitoring, emission testing and reporting for PNM jurisdictional generation facilities and purchased power contracts.

Emission Type	Average Electric Emissions Rate (lbs/MWh)	Annual Avoided Emissions (tons)	Lifetime Avoided Emissions (tons)
SO2	0.603	18	157
NOx	2.066	61	538
CO2	1,431	42,168	372,633
Particulates	0.030	1	8

Water Impact	Average PNM Water Consumption (gal/MWh)	Annual Water Saved (gal)	Lifetime Water Saved (gal)
Water Saved	406	23,905,423	211,248,394

C. (8) Self-Direct Programs

PNM received no applications for the Self-Direct program in 2010.

Additional Program Information

Residential Lighting

In 2010, the Residential Lighting program exceeded its target with over 990,000 CFLs sold through the program. There were a total of 148 participating retail stores in the Residential Lighting program, up from 132 in 2009. These stores included large home improvement stores, buying clubs, discount retailers, drug stores, grocery stores and independent hardware stores throughout the PNM service territory. The average incentive on standard CFLs was \$0.95 per bulb and the average incentive per specialty CFL was \$1.50. Standard CFLs accounted for 86.4% of sales through the program, while specialty bulbs comprised the remaining 13.6%.

Each participating retailer displayed point-of-sale materials describing the benefits of CFLs, the different CFL options available and information on the discounts provided by the program. PNM Residential Lighting program field representatives provided participating stores with collateral and point-of-sale materials, organized retailer training sessions and conducted 27 in-store promotions throughout the year.

Refrigerator Recycling

JACO Environmental, Inc., the third-party contractor utilized for the Refrigerator Recycling program, has established a recycling center in Albuquerque. The facility disassembles all of the refrigerators and freezers collected through the program. In 2010, the average refrigerator collected and recycled through the program was manufactured in 1988 and was 18 cubic feet in size. The 8,239 refrigerators and freezers recycled in 2010 as part of the Refrigerator Recycling program prevented the emission of approximately 67,560 metric tons of CO₂ and CO₂ equivalents into the atmosphere⁴. Some of the key marketing activities used to promote this

⁴ EPA Responsible Appliance Recycling (RAD) Program Fact Sheet (http://www.epa.gov/ozone/partnerships/rad/raddisposal_factsheet.html)

program included write-ups in the PNM bill insert, a free-standing bill insert in English and Spanish, TV and newspaper advertising, and Google ad words.

ENERGY STAR® Home

A total of 714 homes built in PNM service territory earned the ENERGY STAR qualification in 2010. The ENERGY STAR Home program included 66 homebuilders and 23 Home Energy Rating System (“HERS”) raters in 2010. ICF International, Inc., the third-party contractor who implemented the program on behalf of PNM and New Mexico Gas Company, conducted trainings and provided marketing support to participating homebuilders and raters, including ENERGY STAR flags, yard signs, and other marketing collateral. ICF also conducted sales and technical training sessions for homebuilders and HERS raters throughout the year. The program continued to use a tiered incentive approach, which awarded homebuilders whose homes achieved a HERS Index of less than 71 with incentives ranging from \$500 to \$1000. Program marketing activities included print ads in Su Casa Magazine, the Albuquerque Journal Parade of Homes and the Journal Santa Fe Green Building Summit special section. The national ENERGY STAR Program awarded PNM and NMGCO with an ENERGY STAR 2010 Partner of the Year Award for this program; the second consecutive year that the program has been recognized with this prestigious award.

School CFL Exchange

The Sierra Club and Interfaith Power and Light provided volunteers to implement this program. CFL bulbs were distributed at 48 events during 2010. Over 17,000 bulbs were distributed at schools, community centers, community events, faith community events, pueblos and apartment complexes, with a focus on providing bulbs to low-income residents.

Easy Savings Kit

In 2010, a total of 7,226 kits were distributed to low-income PNM customers. As in 2009, this program continued to be available through two delivery mechanisms: direct mail and low-income assistance agencies. An informational postcard describing how to receive the kit was mailed to nearly 40,000 PNM customers who had qualified for the Low Income Home Energy Assistance Program (LIHEAP) in 2009. The agency delivery mechanism included a direct-install component. The City of Albuquerque Department of Senior Affairs received 1,000 kits to install in senior citizens’ homes as part of its weatherization activities. An additional 2,000 enrollment cards were distributed to various low-income assistance agencies, including the Salvation Army, Interfaith Power and Light and the Red Cross. These cards were then distributed by the agencies to the low-income customers they serve. Of the 7,226 kits distributed, 5,396 reached customers via the direct mail postcard, 830 reached customers via the agency-distributed postcard, and the remaining 1,000 kits were installed by the City of Albuquerque’s Senior Affairs Department.

Low-Income Refrigerator Replacement and CFL Installation

PNM has contracted with the New Mexico Mortgage Finance Authority (MFA) to implement this program. MFA and its subcontractors installed 9,857 CFLs and replaced 605 refrigerators in the homes of low-income PNM customers in 2010.

Commercial Comprehensive

PNM contracted with KEMA Services, Inc. to implement the Commercial Comprehensive energy efficiency program. This program offers pre-set and custom incentives for installing qualifying equipment in new and existing buildings, as well as a program specifically for small business customers (QuickSaver, the small business program is described separately below). Eligible equipment includes energy efficient lighting, HVAC, refrigeration, and motors. In 2010, 308 customers participated in the program. The projects completed at these customers' facilities resulted in 22,432,986 of annual kWh saved and \$2,621,357 in rebates paid.

