PNM Exhibit SMB-1

2012

ENERGY EFFICIENCY AND

LOAD MANAGEMENT

PROGRAM PLAN

NMPRC CASE NO. 12-00317-UT

OCTOBER 5, 2012

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1 EXECUTIVE SUMMARY

PNM began offering Energy Efficiency (EE) and Load Management (LM) programs to residential and commercial customers in October 2007, with the approval of New Mexico Public Regulation Commission (NMPRC) Case No. 07-00053-UT. The NMPRC again approved EE programs in Case No. 08-00204-UT in May 2009 and in Case No. 10-00280-UT in June 2011. Table 1-1 summarizes the program results from 2008 through 2011. Detailed analyses of each year's results are available in PNM's annual EE and LM program reports and measurement and verification reports at www.pnm.com/regulatory.

Table 1-1

Historical Calendar Year Results	2008	2009	2010	2011
Portfolio TRC Ratio	2.71	1.56	2.20	1.78
Total Annual Energy Savings*	35.2GWh	39.9 GWh	58.8 GWh	57.6 GWh
Peak Demand Reduction*	7.5 MW	6.3 MW	9.9 MW	9.7 MW
LM Dispatchable Capacity	47 MW	53 MW	67 MW	57 MW
Total Program Expenses ($M)	$8	$12	$16.60	$16.60

* Savings are calculated at the customer meter. Savings at the generator include an additional 7% system

The 2012 Energy Efficiency and Load Management Program Plan (2012 Plan) contains the description of the PNM portfolio of energy efficiency programs. The 2012 Plan presents updated participation targets and budgets for existing programs approved by the NMPRC in Case No. 10-00280-UT, proposed modifications of existing programs and five new programs. The 2012 Plan is proposed pursuant to the Efficient Use of Energy Act, NMSA 1978 § 62-17-1*et. seq.,* (EUEA or Act) and the Energy Efficiency Rule (Rule)[1].

All programs proposed in this plan were selected according to the criteria detailed below, including passing the Total Resource Cost (TRC) cost-benefit test. PNM also carefully considered public comments and suggestions, and believes there is general agreement among public advisory group attendees concerning the reasonableness of the program changes and new programs being proposed. PNM developed the portfolio of programs to appeal to various segments of residential customers, including low-income customers. The 2012 Plan includes low-cost and no-cost programs to achieve broad participation among all residential customers. In addition, every commercial or industrial customer who pays the energy efficiency rider is eligible to participate in the programs for non-residential customers. The proposed 2012 Plan has a total projected 12-month budget of $22,493,227 with projected energy savings of approximately 82 gigawatt-hours (GWh). Table 1-2 shows the projected 12-month budget, energy and demand savings, and the TRC ratios for each program group and the total portfolio. (Program costs and TRC ratios shown in the 2012 Plan do not include costs associated with profit incentives unless otherwise noted.)

[1] PNM recognizes that there is some confusion regarding what Energy Efficiency Rule is legally in effect, if any. In developing this 2013 Plan, PNM has relied on the guidelines contained in the 2007 version of the Rule, adapted to reflect variances from that version of the Rule as provided in the Final Order Granting Blanket Variances in NMPRC Case No. 11-00439-UT (Nov. 22, 2011). For ease of reference, PNM refers to that version as the Energy Efficiency Rule.

Table 1-2

2012 Plan	Annual kWh Savings	Lifetime kWh Savings	MW Savings	Budget	TRC
Commercial EE	38,455,039	374,997,751	8.2	$ 7,328,102	1.65
Residential EE	38,419,190	216,718,922	7.2	$ 5,771,415	1.82
Low Income EE	4,494,630	50,472,429	0.6	$ 1,631,215	3.06
Load Management	1,125,000	1,125,000	60.0	$ 7,433,135	1.57
Market Transformation	N/A	N/A	N/A	$ 329,359	N/A
TOTAL	**82,493,859**	**643,314,102**	**76.0**	**$ 22,493,227**	**1.70**

2 PROGRAM GOALS

2.1 LEAST-COST RESOURCE PLANNING

PNM energy efficiency and load management programs provide numerous benefits to the PNM system, customers, participating customers, the environment and the New Mexico economy. The programs, now in their fifth year, are a key resource in the PNM 2011 Integrated Resource Plan (2011 IRP). The 2011 IRP examined many different portfolios of options that could be implemented to meet expected growth in the demand for electricity from 2011 to 2030. Energy efficiency and load management programs were consistently found to be cost-effective alternatives when compared to meeting system needs with traditional supply-side resources. "The most cost-effective portfolio meets electric system demand, provides acceptable system reliability and operational flexibility, meets renewable portfolio standards and other regulatory requirements, and minimizes financial cost to the customer."[2]

2.2 REQUIREMENTS OF THE EFFICIENT USE OF ENERGY ACT

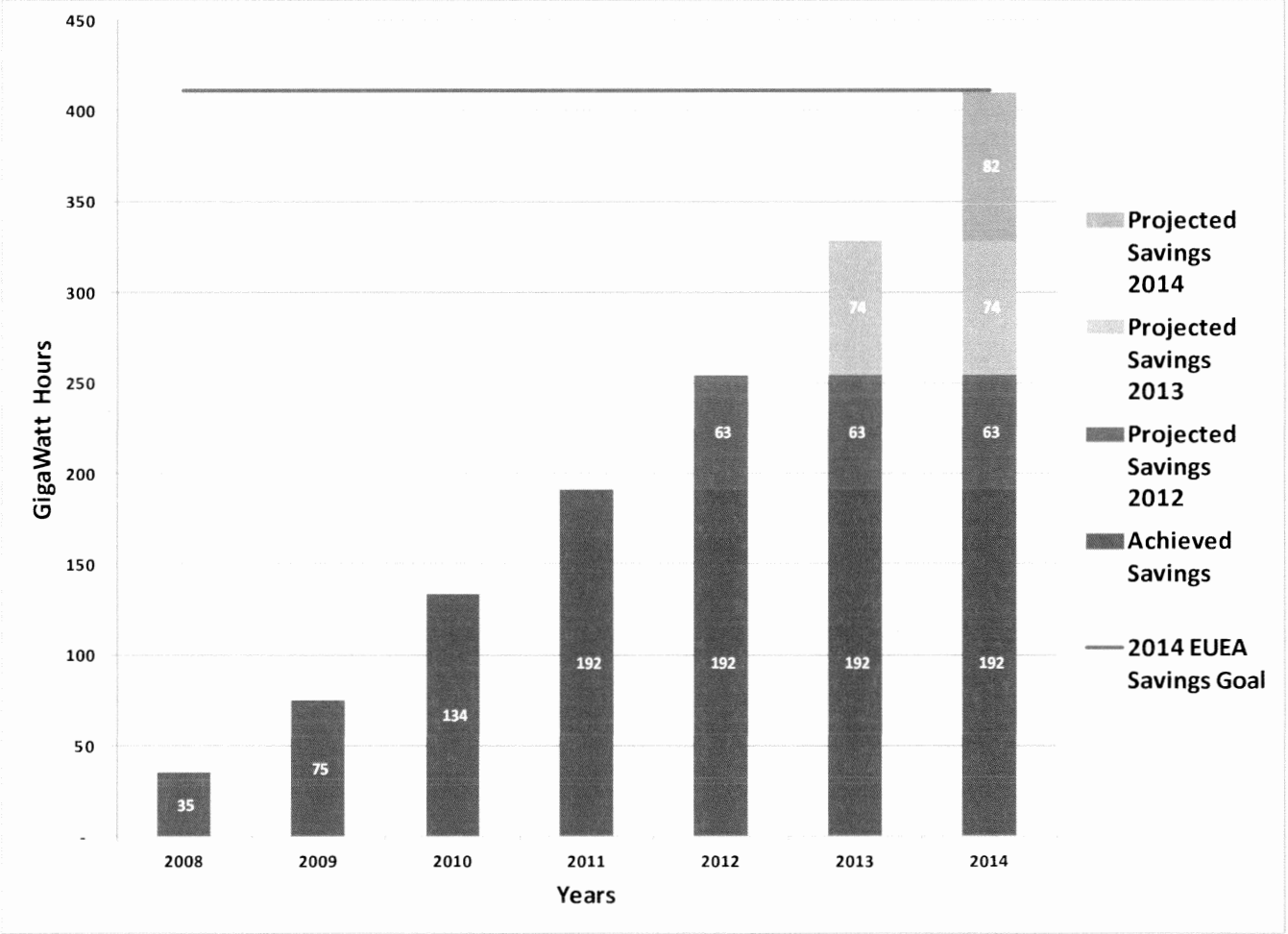
The most cost-effective portfolio in the 2011 IRP includes projected impacts of the 2012 Plan and projected growth of the programs that will allow PNM to achieve the minimum energy saving goals specified in the Efficient Use of Energy Act. The Act requires that PNM achieve cumulative savings equivalent to at least 411 GWh by 2014, which is five percent (5%) of PNM's retail sales in 2005.

