



2021

ENERGY EFFICIENCY AND

LOAD MANAGEMENT

PROGRAM PLAN

NMPRC CASE NO.

APRIL 15, 2020



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1 EXECUTIVE SUMMARY

PNM began offering Energy Efficiency (EE) and Load Management (LM)¹ programs to residential and commercial customers in October 2007, with the approval of the New Mexico Public Regulation Commission (NMPRC) in Case No. 07-00053-UT. The NMPRC approved subsequent EE programs in Case No. 08-00204-UT in May 2009, in Case No. 10-00280-UT in June 2011, in Case No. 12-00317-UT in November 2013, in Case No. 14-00310-UT in April 2015, in Case No. 16-00096-UT in January 2017, and Case No. 17-00076-UT in January 2018. Table 1-1 summarizes EE and LM program performance from 2008 through 2019. Detailed analyses of the most recent year's (2019) performance are available in PNM's annual EE and LM program report and measurement and verification report, which are filed concurrently with the 2021 Energy Efficiency and Load Management Program Plan (2021 Plan) and are available at www.pnm.com/regulatory.

Table 1-1

Year	Portfolio Benefit Cost Ratio**	Incremental Annual Energy Savings*	Peak Demand Reduction*	Dispatchable Capacity (DR)	Total Program Expenses (\$M)
2008	2.71	35.2GWh	7.5 MW	47 MW	\$8.0
2009	1.56	39.9 GWh	6.3 MW	53 MW	\$12.0
2010	2.2	58.8 GWh	9.9 MW	67 MW	\$16.6
2011	1.78	57.6 GWh	9.7 MW	57 MW	\$16.6
2012	2.85	79.3 GWh	13.6 MW	57 MW	\$17.3
2013	1.91	75.6 GWh	11.8 MW	62 MW	\$18.1
2014	1.74	74.8 GWh	12.0 MW	61 MW	\$21.7
2015	1.79	79.3 GWh	12.1 MW	57 MW	\$24.3
2016	1.75	82.0 GWh	13.0 MW	57 MW	\$25.6
2017	1.74	74.4 GWh	11.9 MW	60 MW	\$25.8
2018	1.67	70.8 GWh	12.5 MW	57 MW	\$23.5
2019	1.93	78.2 GWh	13.7 MW	44 MW	\$24.0

* Savings at the customer meter. Savings at the generator include an additional 8% system losses.

** Utility Cost Test applied beginning in 2015; Total Resource Cost applied in prior years.

¹ Load Management is also referred to as Demand Response (DR), and in this filing, PNM uses the terms 'load management' and 'demand response' interchangeably.



The 2021 Plan describes PNM’s portfolio of EE and LM programs, and also presents updated participation targets and budgets for the EE and LM programs currently in effect, that were approved by the NMPRC in Case No. 17-00076-UT. PNM is filing the 2021 Plan pursuant to the Efficient Use of Energy Act, NMSA 1978 § 62-17-1*et. seq.*, (EUEA or Act) and the NMPRC’s Energy Efficiency Rule, 17.7.2 NMAC (Rule). The 2021 Plan includes proposed budgets and savings for calendar years 2021, 2022 and 2023.

PNM is proposing to continue all of its existing EE and LM programs, with the modifications described in this Plan, and is proposing to add new residential and commercial behavioral-based energy efficiency programs. All programs proposed in the 2021 Plan were selected based on the criteria detailed below, including that the portfolio of programs pass the Utility Cost Test (UCT). PNM also carefully considered public comments and suggestions, as described in Section 3, especially from the members of the public advisory group, concerning the reasonableness of program changes. PNM developed the portfolio of programs to appeal to various segments of residential customers, including low-income customers. The 2021 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 2021 Plan has a total projected 12-month budget of \$31,366,198 for calendar year 2021 with projected energy savings of approximately 119 gigawatt-hours (GWh). Tables 1-2, 1-3, and 1-4 show the projected annual budgets, energy and demand savings, participation targets and the UCT ratios for each program and the total portfolio.