PNM QuickSaver™

PNM QuickSaver, which is part of the Commercial Comprehensive program, is a direct install program for small business customers with an annual average peak demand of 100 kW or less. It offers business customers pre-set incentives for installing qualifying lighting products and refrigeration in existing buildings. In 2010, the program focused on continuing to select and train participating contractors and implementing the program. Six trade ally training events were held in 2010, which resulted in 27 approved QuickSaver contractors. \$525,729 in incentives was paid on 167 customer projects, which resulted in 3,671,151 of annual kWh saved.

Market Transformation

Market Transformation (MT) is a program that promotes the adoption of energy efficient products and services. The goal of the program is to induce lasting behavioral changes in the marketplace, resulting in an increased adoption of energy efficient technologies and measures. In 2010, MT activities included expanding the school kit program that was started in 2009. The MT program continued to provide "Learning and Conserving" curriculum kits that were purchased from the National Energy Education Development Project (NEED). These kits were donated to schools in Silver City, Ruidoso, Alamogordo, Bernalillo, Cliff, Santa Fe and Albuquerque. Also, training workshops were held in Albuquerque and Alamogordo to help teachers gain greater understanding of the many ways the kits could be used in the classroom.

In late 2010, MT staff conducted an informal survey of teachers that had received the kits to gain a better understanding of how they were being used in the classrooms. About half of the teachers responded, and their responses showed that more than 1,100 students around New Mexico in grades six through nine had utilized the curriculum in the kits. Every teacher who responded said the students were excited to make changes at home in order to save energy after going through the lessons in the kits. Seventy percent of the teachers said that their students had told them about some type of change they had made at home after using the NEED curriculum in the classroom. Changes included replacing incandescent light bulbs with CFLs, turning off lights when leaving the room, and unplugging electronics that are not in use.

MT staff partnered with the Albuquerque Bernalillo County Water Utility Authority to create an educational movie titled, "Power Couple – The Shocking True Story of Water and Electricity." Aimed at middle- and high-school students, the 7-minute movie takes a humorous approach to presenting the connection between water and electricity and discusses the importance of conserving both resources.

MT staff also participated in events in Alamogordo, Albuquerque, Silver City, Bernalillo and Deming to educate customers on ways they could make their home or business more energy efficient.

PNM Peak Saver and PNM Power Saver

PNM Peak Saver and PNM Power Saver are the two PNM load-management programs. These programs were successfully utilized to offset the need for peaking resources during the summer of 2010. About 64 MW were curtailed during an event where both programs were utilized in 2010. The table below provides a summary of the events during the 2010 control season, which ran from May to September.

Event Date	Event Time	Event End Time	Event Performance Peak Saver (kW)	Approximate Event Performance Power Saver (kW)*	Approximate Total Event Performance (kW)	Reason For Event
7/20/2010	1:30 PM	5:30 PM	27,078	36,728	63,806	Peak Shaving Event
8/4/2010	1:55 PM	3:05 PM	22,898	-	22,898	Non-spinning reserve test event

Appendix A – PNM Avoided Costs

The following table provides the avoided energy and demand costs for calendar year 2010. These costs were used by ADM in their program evaluation and in the PNM TRC model. The costs are the same as those approved in Case No. 08-00204-UT with the exception of the CO₂ adder which is consistent with the PNM 2008 Integrated Resource Plan.

	Energy	Capacity	CO ₂
Units:	\$/kWh	\$/kW-yr	\$/kWh
Data Year	2009	2009	2009
2010	\$ 0.0868	\$ 94.01	\$ -
2011	\$ 0.0893	\$ 96.36	\$ -
2012	\$ 0.0919	\$ 98.76	\$ 0.007
2013	\$ 0.0946	\$ 101.23	\$ 0.007
2014	\$ 0.0973	\$ 103.76	\$ 0.008
2015	\$ 0.1002	\$ 106.36	\$ 0.008
2016	\$ 0.1032	\$ 109.02	\$ 0.008
2017	\$ 0.1062	\$ 111.74	\$ 0.008
2018	\$ 0.1094	\$ 114.54	\$ 0.008
2019	\$ 0.1127	\$ 117.40	\$ 0.009
2020	\$ 0.1161	\$ 120.34	\$ 0.009
2021	\$ 0.1197	\$ 123.34	\$ 0.009
2022	\$ 0.1233	\$ 126.43	\$ 0.009
2023	\$ 0.1271	\$ 163.99	\$ 0.009
2024	\$ 0.1311	\$ 168.09	\$ 0.010
2025	\$ 0.1352	\$ 498.68	\$ 0.010
2026	\$ 0.1395	\$ 511.15	\$ 0.010
2027	\$ 0.1439	\$ 523.93	\$ 0.010
2028	\$ 0.1486	\$ 537.03	\$ 0.011
2029	\$ 0.1534	\$ 550.45	\$ 0.011
2030	\$ 0.1584	\$ 564.21	\$ 0.011
2031	\$ 0.1636	\$ 578.32	\$ 0.012
2032	\$ 0.1690	\$ 592.78	\$ 0.012
2033	\$ 0.1747	\$ 607.60	\$ 0.012
2034	\$ 0.1806	\$ 622.79	\$ 0.012
2035	\$ 0.1867	\$ 638.35	\$ 0.013
2036	\$ 0.1932	\$ 654.31	\$ 0.013
2037	\$ 0.1999	\$ 670.67	\$ 0.013
2038	\$ 0.2069	\$ 687.44	\$ 0.014
2039	\$ 0.2142	\$ 623.91	\$ 0.014
2040	\$ 0.2219	\$ 639.51	\$ 0.014
2041	\$ 0.2219	\$ 639.51	\$ 0.015
2042	\$ 0.2219	\$ 639.51	\$ 0.015