New programs are developed according to the specifications included in the Act and the Rule, which includes passing the TRC cost-effectiveness test. As of year-end 2011, PNM's approved EE programs are achieving cumulative annual "net" energy savings of about 192 GWh. (Net savings are determined by applying reductions to gross savings that account for free rider impacts and the effective useful life of the programs as determined by the independent evaluator). Incremental projected energy savings from currently approved programs for calendar year 2012 are 63 GWh. The projected annual savings under the 2012 Plan portfolio is 82 GWh; however, PNM projects that only about 74 GWh will occur in calendar year 2013 due to the filing and approval schedule. PNM is forecasting 82 GWh of savings in calendar year 2014 based on full implementation of the programs in the 2012 Plan, providing for cumulative savings of 411 GWh which is equal to PNM's minimum energy savings target for 2014 as specified by the EUEA. The Commission disapproved and reduced some programs that PNM proposed in Case No. 10-00280-UT; therefore, PNM has not achieved the amount of savings that were projected in PNM's original program plan submitted in that case. However, if the new programs and budgets proposed in the 2012 Plan are approved by April, 2013 and customer participation meets the projections assumed in the 2012 Plan,

[2] "Electric Integrated Resource Plan: 2011 – 2030, July 2011, p. 1. http://www.pnm.com/irp

PNM will achieve the minimum savings specified in the Act. Figure 2-1 shows the annual cumulative savings achieved through 2011 and incremental projections through 2014.

Figure 1-1



2.3 INCREASED ADOPTION OF ENERGY EFFICIENCY TECHNOLOGIES

In addition to meeting the requirements of the Act, PNM hopes that through its energy efficiency programs it will encourage lasting structural and behavioral changes in the marketplace. This is accomplished by promoting the purchase of energy efficient products and services, increasing customer awareness of energy efficiency measures, providing incentives to change behaviors, and removing market barriers. The programs proposed in the 2012 Plan address these objectives by:

- Implementing multi-channel promotional campaigns that increase customer awareness of energy efficiency products and their benefits;
- Informing and training the retail and contractor networks to help build awareness and encourage participation within the vendor community;
- Partnering with community-based organizations to help inform and educate customers;

- Using rebates to shift the focus from the initial cost of installing measures to the long-term savings in operating costs;
- Facilitating the rebate process to make participation simple for customers;
- Broadening low-income programs to enhance this customer segment's participation in EE programs by building awareness of energy efficient products, their benefits, and the expected savings; and
- Implementing educational programs for different customer segments about the benefits of the energy efficiency programs.

3 PROGRAM SELECTION

3.1 PROGRAM RESEARCH

In 2011, Global Energy Partners completed a new study (GEP Potential Study)[3] which was consulted in the selection of programs for this plan, and will continue to be a guiding document in future years. PNM also conducted secondary product, program and market research.

Much of the research for the 2012 Plan was conducted through interaction with other utilities and through participation in national organizations concerned about energy efficiency such as Southwest Energy Efficiency Project (SWEEP), Consortium for Energy Efficiency (CEE), American Council for an Energy-Efficient Economy, Electric Power Research Institute, Institute for Electric Efficiency, and ESource.

PNM also solicited input regarding existing and new programs from a public advisory group; a list of those invited and who attended the advisory group meetings is provided in Appendix B. Public advisory group meetings were held on December 14, 2011 and May 22, 2012 to assist in the development of the 2012 Plan. PNM also had discussions with, and received information from, several individual members of the advisory group on separate occasions.

3.2 SELECTION CRITERIA

The following criteria were considered when selecting new programs and evaluating existing programs:

A. Cost effectiveness – The Act establishes the TRC test as the standard to be used in determining the cost-effectiveness of energy efficiency or load management programs. The TRC, as defined in the Rule[4], is the ratio of the net present value of the program savings to the present value of program costs. Any program with a TRC of 1.0 or above is cost-effective.

    1. Costs include PNM program administration costs, promotion, third-party implementation, participant rebates/incentives, and measurement and verification, as well as the costs for the customer to participate

[3] Energy Efficiency Potential Study for the State of New Mexico, Volume 2: Electric Energy Efficiency, Global Energy Partners, 2011

[4] 2007 Energy Efficiency Rule, 17.7.2.7.AA

in the program, such as the incremental cost of purchasing an energy efficient product over a less efficient product.

2. Benefits include avoided costs to the utility for energy, demand, natural gas and reductions in CO_2 emissions. PNM's energy efficiency avoided costs are provided in Appendix A.

3. All programs in the 2012 Plan meet the cost-effectiveness criteria and have a TRC greater than 1.0.

B. System benefits – programs should deliver system benefits through demand and energy savings or availability of load that can be dispatched or shifted to off-peak times.

1. The programs selected for the 2012 Plan provide significant energy and demand savings as shown in Table 4-3 below.

C. Broad participation potential – programs should provide the opportunity for broad participation among eligible customer classes targeting residential, commercial, industrial and low-income customers.

1. The 2012 Plan includes programs for residential customers, low-income customers, commercial and industrial customers.

D. Energy and demand savings – collectively, the proposed programs should contribute to meeting the 2014 and 2020 savings requirements as set forth in the Act.

E. Non-energy benefits – programs should create significant non-energy benefits, including lower bills for customers, increased consumer awareness and adoption of energy efficient technologies, removal or minimization of market barriers to adoption of energy efficiency products and technologies, and environmental benefits through the reduction in emissions and water use associated with the production of electricity.

1. Programs in the 2012 Plan provide significant non-energy benefits including:

i. Lower bills for those who participate. Energy savings for the measures in each program are shown in Table 4-2. These savings will result in lower bills for those who participate.

ii. Increased awareness and adoption of technologies. The programs include substantial promotional efforts designed to increase customer awareness and understanding of energy efficiency. The participation goals, shown in Table 4-1, will insure increased adoption of measures.

F. Implementation – Programs should have a proven track record in other utility markets and a defined target market within PNM service territories that ensures straightforward program implementation.

1. Programs are implemented and managed by PNM staff or third-party contractors who are experienced with specific programs and technologies, and who leverage the existing market experience. Table 3-2 lists the parties responsible for program implementation.

G. Measurement and verification ("M&V") – Each program implemented should have a defined method for measuring and verifying savings to determine the contribution to overall energy efficiency goals.

1. PNM has worked closely with independent M&V evaluators since 2008 and will continue to work with the state-appointed evaluator when they examine the 2012 Plan programs. Section 4.4 provides a description of the important elements of program M&V.

H. Performance risk of the technologies – None of the products promoted by any of the programs should rely on unproven technologies.

1. Each program contained in the 2012 Plan is based on proven measures that have been implemented successfully by other utilities.

3.3 COST-EFFECTIVENESS MODEL

3.3.1 TRC MODEL

Cost-effectiveness is determined through calculation of the TRC ratio, the ratio of program benefits to program costs, for each program and for the portfolio of programs. PNM has developed a spreadsheet model for performing the TRC calculation. The input assumptions and results for each program analysis are included in Appendix C – Technical Manual. Inputs to the TRC model include measure life, per-unit energy and capacity savings, forecasted participation rates, rebate costs, natural gas savings per unit, and incremental participant costs which include any state or local credits or rebates that are available. These inputs are based on independent measurement and verification reports for past program years, data contained in the potential studies, research on programs at other utilities, and standards set by ENERGY STAR, CEE and other energy efficiency organizations.

Several factors were considered in estimating the participation targets, including past program performance, the potential participation identified in the GEP Potential Study, participation targets identified in responses to requests-for-proposals issued by PNM, and third-party contractor estimates. PNM also considered participation rates at other utilities and the cost impact to participants of installing efficiency measures.

3.3.2 PROGRAM BENEFITS

Program benefits are determined by multiplying the annual program energy and demand savings by the annual avoided costs for energy and demand, over the useful life of the program. The avoided costs used in the TRC model are provided in Appendix A.

3.3.3 PROGRAM COSTS

Table 3-1 shows the estimated annual costs to implement the 2012 Plan programs. Costs are presented in six categories which are described below.