Table 1-2

2021 Programs	Budget	Annual kWh Savings	Lifetime kWh Savings	Annual kW Savings	UCT	Participation /Units
Residential Comp.	\$ 5,941,915	10,487,791	88,380,725	4,009	0.81	14,632
Commercial Comp.	\$ 9,734,602	42,626,996	371,745,275	8,324	1.38	676
Behavioral Comp	\$ 1,841,795	22,589,734	42,254,734	2,723	0.69	329,179
Residential Lighting/Retail Products	\$ 3,889,740	32,623,280	291,978,357	4,309	2.09	975,110
Easy Savings	\$ 574,128	1,729,000	18,154,500	252	1.13	7,000
Energy Smart (MFA)	\$ 245,029	360,000	5,734,800	33	0.59	200
New Home Const.	\$ 722,660	758,625	11,295,926	272	0.72	850
Home Works	\$ 578,786	1,928,200	21,595,840	124	0.78	12,850
Power Saver (LM)	\$ 5,318,011	2,020,000	2,020,000	52,000	1.28	
Peak Saver (LM)	\$ 2,519,532	1,000,000	1,000,000	25,000	1.30	
Total	\$ 31,366,198	116,123,626	854,160,158	97,046	1.29	



Table 1-3

2022 Programs	Budget	Annual kWh Savings	Lifetime kWh Savings	Annual kW Savings	UCT	Participation /Units
Residential Comp.	\$ 6,480,692	11,012,144	95,528,606	4,289	0.94	15,557
Commercial Comp.	\$ 9,525,633	41,485,485	361,706,739	8,090	1.49	654
Behavioral Comp.	\$ 1,083,133	22,668,726	42,333,726	2,723	1.36	329,179
Residential Lighting/Retail Products	\$ 3,641,180	33,393,979	298,876,111	4,420	2.49	1,000,230
Easy Savings	\$ 587,822	1,729,000	18,154,500	252	1.18	7,000
Energy Smart (MFA)	\$ 246,427	360,000	5,734,800	33	0.62	200
New Home Const.	\$ 682,841	669,375	9,966,994	240	0.71	750
Home Works	\$ 582,089	1,928,200	21,595,840	124	0.84	12,850
Power Saver (LM)	\$ 5,655,445	2,050,000	2,050,000	55,000	1.33	
Peak Saver (LM)	\$ 2,533,360	1,000,000	1,000,000	25,000	1.35	
Total	\$ 31,018,623	116,296,909	856,947,315	100,170	1.42	

Table 1-4

2023 Programs	Budget	Annual kWh Savings	Lifetime kWh Savings	Annual kW Savings	UCT	Participation /Units
Residential Comp.	\$ 6,396,043	10,897,019	93,957,152	4,141	0.93	15,391
Commercial Comp.	\$ 9,346,302	40,510,823	353,166,576	7,890	1.50	633
Behavioral Comp.	\$ 1,083,133	22,668,726	42,333,726	2,723	1.41	329,179
Residential Lighting/Retail Products	\$ 3,818,936	34,014,261	304,427,634	4,530	2.48	1,025,230
Easy Savings	\$ 601,889	1,729,000	18,154,500	252	1.18	7,000
Energy Smart (MFA)	\$ 247,936	360,000	5,734,800	33	0.63	200
New Home Const.	\$ 697,833	669,375	9,966,994	240	0.70	750
Home Works	\$ 585,655	1,928,200	21,595,840	124	0.87	12,850
Power Saver (LM)	\$ 4,649,495	2,050,000	2,050,000	55,000	1.62	
Peak Saver (LM)	\$ 2,164,561	1,000,000	1,000,000	25,000	1.58	
Total	\$ 29,591,783	115,827,404	852,387,222	99,933	1.49	

1.1 SUMMARY OF CHANGES FROM PREVIOUS PLAN

PNM is proposing new programs in the 2021 Plan and has evaluated existing programs and explored strategies and tactics to increase program effectiveness, and is proposing the following additions and modifications in the 2021 Plan:

- The total budget for the 2021 Plan is \$31,366,198, in compliance with the EUEA of no less than 3% and no more than 5% funding requirement.
- The total budget for the energy efficiency portfolio has increased from the 2020 budget by approximately 22% due to higher participation targets, newly proposed programs, and enhancements in existing programs.
- PNM issued an RFP for behavioral energy efficiency programs and met with EE public advisory group on February 20, 2020 to discuss the responses to RFP and feasibility of implementing new programs. Based on the responses to RFP and consultation with stakeholders, PNM has determined that implementing new residential and commercial behavioral programs is in the public interest and plans to propose the new behavioral EE programs in the 2020 EE application.
- The Residential Lighting program has completely phased out CFL bulbs and continues to be primarily focused on discounting both standard and specialty LED bulbs. Beginning in 2021, PNM plans to incorporate a new mix of upstream and downstream retail products to provide a more robust customer offering, including but not limited to, advanced power strips, evaporative cooling equipment, and room air conditioners.
- The Residential Lighting program continues to expand the types of retailers participating in the program, including more dollar stores and smaller hardware stores in low income regions of the PNM service area.
- The Residential Cooling and Pool Pump program will include a midstream component for eligible mini-split heat pumps and refrigerated air conditioning equipment to incentivize and encourage distributors and contractors to stock and provide high efficiency cooling equipment directly to customers.
- Wi-Fi connected Energy Star-certified thermostats continue to be offered as options in several programs, including Residential Cooling and Pool Pumps, Home Energy Checkup, and New Home Construction.
- Tier two advanced power strips continue to be offered in both the Home Energy Checkup and the Energy Innovation school kit programs.
- Upon examination of its data access policy, PNM is unable to automate the transfer of whole-building data directly into ENERGY STAR Portfolio Manager due to a lack of interface capability within its current CIS system. However, building owners may submit a written or electronic request for aggregated data for energy consumption on whole building data for tenant meters.



More details about this policy is described in the Commercial Comprehensive section under Continuing Programs.

- PNM will continue to offer incentives for WiFi-enabled smart thermostats in the Multifamily component of the Commercial Comprehensive program.
- Commercial lighting marketing campaigns effectively target business customers, in particular, the hard-to-reach small business customers to encourage participation.
- LM programs are being modified to improve cost-effectiveness. Modifications are being made to the day-of baseline adjustment factor to more closely reflect the capacity that would be delivered on a non-event day.
- Results from a customer saturation survey performed in 2020, along with other industry research, will be utilized when planning further residential program offerings.

2 PROGRAM GOALS

2.1 LEAST-COST RESOURCE PLANNING

PNM EE and LM programs benefit the PNM system, participating customers, non-participating customers, the environment and the New Mexico economy. The programs were identified as a key resource in the PNM 2017 Integrated Resource Plan (2017 IRP)². The 2017 IRP examined many different portfolios of options that could be implemented to meet expected growth in the demand for electricity from 2017 to 2036. EE and LM programs were consistently found to be cost-effective alternatives for meeting system needs when compared with traditional supply-side resources. The most cost-effective resource portfolio is defined as “those supply-side resources and demand-side resources that minimize the net present value of revenue requirements proposed by the utility to meet electric system demand during the planning period consistent with reliability and risk considerations, as defined in the IRP Rule.”³ PNM is currently preparing its 2020 Integrated Resource Plan, the 2021 Energy Efficiency Plan will once again be utilized as a key resource. The 2021-2023 Plan includes a revised estimate of avoided costs which is used to calculate cost-effectiveness of the EE programs.

2.2 REQUIREMENTS OF THE EFFICIENT USE OF ENERGY ACT

Projected growth of PNM’s EE and LM programs will allow PNM to achieve the minimum energy saving goals at the budget levels specified in the EUEA. The Act required that PNM achieve cumulative savings of at least 411 GWh in 2014, equivalent to five percent (5%) of PNM’s retail sales in 2005, which PNM met.⁴ In 2020 PNM is required to achieve cumulative savings of 658 GWh, or 8% of 2005 retail sales and has exceeded that goal. The next compliance year is 2025, when PNM is required to achieve an estimated cumulative savings of 403 GWh, or 5% of 2020 retail sales.

New programs are developed according to the specifications included in the Act and the Rule, which include passing the UCT cost-effectiveness test at a portfolio level, and meeting or exceeding the EUEA goals. As of year-end 2019, PNM’s approved EE programs are achieving cumulative annual net energy savings of about 672 GWh. (Net savings are determined by applying reductions to gross savings that account for free rider impacts and the effective useful life (EUL) of the programs, as determined by the independent evaluator).