Table 3-1

Program	Admin	Third Party	Rebates	Promotion	M&V	Total
Commercial EE						
Commercial Comprehensive	$ 397,278	$ 2,110,568	$ 4,609,120	$ 10,000	$ 201,135	$ 7,328,102
Residential EE						
Refrigerator Recycling	$ 72,021	$ 668,000	$ 400,000	$ 152,000	$ 21,000	$ 1,313,021
Residential Lighting	$ 95,250	$ 488,422	$ 1,115,061	$ 10,000	$ 31,500	$ 1,740,233
Energy Star Homes	$ 7,925	$ 67,500	$ 66,750	$ -	$ 3,554	$ 145,730
Whole House (New)	$ 57,235	$ 671,794	$ 287,733	$ 10,000	$ 25,669	$ 1,052,430
Student Efficiency Kits (New)	$ 17,135	$ 132,750	$ 157,500	$ -	$ 7,685	$ 315,069
Residential Stay Cool (New)	$ 37,900	$ 108,434	$ 508,568	$ 25,000	$ 16,998	$ 696,899
Home Energy Reports (New)	$ 27,629	$ 468,013	$ -	$ -	$ 12,391	$ 508,033
Low Income EE						
Low Income Refrigerator & CFL	$ 7,132	$ 32,444	$ 78,368	$ 10,000	$ 3,199	$ 131,142
Easy Savings Kit	$ 17,710	$ 120,000	$ 180,000	$ -	$ 7,943	$ 325,653
LI Home Efficiency (New)	$ 63,293	$ 458,407	$ 603,750	$ 10,000	$ 28,386	$ 1,163,837
Community CFL	$ 576	$ -	$ 8,750	$ 1,000	$ 258	$ 10,584
Load Management						
PNM Power Saver	$ 301,013	$ 3,696,000	$ 1,403,003	$ -	$ 13,125	$ 5,413,141
PNM Peak Saver	$ 111,869	$ 1,095,000	$ 800,000	$ -	$ 13,125	$ 2,019,994
Market Transformation	$ 18,359	$ -	$ -	$ 311,000	$ -	$ 329,359
TOTALS	**$ 1,232,324**	**$ 10,117,332**	**$10,218,603**	**$ 539,000**	**$ 385,968**	**$ 22,493,227**

THIRD PARTY IMPLEMENTATION

PNM administers all programs; however, PNM has engaged third-party contractors with proven expertise to implement most of the programs. PNM has chosen to use third-parties to implement programs because of the many advantages that this approach provides. These advantages and considerations include:

- The ability to use a request-for-proposal ("RFP") process which solicits responses from potential contractors and allows PNM to evaluate the best approach and most qualified proposal.
- Proven expertise and experience in delivering similar programs by the selected contractor reduces the risk associated with implementing a new program and achieving targeted participation.
- Companies that specialize in specific program delivery can start a new program quickly after PNM receives PRC approval.
- Program scale can be adjusted up or down quickly through the use of contractor personnel.
- Contracts can be designed to limit PNM and customer risk by including provisions to pay for performance achieved.

Third-party implementation costs are the costs paid by PNM to the third-party contractors. These costs can include contractor labor, development of promotional material, marketing, customer outreach, development of program processes and customer enrollment procedures, trade ally recruitment and other program specific costs. Table 3-2 lists each program and the party responsible for implementation.

Table 3-4

Program	Third Party Implementer
Commercial EE	
Commercial Comprehensive	KEMA Services Inc.
Residential EE	
Refrigerator Recycling	JACO Environmental
Residential Lighting	Energy Federation Inc.
Whole House (New)	Ecova
Home Energy Reports (New)	Opower
Student Efficiency Kits (New)	National Energy Foundation
Residential Stay Cool (New)	Energy Federation Inc.
Low Income EE	
Low Income Refrigerator & CFL	MFA
Easy Savings Kit	Resource Action Programs
Energy Smart Renters	MFA
Low Income Home Efficiency (New)	Ecova
Community CFL	PNM
Load Management	
PNM Power Saver	Comverge
PNM Peak Saver	EnerNOC

PROMOTION

Most third-party contractors are responsible for marketing the programs they administer; therefore, their promotional costs are included in third-party expenses. PNM manages marketing for two programs, Refrigerator Recycling and Market Transformation, and will assist EFI in development of materials for the promotion of the Residential Stay Cool program. PNM also works in conjunction with each third-party contractor to market its respective program and includes information about some of these programs in its own marketing materials and customer outreach channels where appropriate. These marketing channels include direct mail, outreach events (including events specifically for low-income customers), bill inserts, call center staff, the PNM website, outdoor advertising, and television and radio spots.

CUSTOMER INCENTIVES (REBATES)

One of the barriers to energy efficiency deployment is that high efficiency options are more expensive than less efficient options. Customer Incentives or rebates are designed to help overcome this barrier and typically offset between 25% and 50% of the incremental cost of purchasing the energy efficiency measure over the standard non-energy efficient option. Exceptions to this are the programs that target low-income customers and other hard-to-reach customer segments, such as small-business customers. The low-income programs are offered at no cost to income-qualified participants, and the small-business component of the Commercial Comprehensive program provides higher incentives in order to encourage greater participation. In addition to using the general guideline of 25% to 50% of incremental cost, rebate amounts are set for each measure in a program based on a market assessment of what it will take to achieve the participation targets for the program. Some measures, such as a multi-pack of compact fluorescent ("CFL") bulbs, may require a small rebate to encourage increased purchases. For other programs, such as Refrigerator Recycling, the rebate is determined based on past participation rates at a given rebate level and the need to increase participation.

INTERNAL ADMINISTRATION

The primary internal administrative cost is the labor associated with program management and administration, program development, tracking, reporting and the time needed to oversee and interact with third-party contractors and stakeholders. Additional costs include incidental costs, such as travel and membership fees for energy efficiency organizations. Internal administrative costs are proportionally allocated to the energy efficiency programs based on the direct costs associated with each program. Direct costs are the costs specific to individual programs such as third-party costs, rebates and promotional costs. Administrative costs represent about five percent of the total 2012 Plan costs.

MEASUREMENT AND VERIFICATION

The budget for independent M&V of the programs is estimated to be about 2% of the total program budget. Costs for M&V are based on the current contract approved by the NMPRC with ADM Associates Inc. (ADM) to conduct analysis of five programs for calendar years 2011 and 2012, and an additional cost for possible M&V for the remaining programs in 2013.

4 2012 PROGRAM PLAN SUMMARY

4.1 SUMMARY TABLES

This section presents the key performance measures and assumptions for each program in the 2012 Plan. The information is presented in a series of tables. Table 4-1 shows the customer participation or unit targets for the programs forecasted over two years.

Table 4-1

Program	Unit Type	2014	2015
Commercial EE			
Comm. Comp. - Retrofit/NC	Participant	350	375
Comm. Comp. - QuickSaver	Participant	625	625
Comm. Comp - Build. Tune Up (New)	Participant	42	79
Residential EE			
Refrigerator Recycling	Refrigerator	8,000	8,000
Residential Lighting	CFL	1,000,000	900,000
Whole House (New)	Participant	1,575	2,100
Student Efficiency Kits (New)	Participant	4,500	4,500
Residential Stay Cool (New)	Cooler	2,375	2,375
Home Energy Reports (New)	Participant	48,000	48,000
Low Income EE			
Low Income Refrigerator & CFL	Bulbs	1,947	1,947
Low Income Refrigerator & CFL	Refrigerators	147	147
Easy Savings Kit	Kit	6,000	6,000
LI Home Efficiency (New)	Participant	1,250	1,500
Community CFL	CFL	5,000	0
Load Management			
PNM Power Saver	MW	40	42
PNM Peak Saver	MW	20	20

Table 4-2 shows the effective useful life ("EUL"), energy and demand savings, incremental participant cost, and average rebate cost per unit for each program.

Table 4-2

Program	EUL	Per Unit Net kWh Savings	Per Unit Net kW Savings	Participant Costs	Rebate Per Unit
Commercial EE					
Comm. Comp. - Retrofit/NC	11.0	76,257	14.688	$ 20,824	$ 7,895
Comm. Comp. - QuickSaver	7.0	17,309	4.570	$ 2,862	$ 2,862
Comm. Comp - Bldg Tune-Up (New)	6.0	45,108	9.918	$ 5,000	$ 5,185
Residential EE					
Refrigerator Recycling	5.0	922	0.158	$ -	$ 50
Residential Lighting	7.0	20	0.003	$ 2.06	$ 1.12
Whole House (New)	9.0	953	0.547	$ 346	$ 183
Student Efficiency Kits (New)	7.0	156	0.012	$ -	$ 35
Residential Stay Cool (New)	10.8	489	0.711	$ 338	$ 191
Home Energy Reports (New)	1.0	165	0.015	$ -	$ -
Low Income EE					
Low Income Refrigerator	18.0	1,287	0.165	$ -	$ 500
Low Income CFL	7.0	47	0.005	$ -	$ 2.50
Easy Savings Kit	8.0	330	0.030	$ -	$ 30
Low Income Home Efficiency (New)	14.0	1,709	0.274	$ -	$ 483
Community CFL	7.0	20	0.002	$ -	$ 1.75

Table 4-3 provides the projected annual energy and demand savings, lifetime savings, net-present-value of the costs and benefits and the TRC for each program.

Table 4-3

Program	Annual kWh Savings	Lifetime kWh Savings	kW Savings	NPV Costs	NPV Benefits	TRC
Commercial EE						
Commercial Comprehensive	38,455,039	374,997,751	8,205	$ 10,049,353	$ 16,571,445	1.65
Residential EE						
Refrigerator Recycling	7,372,239	36,861,194	1,263	$ 954,954	$ 1,497,160	1.57
Residential Lighting	19,647,718	137,534,029	2,501	$ 2,217,724	$ 4,921,699	2.22
Energy Star Homes	114,496	3,434,888	113	$ 344,436	$ 370,500	1.08
Whole House (New)	1,500,329	13,502,960	862	$ 1,148,294	$ 1,528,324	1.33
Student Efficiency Kits (New)	702,555	4,917,882	55	$ 174,740	$ 288,603	1.65
Residential Stay Cool (New)	1,161,854	12,547,969	1,688	$ 849,650	$ 1,944,216	2.29
Home Energy Reports (New)	7,920,000	7,920,000	720	$ 469,531	$ 654,335	1.39
Low Income EE						
Low Income Refrigerator & CFL	281,403	4,051,664	33	$ 48,775	$ 124,808	2.56
Easy Savings Kit	1,977,982	15,823,853	182	$ 134,614	$ 765,500	5.69
LI Home Efficiency (New)	2,135,743	29,900,400	343	$ 517,640	$ 1,242,296	2.40
Community CFL	99,502	696,512	11	$ 4,849	$ 24,008	4.95
Load Management						
PNM Power Saver	450,000	450,000	40,000	$ 3,647,696	$ 4,908,440	1.35
PNM Peak Saver	675,000	675,000	20,000	$ 992,010	$ 2,353,663	2.37
Market Transformation				$ 304,399		
TOTAL	**82,493,859**	**643,314,102**	**75,976**	**$ 21,858,666**	**$ 37,194,997**	**1.70**

Table 4-4 shows projected program cost and energy savings for the proposed 2012 Plan programs through 2015, including projected increases in customer participation in 2015.

Table 4-4

Program	2014		2015	
	Program Budget	kWh Savings	Program Budget	kWh Savings
Commercial EE				
Commercial Comprehensive	$ 7,328,102	38,455,039	$ 8,139,119	41,195,957
Residential EE				
Refrigerator Recycling	$ 1,313,021	7,372,239	$ 1,304,182	7,372,239
Residential Lighting	$ 1,740,233	19,647,718	$ 1,623,078	17,682,947
Energy Star Homes	$ 145,730	114,496	$ -	-
Whole House (New)	$ 1,052,430	1,500,329	$ 1,173,016	2,000,438
Student Efficiency Kits (New)	$ 315,069	702,555	$ 312,914	702,555
Residential Stay Cool (New)	$ 696,899	1,161,854	$ 675,255	1,161,854
Home Energy Reports (New)	$ 508,033	7,920,000	$ 504,557	7,920,000
Low Income EE				
Low Income Refrigerator & CFL	$ 131,142	281,403	$ 130,245	281,403
Easy Savings Kit	$ 325,653	1,977,982	$ 323,425	1,977,982
LI Home Efficiency (New)	$ 1,163,837	2,135,743	$ 1,252,115	2,562,891
Community CFL	$ 10,584	99,502	$ -	-
Load Management				
PNM Power Saver	$ 5,413,141	450,000	$ 5,572,353	472,500
PNM Peak Saver	$ 2,019,994	675,000	$ 2,006,265	675,000
Market Transformation	$ 329,359	-	$ 327,106	-
TOTAL	**$22,493,227**	**82,493,859**	**$23,343,630**	**84,005,765**

4.2 NON-ENERGY BENEFITS

4.2.1 ECONOMIC BENEFITS AND GREEN JOBS

The PNM Energy Efficiency Program has a positive economic impact on our state through the creation of green jobs. There is a correlation between the level of incentives provided to customers and the number of retrofit and new construction projects performed by contractors and other trade allies to help our residential and commercial customers become more energy efficient. More specifically, in the case of energy efficiency spending, these programs provide services, purchase materials, and induce investment, which have a direct impact on the economy. For every dollar spent in EE programs, a portion of it remains within the state as wages and payment for local equipment and services. As this money gets re-spent within the state, it increases its overall benefit. The incentive levels in the 2012 Plan are designed to cover about 25% of the incremental cost of performing the retrofits and encourage investments that would otherwise not be made. Therefore, one estimate of the increased investment caused by the rebate payments would be to assume that the rebates cause spending on retrofits valued at four times the rebate level. Based on the estimated customer incentives of about $10,000,000 this would result in about $40,000,000 in investment in energy efficiency improvements that would otherwise not have been made.

The number of green jobs created by the existing PNM Energy Efficiency Program and those projected for the new programs are shown in Table 4-5. These jobs are full-time positions created by the third-party contractors to implement the programs. The Commercial Comprehensive program, for example, directly employs 7 people. In addition to the jobs shown in Table 4-5 PNM estimates that another 21 jobs are being supported in the contractor community to install the measures associated with the commercial program. (The estimate of additional jobs is based on an analysis of the time spent installing measures – multiplying the number of measures that have been installed by the labor minutes per installed measure).

Table 4-5

Program	Green Jobs
Existing Programs	
Residential Lighting	2
Refrigerator Recycling	12
Power Saver	11
Peak Saver	3
Energy Star Homes	1
Commercial Comprehensive	7
Proposed Programs	
Expanded Commercial Comp.	1
Whole House	4
Residential Stay Cool	1
LI Home Efficiency	2
TOTAL	**44**

4.2.2 EMISSIONS REDUCTIONS

The energy savings attributed to the proposed 2012 Plan, if approved and implemented, would result in significant reductions of various environmental emissions and in water needed for the generation of electricity. The CO_2 reduction is estimated to be about 47,000 metric tons per year and the water reduction is estimated at about 33,000,000 gallons per year, assuming the PNM average generation portfolio production values.

4.3 TARIFF RIDER AND CUSTOMER BILL IMPACT

PNM Rate Rider No. 16 (Rider) recovers the costs associated with the PNM Energy Efficiency Program. Beginning with the first billing cycle of May 2012, the Rider was set at 2.643 percent of bills, as shown in Advice Notice No. 446[5]. In addition to the approved current year program costs and profit incentive costs, the Rider also includes reconciliation of program costs and profit incentive costs through calendar year 2011. PNM will file a reconciliation of 2012 program costs in conjunction with its 2012 annual report on April 1, 2013. The annual report and reconciliation filing will include proposed adjustments to the Rider to account for any over- or under-collection of program costs and profit incentive costs in 2012. PNM estimates the Rider element for recovery of the 2012 Plan program costs will be about 2.598 percent (2.598%) of bills which will replace the current program cost element (currently 2.150 percent – not including reconciliation elements) in the Rider.

[5] Advice Notice No. 446, effective April 26, 2012.

4.4 MEASUREMENT AND VERIFICATION (M&V)

The Act requires that M&V be performed by an independent program evaluator. The Rule specifies that the NMPRC will approve the selection of the independent evaluator. The independent evaluator prepares a report that includes documentation of the total portfolio and individual program-level expenditures, measured and verified savings, and cost-effectiveness of all utility programs, including self-direct programs. The report includes deemed savings assumptions and all other assumptions determined by the evaluator. Objectives of the M&V process include verifying that measures were installed, are operating properly within reasonable quality standards and are expected to generate the predicted savings.

In addition to the objectives listed above some of the broader expectations of the M&V evaluator include: to implement a rigorous and transparent M&V process for all energy-efficiency and load management programs in New Mexico; to develop an M&V framework that clarifies the responsibilities of the Commission, the evaluator and the utilities and development of guidance for the implementation of consistent impact evaluations; to assess program metrics; to report the results of the evaluations; to inform future program design and budget allocation decisions; and, to provide technical support to the NMPRC and the NMPRC appointed M&V Committee, as may be requested.

The NMPRC approved ADM Associates, Inc. as the statewide independent evaluator for calendar years 2011 and 2012. The M&V Committee issued an RFP on June 21, 2012 for selection of a new independent evaluator for evaluation of the programs in calendar years 2013 and 2014. PNM will work closely with the independent evaluator approved by the NMPRC for evaluation of the 2012 Plan programs.

4.5 REPORTING

PNM will make annual compliance filings, currently scheduled for April 1, each year that will cover program evaluation and tariff rider collections. The filings will also include the M&V reports completed by the independent evaluator. Concurrently with filing the annual report, PNM will request any needed reconciliation of the tariff Rider to reflect actual participation levels and actual expenditures made in implementation of the programs. Annual reports are available through the PNM web site at: www.pnm.com/regulatory.