² “PNM 2017-2036 Integrated Resource Plan” July, 2017

<https://www.pnm.com/documents/396023/396193/PNM+2017+IRP+Final.pdf/eae4efd7-3de5-47b4-b686-1ab37641b4ed>

³ Ibid, page 82

⁴ “PNM Energy Efficiency Program 2015 Annual Report”, April 15, 2016. <http://www.pnm.com/regulatory>



For cost-effectiveness analysis and for determining the cumulative savings that contribute to meeting the EUEA goals in 2014 and 2020, PNM calculates the average EUL of the portfolio. This value is determined by dividing the total lifetime savings by the annual savings, resulting in an average estimate of how long measures will continue to provide savings. The average portfolio EUL for the 2019 Program was nine years. The cumulative savings for 2019 are the sum of all annual savings for the nine years from 2011 through 2019. Beginning in 2019, the 2010 annual savings will no longer contribute to cumulative savings. Based on cumulative savings achieved through 2019, PNM programs must achieve on average 80 GWh of annual savings in years 2021 through 2025 in order to achieve the 2025 minimum savings goal of 403 GWh. Figure 2-1 shows the annual cumulative savings achieved through 2019 and anticipated savings in 2020.

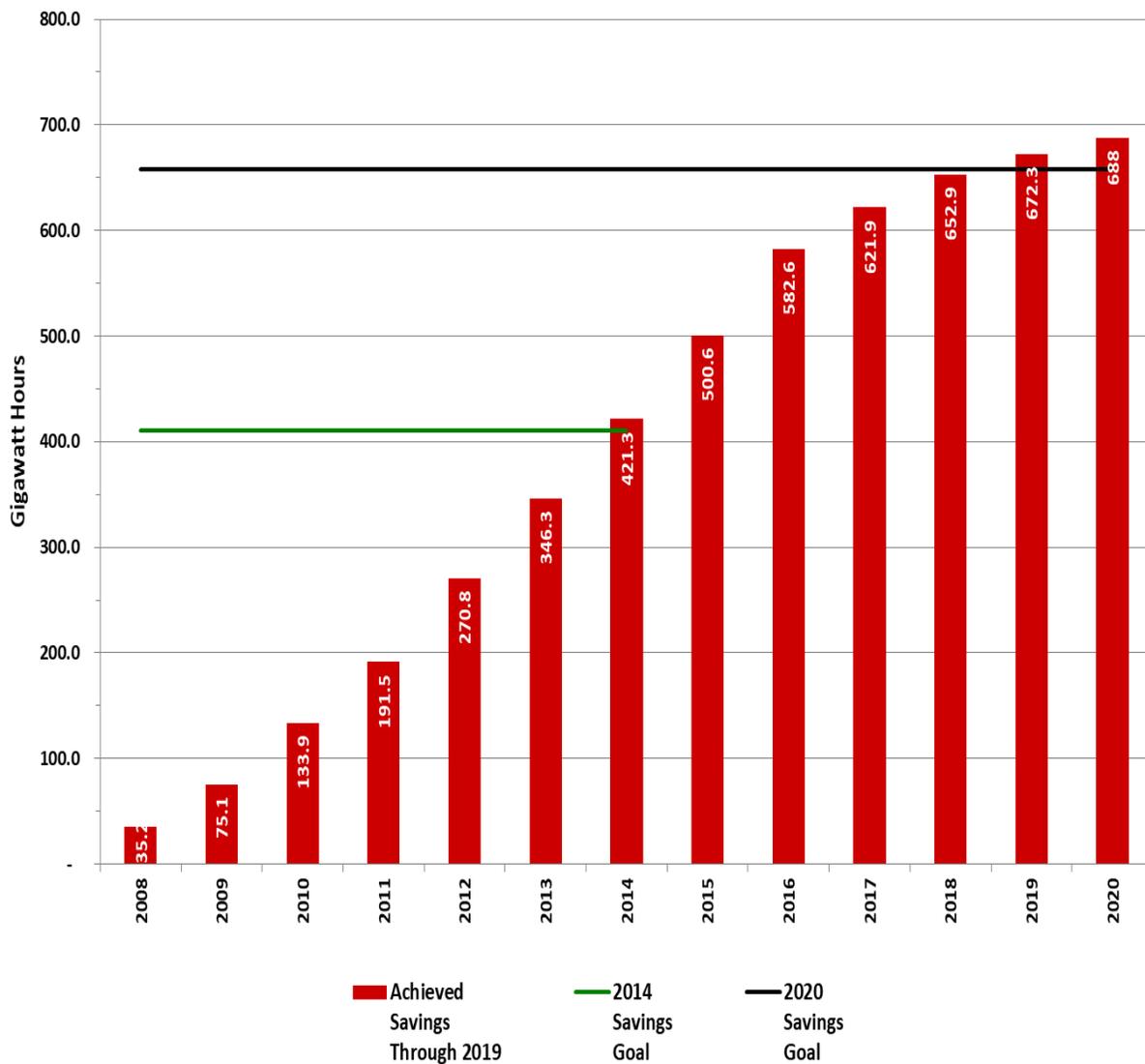


Figure 2-1



2.3 INCREASED ADOPTION OF ENERGY EFFICIENCY TECHNOLOGIES

In addition to meeting the requirements of the Act, PNM's EE programs encourage lasting structural and behavioral changes in the New Mexico economy through the process of market transformation. 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. Over time, distributors will stock more efficient equipment, contractors will promote more efficient equipment to their customers, and customers will become more inclined to purchase efficient equipment. The programs included in the 2021 Plan address the market transformation objectives and strategy by continuing initiatives launched in 2017, including continuing to work with organizations such as Design Lights Consortium to incorporate the latest in efficient lighting technology into our Commercial Comprehensive portfolio, along with the continuous fine tuning of program design and delivery elements in the other PNM EE programs including, but not limited to:

- Implementing multi-channel promotional campaigns that increase customer awareness of EE products and their benefits
- Educating the vendor community of retailers and installation contractors who provide EE products and services, to build awareness, encourage participation and promote consistency in business operations and customer service within
- Partnering with community-based organizations to educate customers
- Using rebates to shift the focus from the initial cost of installing measures to the long-term savings in operating costs