5 PROGRAM DESCRIPTIONS

Continuing and proposed new programs are described in the following sections:

- 5.1 – Commercial Programs
- 5.2 – Residential Programs
- 5.3 – Low-Income Programs
- 5.4 – Load Management Programs
- 5.5 – Market Transformation Program

5.1 COMMERCIAL PROGRAMS

5.1.1 CONTINUING PROGRAMS – APPROVED IN CASE NO. 10-00280-UT

COMMERCIAL COMPREHENSIVE

The Commercial Comprehensive program is PNM's flagship program for non-residential customers. The program provides incentives for the retrofit or installation of both prescriptive and non-prescriptive measures that decrease demand and save energy. The program is designed to be a "one-stop-shop" for commercial customers interested in improving the efficiency of their existing or planned new facilities. Examples of measures include a prescriptive list of lighting upgrades, building controls, compressed air and fan systems, and HVAC and refrigeration upgrades, as well as incentives for custom measures. This program also includes a new construction option that offers incentives for buildings constructed to exceed local building code energy requirements and special incentives for small businesses. In addition, the program offers training programs and on-site audits.

One important aspect of the Commercial Comprehensive program is its reliance on the participation of local energy efficiency vendors, suppliers and contractors who install the energy saving equipment. These organizations are critical "trade allies" and the program would not be successful without their enthusiastic support. PNM conducts several training sessions each year for participating trade allies in which the program processes are reviewed and technical training is provided on new efficiency approaches.

The Commercial Comprehensive program is comprised of three main components: Retrofit Rebates, New Construction, and PNM QuickSaver™ for small business customers, which are each described in more detail below. Complete program details including the customer application and a list of all rebates is available on the PNM web site.[6]

RETROFIT REBATES

The Retrofit Rebate component is the largest component of the Commercial Comprehensive program in terms of total savings. The Retrofit Rebate component offers two options for a PNM business customer: 1) a pre-set menu of rebates for installing qualifying equipment in new and existing buildings; or 2) custom rebates for reducing energy use with a system improvement that is not included on the pre-set menu. Custom rebates are based on the estimated first-year energy savings.

Items from the pre-set menu that qualify for PNM rebates include:

- Lighting Retrofits for efficient technologies from Fluorescent and Metal Halide to LED
  - Interior
  - Exterior
  - Specialty Applications
  - Fixture Removal
- HVAC
  - Unitary Units (Packaged, Split, Air Source Heat Pumps)
  - Large Chillers (Centrifugal, Scroll, Reciprocating, Air-Cooled)
  - Other (guest room occupancy sensor)
- Building Envelope
  - Window Films
- Refrigeration
  - Strip Curtains
  - Night Covers for display units
  - EC Motors
  - Fan Controllers

[6] http://www.pnmenergyefficiency.com/Projects/Default.aspx?tabid=909

- Anti-Sweat Heater Controls
- LED Refrigeration Lighting
- High Efficiency Ice Makers

- Food Service
  - EnergyStar Steam Cookers
  - Combination Ovens
  - EnergyStar Holding Cabinets
  - EnergyStar Beverage Machines
  - Snack, and Beverage Controls
- Motors and VSD's
- Super Premium and Variable Frequency Drive Controllers

PNM QUICKSAVER

The PNM QuickSaver component is available for business accounts with peak demand of 100 kW or less. Qualifying businesses contact an approved PNM QuickSaver trade ally to schedule an energy efficiency evaluation. The PNM QuickSaver-approved trade ally then provides an on-site evaluation and a written proposal for the energy efficiency equipment upgrades for which the facility qualifies. Using this information, a contract between the customer and the trade ally is drafted with the costs and final project completion payment clearly defined. The contractor handles all of the project paperwork. PNM QuickSaver covers on average about 70% of the project cost, which makes improved efficiency more affordable and attractive to the hard-to-reach small business customer. PNM pays the rebate to the contractor, and for many projects, utility savings will pay back out-of-pocket cost incurred by the business participant in less than one year.

Fewer energy savings measures are available under the QuickSaver component compared to the Retrofit or New Construction components. QuickSaver focuses on the following measures that are the most common and cost-effective measures for the typical small business:

- Refrigeration Components
- Lighting Fixtures and Lamps
- Lighting Control Upgrades

These measures are also ones that can be installed quickly and provide immediate electric cost savings to participating small business owners.

NEW CONSTRUCTION

Customers that build new facilities or make major renovations of existing buildings can receive an incentive if they install equipment or systems that result in surpassing existing building code requirements and save additional energy. Savings are determined by following ASHRAE 90.1-2007 Appendix G standards and must be validated using a standard modeling tool such as DOE-2, BLAST, EnergyPlus or eQUEST capable of hourly calculations and modeling multiple thermal zones. The tool used must be approved by PNM staff.

The whole-building new construction component provides an incentive based on the amount of annual energy saved due to constructing the building to standards at least 10% better than local building code, which is currently the ASHRAE 90.1 2007 standard. There are two levels of incentives available based on the following conditions:

- Surpass ASHRAE 90.1 2007 on a new building by 10 percent and receive 8 cents per first-year kilowatt-hours saved.
- Surpass ASHRAE 90.1 2007 on a new building by 20 percent and receive 10 cents per first-year kilowatt-hours saved.

REFRIGERATOR RECYCLING

The Refrigerator Recycling program is primarily a residential program but is also available to commercial customers. Please see the residential program description below for more detail.

SELF-DIRECT

This program allows large customers (with energy usage greater than 7 million kWh per year) to receive credits for qualifying incremental expenditures made towards energy efficiency measures at the customers' facilities. Credits for approved self-direct programs may be used to offset up to seventy percent of the energy efficiency tariff Rider until the credit is exhausted.

5.1.2 CHANGES TO EXISTING PROGRAMS

BUILDING TUNE-UP COMPONENT OF COMMERCIAL COMPREHENSIVE

OVERVIEW

For 35 years, since the first energy codes were implemented, there has been no consideration in the codes for how buildings actually perform; only criteria that prescribe how they are to be designed and constructed. The purpose of this new component to the Commercial Comprehensive program is to improve the system efficiency of small, medium and large commercial buildings, and it is intended to use a systems approach of improving overall efficiency. The goal is to optimize building performance through several elements that can include continuous monitoring, building operator training, and the installation of energy management systems. HVAC systems will be examined to identify issues with thermostats, airflow, refrigerant charge, economizer function, and other performance parameters.

Monitoring has many meanings however, there are two options that are being promoted as continuous monitoring. These are commonly referred to as either top-down or bottom-up approaches. The top-down approach is at the meter level, and bottom-up is at the equipment level. The top-down approach attempts to diagnose performance issues through real time energy metering in an enhanced energy information system. The top-down approach establishes a baseline energy profile and tracks savings and performance versus the baseline. However, the top-down approach has difficulty drilling down to the actual measure from the utility analysis; for example, it is able to identify anomalies to expected operation, but is unable to identify specific equipment causing the issue. The bottom up approach is better at identifying measures but can be costly and relies heavily on being able to interface with proprietary control systems. However, because of the complexity and expense with these approaches, this measure will only be used when other methods are not sufficient for identifying savings.

The building tune-up is the process of bringing a building's mechanical and electrical systems, including building controls, to peak performance. Existing systems will be analyzed and parameters may be adjusted and equipment repaired as necessary. Low-cost operational improvements that deliver high energy savings will be identified. For more complex systems, a building analysis may be performed. In return for the building analysis the customer will be required to install all identified energy efficient measures that have a two year payback or less, and cost less than $5,000.

After system improvements are identified and prior to any system modifications, a baseline of utility consumption will be estimated. PNM will pay a rebate based on the 1-year annualized rate of energy savings. For larger projects, a portion of the rebate may be paid based on actual savings achieved as determined by monitoring for one year after the project is

completed. Monitoring will depend upon the complexity of the tune-up and/or measures taken. Therefore, monitoring can include; the evaluation of the building management systems, analyzing metering data, or evaluating specific equipment performance. The anticipated customer incentive is estimated to be approximately 10¢/kWh for actual first year energy savings; however, the incentive may be decreased to 8¢ or increased up to 12¢ in response to customer participation. The range of rebate levels is based on typical rebates being paid by similar programs at other utilities. For more complicated buildings, PNM will also pay a portion of the study expenses of approximately $5,000 per 100,000 sq ft up to $20,000.

IMPLEMENTATION

PNM selected KEMA Services, Inc. (KEMA) through a competitive Request for Proposal (RFP) process as the third-party contractor to implement this program. KEMA is the third-party implementer for the existing Commercial Comprehensive program. The Building Tune-Up program will be implemented as a new option for customers under the existing Commercial Comprehensive program. PNM and KEMA will work closely with the vendor and contractor community. KEMA will recruit and educate trade allies, distributors, and wholesalers on the program details and incentives, will provide contractor training and be available for customer support.

ENERGY SAVINGS

The energy savings are projected to be approximately 0.52 kWh per square foot of managed space, based on M&V of similar building tune-up programs at other utilities[7]. Based on potential study data and average energy use, this represents approximately 3 percent of the electrical energy consumption of a typical installation.

TARGET MARKET

Any PNM non-residential customer who pays the energy efficiency rider is eligible. The participation goal for the program was developed through analysis of similar programs implemented at other utilities and is expressed in terms of square feet of commercial building space participating in the program. The goal for the first year is to have customer participation equivalent to about 2,100,000 square feet of commercial space. This goal increases to 4,000,000 square feet in the second year and 5,100,000 square feet in the third year.

RELATION TO EXISTING PROGRAMS

The Building Tune-Up component of the Commercial Comprehensive program differs from the Retrofit Rebate component in that the primary goal is to identify low-cost operational improvements that deliver energy savings. Existing mechanical and electrical systems and building controls will be adjusted, typically with minimum capital cost. To the extent a building tune-up incorporates prescriptive elements included in the PNM Retrofit Rebate program, the customer will generally receive rebates through the Retrofit Rebate program.

POTENTIAL FREE RIDERS

[7] SBW Report No. 0606 CALMAC Study IDQST0001.01 "Impact and Process Evaluation Final Report" for QuEST's 2004-5 Building Tune-Up Program, March 22, 2007

Free ridership is estimated to be 13 percent based on a California Database of Energy Efficient Resources (DEER) report[8], CALMAC M&V studies[9], and evaluation of the 2004-05 San Diego Retro-Commissioning Program.

5.2 RESIDENTIAL PROGRAMS

5.2.1 CONTINUING PROGRAMS – APPROVED IN CASE NO. 10-00280-UT

RESIDENTIAL LIGHTING

The Residential Lighting program provides incentives to PNM customers to replace incandescent light bulbs with CFL bulbs and other efficient lighting technologies through instant, markdown discounts and coupons at participating retailers in the PNM service territory. A list of retailers that offer discounts is available at http://www.pnm.com/cfl. The primary focus of the program is promotion of CFLs. CFLs use 75% less electricity and last up to 10 times longer than traditional incandescent bulbs. A CFL placed in a frequently used lamp can save about $35 or more over the lifetime of the bulb. PNM is budgeting about $1.12 per bulb as the average rebate, which represents about 50% of the incremental cost on average.

Light Emitting Diode (LED) bulbs offer another option for savings that are similar to the savings from CFLs. LEDs last up to 20 years and have some characteristics that are superior to CFLs, such as dimmability. Most options for LEDs available in the market today are very high cost and since the savings are not significantly more than CFLs they do not pass the TRC test as an individual residential measure. However, there is some public interest in LEDs and PNM will consider including some discounts for LEDs in the 2012 Residential Lighting program. Even though LED lights in most residential situations are not cost-effective, inclusion of a small number of LED rebates will have very little impact on the total program TRC. PNM will monitor LED sales and product availability and evaluate opportunities for strategic promotions of LED technology.

PNM projects that up to 1,000,000 high efficiency bulbs will be discounted through the Residential Lighting Program in 2013, but that the target will begin to decrease in 2014. Beginning in 2012, the market for light bulbs will start to transform due to the impact of the Energy Independence and Security Act of 2007 (EISA). This federal legislation prescribes minimum efficacy standards (lumens per watt) for regular duty light bulbs. EISA requires the ultimate phase-out of inefficient lighting technologies beginning in 2012 with the elimination of the 100 watt (W) incandescent bulb and then the 75W, 60W and 40W bulbs, respectively, in subsequent years. Also, certain specialty bulbs are exempt from EISA, including candelabra bulbs, reflectors, and three-way bulbs. However, funding for implementation of EISA has been delayed by Congress which may delay the implementation schedule.

Despite the major lighting market change that EISA will bring, there will be a continued need for CFL promotions. Customers will be faced with a choice between more lighting options at the point of purchase, including new technologies such as the EISA-compliant halogen (EC-Halogen) bulbs, which retain the look of traditional incandescent bulbs, but use less energy. However, an EC-Halogen equivalent to a 100W incandescent uses 73W, while an equivalent CFL uses only 23W. Consequently, there are still significant energy savings to be achieved by using and promoting CFLs. Although overall savings from CFL programs will be lower than they are currently as these new baselines are established, lighting will still be

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[8] Overview of DEER NTFR Update Process for 2006-2007 Programs, page 108, CPUC, 2008.

[9] SBW Report No. 0606 CALMAC Study ID QST0001.01 "Impact and Process Evaluation final Report" for QuEST's 2004-5 Building Tune-Up Program, California Measurement Advisory Council, 2007

on par with appliance recycling as one of the most cost-effective residential energy efficiency program options[10]. Research shows that price will continue to be a leading consideration in making lighting purchases[11], which demonstrates that PNM should continue to offer incentives for customers to encourage them to purchase energy efficient CFLs.

The market penetration (i.e. households with at least 1 CFL) is 69% nationally, while the CFL market share is approximately 15% and the socket saturation (defined as the fraction of total Medium Base Screw Lamp sockets in a home filled with a CFL is 11% nationally.[12] Given the continuing significant market potential for CFLs and LEDs, PNM believes residential lighting promotion is increasingly important.

PNM will continue to monitor the sales of various types of high efficient bulbs. Independent M&V will determine impacts on the free-rider rates or net energy savings and PNM will make modifications to the goals over time as indicated. PNM will also continue to monitor and research new lighting technologies, such as LEDs, and will investigate the possibility of offering additional incentives on other technologies in the future.

REFRIGERATOR RECYCLING

The Refrigerator Recycling program is designed to encourage retirement of old or unnecessary second refrigerators and freezers. A refrigerator manufactured before 1995 can use up to three times more energy than a newer model. By retiring and not replacing an extra working unit, a PNM residential customer can save up to $175 a year in electricity costs. This program is also available to PNM business customers, although only residential size and type refrigerators and freezers are accepted. The rebate amount is $50 per refrigerator or freezer. The rebate was raised from $30 in 2012 in order to achieve the targeted participation rate. PNM believes that $50 is sufficient to achieve the targets in the 2012 Plan.

PNM has contracted with JACO Environmental, Inc. to implement the program, which includes picking up old units and transporting them to the local recycling facility. Approximately 95% of each refrigerator or freezer is recycled. The unit must be in working condition and be between 10 and 27 cubic feet in size. There is a limit of two refrigerators and/or freezers per household, but no limit for business customers.

5.2.2 CHANGES TO EXISTING PROGRAMS

ENERGY STAR HOMES

PNM is proposing to end the ENERGY STAR Homes program by year-end 2013 as a result of changes in federal and state requirements for home construction described below. The ENERGY STAR Homes program provides home builders within PNM's service territory an incentive payment for homes built to the ENERGY STAR standards. PNM has collaborated with the New Mexico Gas Company on the ENERGY STAR Homes Program in promoting the program and sharing the cost of the incentives for homes built in areas where they have overlapping service territories.

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[10] "Executive Summary: Overview of Results and Program Recommendations of 2011 Lighting Planning Studies", Ecova, http://www.ecova.com/media/121084/overview_of_results_and_program_recommendations_from_lighting_planning_studies.pdf

[11] Ecova study

[12] "The U.S. Replacement Lamp Market, 2010-2015, and the Impact of Federal Regulation on Energy Efficiency Lighting Programs" – Applied Proactive Technologies, August 2010.

In order to maintain brand effectiveness, ENERGY STAR has published a new national standard, version 3.0. This was necessary because version 2.0 requirements were less stringent than the 2009 International Energy Conservation Code (IECC). The State of New Mexico has approved code requirements for new construction based on the 2009 IECC. PNM has studied the incremental costs and potential energy savings of building homes to the ENERGY STAR version 3.0 guidelines compared to the new State code requirements. Costs were analyzed for local builders who itemized the incremental costs incurred to build to ENERGY STAR version 3.0. The incremental cost was approximately $3,000 for version 3.0. A participating HERS (Home Energy Rating System) rater determined that the incremental annual energy savings for a home constructed to meet the new ENERGY STAR guidelines compared to the new State code are estimated to be 93 therms and 858 kWh. These values result in a TRC less than 1.0 and therefore the PNM ENERGY STAR Homes Program will no longer be cost-effective. PNM proposes that homes participating in the program must have a permit dated prior to the date the NMPRC approves this plan and have an occupancy certificate prior to September 30, 2013. Homes constructed after this date will not be eligible and the PNM ENERGY STAR Homes program will end by December 31, 2013.

5.2.3 NEW RESIDENTIAL PROGRAMS

WHOLE HOUSE

OVERVIEW

PNM is proposing a comprehensive program in which PNM residential customers can participate and save money and energy by choosing one of several rebate packages tailored to meet their needs. The program includes a required home energy assessment with installation of low cost measures, including up to twenty CFLs, low-flow showerheads, faucet aerators, and programmable thermostats, for which the customer will pay a fee of $40. Rebates will also be provided for the purchase of ENERGY STAR appliances and replacement of existing and working HVAC units with more efficient units having a seasonal energy efficiency ratio (SEER) of 13 or above. The program will also identify customers who may qualify for additional incentives on advanced evaporative cooling and high-efficiency pool pumps. PNM has selected Ecova, Inc. (Ecova) through a competitive RFP process to be the third-party implementer of this program. Ecova's duties will include recruitment and training of contractors, home assessors and retailers (trade allies), rebate fulfillment, marketing and advertising, data tracking and reporting, and quality assurance.