- Simplifying rebates for customers by offering multiple rebate channels, such as online rebate submittal, instant in-store discounts, and mail-in and electronic rebate forms as applicable
- Increasing awareness of low income programs by expanding the Energy\$mart program to include additional measures for deeper energy savings, and continuing to monitor and adjust the other low income programs to encourage broad participation across PNM's service area
- Implementing educational programs for different customer segments about the benefits of the EE programs

3 PROGRAM SELECTION

3.1 PROGRAM RESEARCH

In 2020, Applied Energy Group (AEG), will complete an energy efficiency potential study (AEG Potential Study) for both energy efficiency and demand response, which will identify categories of energy efficient equipment and the estimated technical, economic and market potential for adoption of that equipment in the state. The updated potential study will be used as a reference for future program design and analysis and in preparing the 2021 plan. PNM also plans on completing an updated residential appliance and socket saturation survey in 2020 to be utilized in future program design.

Much of the research for the 2021 Plan was done in conjunction with other utilities and through participation in national organizations concerned about energy efficiency such as E Source, Consortium for Energy Efficiency (CEE), American Council for an Energy-Efficient Economy (ACEEE), Southwest Energy Efficiency Project (SWEEP) and Electric Power Research Institute (EPRI).

PNM also solicited input regarding existing and new programs from a public advisory stakeholder group. A list of those invited to the advisory group meetings is provided in Appendix B. The public advisory group met on February 20, 2020, again on March 11, 2020 and again on March 24, 2020 to discuss the development of the 2021 Plan, and individual members of the public advisory group provided comments and information at other times during the Plan development process.

3.2 SELECTION CRITERIA

The following criteria were considered when evaluating and considering modifications to existing programs:

- A. Cost effectiveness – The Act establishes the Utility Cost Test (UCT) as the standard to be used in determining the cost-effectiveness of energy efficiency or load management programs. The UCT, as defined in the Act, “means a standard that is met if the monetary costs that are borne by the public utility and that are incurred to develop, acquire and operate energy efficiency or load management resources on a life-cycle basis are less than the avoided monetary costs associated with developing, acquiring and operating the associated supply-side resources.”⁵
 1. Costs are identified by the following categories: PNM program administration costs, promotion, third-party implementation, participant rebates/incentives, market transformation, and measurement and verification.

⁵ NMSA 1978 § 62-17-4(K)



2. Benefits include avoided costs to the utility for energy, demand and reductions in CO₂ emissions. PNM's EE avoided costs are provided in Appendix A.
3. Not all programs in the 2021 Plan are cost-effective because they do not individually have a UCT greater than 1.0. However, the overall portfolio of programs does have a UCT greater than 1.0

- B. System benefits – programs should deliver system benefits through demand and energy savings or the ability to dispatch load or shift it to off-peak times.

The programs selected for the 2021 Plan provide significant energy and demand savings as shown in Table 4-2 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.

The 2021 Plan includes programs for residential customers, low-income customers, homebuilders, commercial and industrial customers.

- D. Energy and demand savings – collectively, the proposed programs will contribute to meeting the 2025 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. Programs in the 2021 Plan provide significant non-energy benefits including:

1. 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.
2. 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 ensure increased adoption of measures.
3. Water use and CO₂ reduction. The programs result in significant water savings and reduction in greenhouse gases that would not have occurred absent the programs. The estimated reductions are described in Section 4.2.2.

- 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.

Programs are implemented and managed by PNM staff and third-party contractors who are experienced with specific programs and technologies, and who leverage the existing market experience. Table 3-4 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.

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 2021 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.

Each program contained in the 2021 Plan is based on proven measures that have been implemented successfully by other utilities.

3.3 PROGRAM BUDGETS AND COST-EFFECTIVENESS

3.3.1 UCT MODEL

PNM has developed a spreadsheet model for performing the UCT calculation. The input assumptions and UCT results are shown in Appendix E – Technical Manual. Inputs to the UCT model include measure life, per-unit energy and capacity savings, forecasted participation rates, rebate costs, administration costs and M&V costs. These inputs are based on independent measurement and verification reports for past program years, New Mexico Technical Resources Manual (TRM), research on programs at other utilities, and standards set by ENERGY STAR, Consortium for Energy Efficiency (CEE) and other energy efficiency organizations.

Several factors were considered in estimating the participation targets, including past program performance, the potential participation identified in past potential studies, 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, and taking the net present value of the sum. The avoided costs used in the UCT model are provided in Appendix A.

3.3.3 PROGRAM COSTS



Tables 3-1, 3-2, and 3-3 show the estimated annual costs to implement the 2021 Plan programs (for 12 months of implementation). The total 2021 Plan budget amount of \$31,366,198 for calendar year 2021 is based on 3.71% of projected 2020 revenues adjusted for an under-collection of program costs in 2019 (see Section 4.3 below). Likewise, the \$31,018,623 budget for 2022 is based on 3.67% of projected revenue for 2020. Finally, the \$29,591,783 budget for 2023 is based on 3.50% of projected revenue for 2020. Costs are presented in six categories which are described in detail following the table.

Table 3-1

2021 Program	Admin	Third Party	Rebates	Promotion	M&V	Market Transformation	Total
Commercial Comprehensive	\$ 353,372	\$ 3,470,991	\$ 5,488,608	\$ 103,197	\$ 161,065	\$ 157,368	\$ 9,734,602
Residential Comprehensive	\$ 213,389	\$ 2,966,046	\$ 2,507,872	\$ 62,317	\$ 97,262	\$ 95,030	\$ 5,941,915
Behavioral Comprehensive	\$ 64,016	\$ 1,701,398	\$ -	\$ 18,695	\$ 29,178	\$ 28,508	\$ 1,841,795
Res Lighting/Retail Products	\$ 142,080	\$ 1,063,571	\$ 2,514,565	\$ 41,492	\$ 64,759	\$ 63,273	\$ 3,889,740
Easy Savings Kit	\$ 20,741	\$ 241,640	\$ 287,000	\$ 6,057	\$ 9,454	\$ 9,237	\$ 574,128
Energy Smart (MFA)	\$ 9,132	\$ 25,000	\$ 200,000	\$ 2,667	\$ 4,163	\$ 4,067	\$ 245,029
New Home Construction	\$ 26,281	\$ 240,022	\$ 425,000	\$ 7,675	\$ 11,979	\$ 11,704	\$ 722,660
Home Works	\$ 21,572	\$ 184,526	\$ 346,950	\$ 6,300	\$ 9,832	\$ 9,607	\$ 578,786
Power Saver	\$ 189,110	\$ 3,343,262	\$ 1,560,000	\$ 55,227	\$ 86,195	\$ 84,217	\$ 5,318,011
Peak Saver	\$ 90,309	\$ 1,321,469	\$ 1,000,000	\$ 26,373	\$ 41,163	\$ 40,218	\$ 2,519,532
TOTALS	\$ 1,130,002	\$ 14,557,925	\$ 14,329,995	\$ 330,000	\$ 515,049	\$ 503,228	\$ 31,366,198