IMPLEMENTATION

The Whole House program will apply a one-stop-shop approach that will include a walk-through assessment and informative discussion between the program participant and home assessor explaining the assessment results, while also providing additional educational materials including conservation tips and information about other incentive programs available to participants. Once the assessment has been completed and the results and educational materials have been presented, the home assessor will install program-required energy efficiency measures, including a low-flow showerhead, faucet aerator, CFLs, and a programmable thermostat.

To encourage even greater energy and cost savings, the participant will also receive tailored combinations of rebate applications for ENERGY STAR qualified appliances, HVAC replacement to higher SEER equipment, including an additional rebate for an HVAC upgrade equivalent to CEE Tier 1, and high efficiency evaporative cooling equipment as applicable. Participants will be eligible to receive a rebate on one ENERGY STAR qualified appliance. Participants can choose from the following:

- Standard size refrigerator - $125 rebate

- Clothes washer - $75 rebate
- Dishwasher - $50 rebate

For rebates relating to early retirement and replacement of HVAC equipment, the participant will receive a rebate application(s) for a SEER-13 or above HVAC unit. Replacement of existing units can only be done by trained PNM participating contractors. Participants may be eligible for an additional rebate if the replacement unit(s) is rated above a SEER 13. Whole House participants who have evaporative cooling in their homes may receive rebate applications for a new higher efficiency evaporative cooling unit and/or window AC unit. Rebates for the HVAC related options will initially be the following:

- Advanced evaporative cooling - $300
- HVAC Early Replacement - $400
- HVAC Replacement with CEE Tier I unit - $500
- Window AC Unit - $25

Appendix C includes specific details on total proposed incentive amounts for the program based on proportionally weighted assumptions about participation levels. Because these are preliminary rebate assumptions, PNM may need to adjust the rebate amounts within the following ranges depending on participation levels:

- $50 to $75 for the dishwasher
- $75 to $100 for the clothes washer
- $125 to $150 for the refrigerator
- $200 and $400 for evaporative cooling equipment
- $300 and $500 for HVAC early retirement
- $400 and $600 for the CEE Tier one HVAC early retirement upgrade
- $25 and $50 for the Window AC unit

A sample of completed Whole House projects will be subject to quality control inspections and participant follow-up to ensure customer satisfaction and proper installation.

CONDITIONS

To qualify for the program, the following conditions must exist:

- A participant is defined as the primary account holder responsible for paying the active PNM residential account, including renters. Landlord approval will be required in certain instances, such as assessment-recommended HVAC and evaporative cooling replacement.
- A walk-through assessment is a required component of the Whole House program and can only be performed by a trained PNM home assessor. The participant is responsible to pay a small fee of $40 for the assessment which includes direct installation of the measures described in the Implementation section, as well as the measures themselves. The fee helps cover the costs of the assessment and will serve to limit the number of customers that only want to participate to receive free direct install measures without participating in the other portions of the program. Based on research of similar programs a fee of about $40 is typical. PNM will monitor program participation and adjust the fee between $25 and $40 if necessary, dependent upon program participation levels.
- The assessor must verify that the existing HVAC equipment is operational in order to be eligible for a rebate for early retirement and replacement of existing HVAC cooling equipment.

- HVAC replacement must be completed by a PNM participating contractor who has been trained in quality installation procedures.
- Rebate applications must contain program required documentation when submitted to the third-party contractor in order to be eligible for a rebate.

TARGET MARKET

Any PNM residential customer who pays the energy efficiency rider is eligible. The participation goal for the program was developed through analysis of similar programs implemented at other utilities and in consultation with Ecova. The goal for the first calendar year is 1,575 participants. This goal increases to 2,100 in the second calendar year.

MARKETING & OUTREACH

The marketing and outreach strategy will focus on educating home assessors, contractors, and retailers to effectively promote the program by presenting consistent and clear messaging and educational information about energy efficiency. Much of the marketing will be accomplished through these trade allies as well as through conventional advertising channels, and could include the PNM website and bill inserts, direct mail, contractor and trade organizations, press releases, and word-of-mouth.

RELATION TO EXISTING PROGRAMS

Ecova and PNM will cross-promote and identify potential synergies with participating contractors within existing and proposed PNM programs, such as Residential Lighting, Refrigerator Recycling, PNM Power Saver and Residential Stay Cool. Customers will receive information about the benefits of the PNM Energy Efficiency Program as a whole.

POTENTIAL FREE RIDERS

The free ridership assumption is based on existing M&V studies performed by ADM on other New Mexico utility programs, and the GEP Potential Study, and is assumed to be 20 percent.

ENERGY SAVINGS

PNM estimates that the average annual energy savings per participant will be about 1,200 kWh and 0.68 kW. This estimate assumes various participation rates in the multiple options available. Please see the Whole House Calculations worksheet in the Technical Manual in Appendix C for more details.

RESIDENTIAL STAY COOL

OVERVIEW

The Residential Stay Cool program offers PNM residential customers cost and energy savings during the high summer peak months by offering incentives for efficient cooling and pool pump equipment. Evaporative cooling is an effective means of providing cooling for homes in this climate. New evaporative technologies have improved the effectiveness of cooling when

compared to traditional thin-pad style evaporative cooling units, also referred to as swamp coolers. The traditional technology employs thin pads (aspen or synthetic material) on multiples sides of the swamp cooler. Studies by the PG&E Technical and Ecological Services Performance Testing and Analysis Unit [13] demonstrate that at temperatures over 88 degrees, the thin-pad coolers do not provide adequate cooling (at least 80 degree air). The ability of a cooler to deliver cool air is referred to as effectiveness (how close the outlet temperature gets to the entering wet-bulb temperature). The PG&E research demonstrates that evaporative cooling units with advanced media (primarily – but not exclusively - single inlet coolers with 12 inch rigid media) provide substantially increased cooling performance when compared to thin-pad style coolers. Customers seeking additional comfort from underperforming evaporative cooling units are increasingly converting to refrigerated air conditioning.

Two high efficiency refrigerated air conditioning options are also part of Stay Cool program. Customers who purchase new or replacement refrigerated air conditioners will be offered an incentive for purchasing unit(s) with higher efficiency standards than the minimum required by code. The standard to be applied is a criteria developed by CEE and tier 1 is the minimum standard for which PNM will offer a rebate. Window air conditioning units are another target of this program. ENERGY STAR qualified refrigerated window units are available in the market, but have a higher cost than the less efficient models.

PNM is also proposing rebates for efficient pool pumps. Homes with swimming pools consistently have higher energy bills than homes without a pool, and homes with pools also tend to have the highest annual natural gas and electricity consumption. Historically, pools have been installed with single speed pumps that are responsible for circulating water in the pool at least once per 24 hours, which is standard practice in the pool industry. These pumps generally do not have timers or features that regulate when they run. In some cases, pools have a second pump for water features. Pools are much more efficient if they have a variable speed pump. Automated controls ensure the pump runs at low speed for longer periods of filtration and at high speed for short periods of pool vacuuming or water feature operation. Controls can ensure filtering occurs for no longer than necessary and that it occurs during the times of day not coincident with the utility's peak. The savings potential of variable speed pumps is so great that ENERGY STAR is considering criteria for pool pumps and CEE is developing a swimming pool initiative to include Tier levels.

IMPLEMENTATION

PNM has selected EFI through a competitive RFP process as the third party contractor to implement the program. The Stay Cool program will initially be implemented as a mail-in rebate program; however, PNM will work with EFI to evaluate options for up-stream or point-of-purchase rebates for the cooling equipment portion if that delivery method is more cost-effective. EFI currently implements the Residential Lighting program and will utilize some of the same retailer network to promote the Stay Cool program. EFI will also work closely with the vendor and contractor community by leveraging contractor networks that exist for PNM's other programs, as well as developing new HVAC networks. EFI will inform contractors, distributors, and wholesalers of the program details and incentives, will provide contractor training and availability for customer assistance and support. EFI will also be responsible for delivering point of sale materials to pool supply distributors, retail locations, and will also be responsible for all marketing, collateral design and production, and program tracking and documentation.