Table 3-2

2022 Program	Admin	Third Party	Rebates	Promotion	M&V	Market Transformation	Total
Commercial Comprehensive	\$ 358,536	\$ 3,381,504	\$ 5,337,328	\$ 135,996	\$ 156,732	\$ 155,539	\$ 9,525,633
Residential Comprehensive	\$ 241,672	\$ 3,100,114	\$ 2,836,752	\$ 91,668	\$ 105,645	\$ 104,841	\$ 6,480,692
Behavioral Comprehensive	\$ 41,929	\$ 989,616	\$ -	\$ 16,900	\$ 16,971	\$ 17,717	\$ 1,083,133
Res Lighting/Retail Products	\$ 138,556	\$ 758,800	\$ 2,570,591	\$ 52,556	\$ 60,569	\$ 60,108	\$ 3,641,180
Easy Savings Kit	\$ 22,005	\$ 251,306	\$ 287,000	\$ 8,347	\$ 9,619	\$ 9,546	\$ 587,822
Energy Smart (MFA)	\$ 9,522	\$ 25,000	\$ 200,000	\$ 3,612	\$ 4,163	\$ 4,131	\$ 246,427
New Home Construction	\$ 25,680	\$ 250,054	\$ 375,000	\$ 9,741	\$ 11,226	\$ 11,140	\$ 682,841
Home Works	\$ 22,492	\$ 184,526	\$ 346,950	\$ 8,531	\$ 9,832	\$ 9,757	\$ 582,089
Power Saver	\$ 208,554	\$ 3,536,143	\$ 1,650,000	\$ 79,106	\$ 91,168	\$ 90,474	\$ 5,655,445
Peak Saver	\$ 94,162	\$ 1,321,469	\$ 1,000,000	\$ 35,717	\$ 41,163	\$ 40,849	\$ 2,533,360
TOTALS	\$ 1,163,107	\$ 13,798,531	\$ 14,603,621	\$ 442,173	\$ 507,088	\$ 504,103	\$ 31,018,623

Table 4-3

2023 Program	Admin	Third Party	Rebates	Promotion	M&V	Market Transformation	Total
Commercial Comprehensive	\$ 377,655	\$ 3,302,856	\$ 5,201,130	\$ 152,216	\$ 152,863	\$ 159,582	\$ 9,346,302
Residential Comprehensive	\$ 252,916	\$ 3,105,498	\$ 2,725,642	\$ 100,979	\$ 103,681	\$ 107,327	\$ 6,396,043
Behavioral Comprehensive	\$ 41,929	\$ 989,616	\$ -	\$ 16,900	\$ 16,971	\$ 17,717	\$ 1,083,133
Res Lighting/Retail Products	\$ 156,408	\$ 657,070	\$ 2,813,016	\$ 63,041	\$ 63,309	\$ 66,092	\$ 3,818,936
Easy Savings Kit	\$ 24,174	\$ 260,971	\$ 287,000	\$ 9,744	\$ 9,785	\$ 10,215	\$ 601,889
Energy Smart (MFA)	\$ 10,284	\$ 25,000	\$ 200,000	\$ 4,145	\$ 4,163	\$ 4,345	\$ 247,936
New Home Construction	\$ 28,157	\$ 260,033	\$ 375,000	\$ 11,349	\$ 11,397	\$ 11,898	\$ 697,833
Home Works	\$ 24,291	\$ 184,526	\$ 346,950	\$ 9,791	\$ 9,832	\$ 10,264	\$ 585,655
Power Saver	\$ 185,014	\$ 2,586,843	\$ 1,650,000	\$ 74,571	\$ 74,888	\$ 78,180	\$ 4,649,495
Peak Saver	\$ 86,840	\$ 970,875	\$ 1,000,000	\$ 35,001	\$ 35,150	\$ 36,695	\$ 2,164,561
TOTALS	\$ 1,187,667	\$ 12,343,287	\$ 14,598,738	\$ 477,736	\$ 482,039	\$ 502,315	\$ 29,591,783