[13] Evaluation of Advanced Evaporative Cooler Technologies Report No.: 491-04.7, PG&E Technical and Ecological Services Performance Testing and Analysis Unit, 2004

The purpose of the Stay Cool program is to lower residential energy use and educate customers on the performance of newer, more advanced technologies available to them. Incentivizing advanced evaporative cooling technologies help to maintain the market share of evaporative cooling equipment. Likewise, incentivizing high efficiency refrigerated air conditioning equipment offers a better energy and cost savings alternative for customers who choose or already have refrigerated air conditioning. Efficient pool pumps lower residential energy usage by extending pumping time at lower speeds and lowering demand during peak utility loads. The initial PNM proposed cooling and pool pump equipment incentives are:

- $300 rebate for the purchase of advanced evaporative coolers
- $100 rebate for the purchase of advanced evaporative cooler window units
- $750 rebate for direct-indirect evaporative cooling units
- $25 rebate for the purchase of ENERGY STAR qualified window A/C units
- $200 rebate for purchase of refrigerated A/C's listed as CEE tier 1 or greater
- $300 rebate for the installation of a variable speed pool pump with integrated controller

Appendix C includes specific details on total proposed incentive amounts for the program based on proportionally weighted assumptions about participation levels. Because these are preliminary rebate assumptions, PNM may need to adjust the rebate amounts within the following ranges in response to participation levels:

- $200 and $400 for advanced evaporative cooling equipment
- $100 and $200 for advanced evaporative window units
- $100 and $300 for the CEE Tier one AC units
- $25 and $50 for the Window AC unit
- $200 and $400 for the variable speed pool pump

ENERGY SAVINGS

For whole house air conditioning, the unit energy consumption (UEC) values from the GEP Potential Study[14] were used as a baseline. The estimated average savings per participant for evaporative cooling, after adjusting for product mix and free ridership, are 489 kWh and 0.71 kW. Please see the Residential Stay Cool Calculations worksheet in Appendix C – Technical Manual for more details including window unit and CEE tier 1 assumptions. A variable speed pool pump in PNM's service territory will typically save 1,041 kWh per year for a 22,000 gallon pool. Since pool pumps operate during PNM's peak period, demand savings are estimated to be significant, about 0.4 kW per pump.

TARGET MARKET

All PNM residential customers are eligible. The GEP Potential Study estimates that the statewide energy consumption of evaporative cooling will decline from 196 GWh in 2009 to 166 GWh by 2015[15] as a result of conversion of evaporative cooling to refrigerated cooling. PNM represents approximately 55 % of that market or 16.5 GWh of this market decline.

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[14] Energy Efficiency Potential Study for the State of New Mexico, Volume 6: Appendices for Electric Efficiency Analysis, Table A-1 PNM single Family household, Global Energy Partners, June 30, 2011.

[15] Energy Efficiency Potential Study for the State of New Mexico, Volume 2: Electric Energy Efficiency Analysis, Global Energy Partners (GEP), June 30, 2011 Table 4-1 page 4-3.

Using the Unit Energy Consumption of 735 kWh[16] per single family household, this conservatively estimates that 12,346 households (2,057 per year) will convert to some type of refrigerated air conditioning. The initial goal is to provide cooling equipment incentives to 2,275 households in the first complete year of the program.

The GEP Potential Study also indicates that 4.5%[17] of PNM's residential customers, or approximately 20,000, have pool pumps. South Central Pool Distributors, which sells 80%-90% of the pumps in PNM's service territory, estimates that it will sell about 1,000 pumps in 2011, of which only about 20 are variable speed pumps. If PNM's program could influence 10% of these 1,000 customers to upgrade to a variable speed pump, that would generate annual savings of approximately 100 MWh, and 7 GWh lifetime savings over a three-year program. Home owners and home owners with pools are the primary market for this program (rebates are available for commercial customers who purchase variable speed pumps through the Commercial Comprehensive program). The incentive will be split between the Contractor and program participant to encourage continued promotion of these technologically advanced products to their client base.

RELATION TO EXISTING PROGRAMS

Residential cooling equipment will also be an important element for many participants in the proposed Whole House program. Whole House participants eligible for replacement of existing evaporative cooling equipment and/or older refrigerated window units with higher efficiency equipment will receive cooling-related rebate incentives through the Whole House program. Application submissions and payment will be monitored in both programs on a regular basis for quality control purposes and to ensure compliance. Efficient pool pump incentives will be cross-promoted as well for homeowners with swimming pools.

The emerging technologies component of the existing Market Transformation program has been offering rebates on the purchase of direct-indirect evaporative cooling units. These incentives will now be offered under the proposed Residential Stay Cool program. Although there has been only limited market response to direct-indirect evaporative cooling, it continues to be a viable, although more expensive, evaporative cooling option and PNM believes it is important to continue to provide incentives to help expand the market for this cost-effective technology.

MARKETING AND OUTREACH

A main barrier regarding evaporative cooling technologies is misinformation in the market. In terms of efficient pool pumps, known barriers include a lack of consumer awareness, sales force (distributors, installers and contractors) engagement, and the high incremental price. Also, residential pools do not require a permit, nor are they governed by the state environment department. Therefore, primary outreach will need to occur through the contractor community. Adequate educational materials will be required for the Residential Stay Cool program as a whole. This program will be promoted through a combination of PNM channels, including bill inserts and the website, point of sale materials, and contractor outreach as applicable.

POTENTIAL FREE RIDERS

[16] GEP Potential Study Volume 2 Table A-1

[17] GEP Potential Study Volume 6 Table A-1

Free ridership is estimated to be approximately 36% based on the measurement and evaluation reports of other evaporative cooling utility programs in New Mexico. Efficient pool pumps do not represent any significant associated free ridership implications for this program.

STUDENT EFFICIENCY KIT

OVERVIEW

Student Efficiency Kits is an energy savings and education program that combines energy efficiency curriculum for teachers with easy-to-install energy efficiency and water-saving measures for students to install at home.

PNM will contract with National Energy Foundation (NEF) to implement this program which consists of general program oversight, web design, kit production, warehousing and distribution, marketing, program tracking, data tabulation, and reporting. This program is designed to generate immediate and long-term savings by sending interactive hands-on education home with motivated students. Participating 5th grade students in PNM's service territory receive educational materials designed to build knowledge and demonstrate simple ways to save by changing habits in conjunction with easy-to-install measures. The kit materials support state and national educational standards, which allow the program to easily fit into teachers' existing schedules and requirements. The total cost of providing the kits including all presentation time and materials is about $64 per kit.

IMPLEMENTATION

National Energy Foundation is an energy efficiency and conservation-focused company specializing in residential resource efficiency and community awareness. PNM selected NEF through a competitive RFP process. One of the characteristics of the NEF proposal that led PNM to select it for this program was the educational experience of its staff and its proven ability to work closely with teachers in the delivery of this type of program.

The program begins with an interactive presentation at a school assembly or similar event teaching the importance of using water and energy efficiently, followed by hands-on, creative problem solving. Next, participating 5th grade students take home an activity kit that includes high efficiency measures. With the help of their parents, the students install the measures at home and complete a home survey. The NEF staff tabulates all the responses, including home survey information, teacher responses, student input, parent responses, and generates a program summary report. By installing and monitoring the efficient measures at home, students are able to reinforce what they have learned through measurable water, energy and monetary savings.

All participants receive classroom materials and efficiency measures to install and monitor in their homes. Select materials can be modified to incorporate PNM's logo and color scheme. Sample contents of the kit and curriculum are shown in Table 5-3 below.

Table 5-2

Each student/teacher receives:	Each teacher/classroom receives:

- Student Guide
- Student Workbook
- Parent Introduction Letter*
- Home Audit Form
- Pre & Post Surveys
- Certificate of Achievement
- Efficiency Activity Kit containing:
  ○ Low-flow Showerhead*
  ○ Kitchen Aerator*
  ○ 2-Compact Fluorescent Light Bulbs
  ○ FilterTone® Alarm*
  ○ LimeLite® Night Light
  ○ Digital Water/Air/Refrigerator/Freezer Thermometer®
  ○ Toilet Leak Detector Tablets*
  ○ Flow Rate Test Bag
  ○ Natural Resources Fact Chart
  ○ Mini Tape Measure
  ○ Parent Comment Card
- Interactive Program Web Site
- Toll-Free Telephone Support
	- Teacher Book
	- Step-by-Step Program Checklist
	- Lesson Plans
	- Program Video (VHS and DVD)
	- Program Evaluation
	- Supplemental Activities*
	- New Mexico State Education Standards
	- Correlation Chart
	- Pre/Post Survey Answer Keys
	- Classroom Natural Gas, Electricity, and Water Posters
	- Self-Addressed Postage Paid Envelope

***Materials/Installation Instructions provided in English and Spanish**

SIMILAR PROGRAMS AT OTHER UTILITIES

Other utilities offering similar programs include: El Paso Electric, Xcel Colorado, Mississippi Power, Alliant Energy, and Black Hills Energy. El Paso's Fall 2009 report points out a high level of participant satisfaction amongst students and teachers, as well as parent involvement in the activities. Xcel (SPS) exceeded its 2009 unit goals by 16%.

ENERGY SAVINGS

PNM estimates that implementing the Student Efficiency Kit program will reduce consumption by 195 kWh per household, per year. This estimate is based on verified savings from CFLs and low-flow showerheads in other PNM programs. Savings assumptions are shown in Appendix C.

TARGET MARKET

PNM will target approximately 4,500 5th grade level students each year across the service territory.

HOME ENERGY REPORTS

OVERVIEW