THIRD PARTY IMPLEMENTATION

PNM is the administrator for its entire portfolio of EE and LM programs, but has engaged third-party contractors with proven expertise to implement the programs because of the many advantages that this approach provides, including:

- *Selecting contractors through a request-for-proposal (RFP) process allows PNM to determine the most qualified contractor and best proposal for program implementation.*
- *Proven expertise and experience in delivering similar programs by the selected contractor reduces the risk associated with implementing a program and achieving participation and savings goals.*
- *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 3-4 lists each program and the contractor responsible for implementation.

Table 3-4

Program	Primary Implementer	Program Type			
		Commercial	Residential	Low Income	Load Management
Commercial Comprehensive	DNV-GL	X			
Comm. Comp. - Multifamily	DNV-GL	X	X	X	
Res. Comp. - Refrigerator Recycling	ARCA	X	X		
Res. Comp. - Energy Checkup	Franklin Energy Services		X	X	
Res. Comp. - Cooling	CLEAResult		X		
Residential Lighting/Retail Products	CLEAResult		X		
New Home Construction	ICF	X	X		
PNM Home Works	NEF		X	X	
Energy Smart (MFA)	MFA			X	
Easy Savings Kit	AM Conservation Group			X	
Power Saver	Itron	X	X		X
Peak Saver	Enbala	X			X

CUSTOMER INCENTIVES (REBATES)

One of the barriers to energy efficiency deployment is that although high efficiency options are cost-effective on a life-cycle basis, initial costs may be higher than they are for less efficient options. Customer incentives or rebates are designed to help overcome this barrier. Rebates provided in the 2021 Plan are designed to provide between 25% and 50% of the incremental cost of purchasing the energy efficiency measure over the standard non-energy efficient option. This range is typical of EE programs offered in the industry. 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. For some programs, such as the Home Energy Checkup component of the Residential Comprehensive program, the rebates are determined in part 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, including 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 with some adjustments for known dedicated costs. Direct costs are the costs specific to



individual programs such as third-party costs, rebates and promotional costs. Administrative costs represent less than five percent of the total 2021 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, based on the current contract approved by the NMPRC. The EE portfolio M&V is discussed in more detail in Section 4.4.

3.4 PROMOTION

Effective promotion and marketing are critical to the success of the EE programs. PNM oversees planning for program marketing across its EE portfolio, and continuously monitors each program's promotional plans. The day-to-day management of marketing depends on each program's needs. Where third-party contractors are responsible for marketing the programs they administer, their promotional costs are recorded in the third-party expense category. In some cases, where contractors do not have needed marketing capabilities, PNM directly manages marketing for programs. PNM also produces its own marketing materials to use in a variety of customer outreach channels where appropriate. These marketing channels include program marketing materials (such as case studies, bill inserts or brochures), direct mail, outreach events (including events focusing on low-income customers), customer communications with call center staff, the PNM website, social media, digital advertising, outdoor advertising, and television and radio commercials.

TRADE ALLY NETWORK STRATEGY

In 2020, over 550 businesses, or trade allies, will actively participate in PNM's EE programs by delivering program services and incentives to customers (see Appendix D for a list of current EE trade ally businesses). By consolidating synergies where appropriate and consolidating the trade ally network across almost all of its EE programs, PNM is able to support the many businesses that drive energy efficiency implementation in its service area. This trade ally network strategy offers services and incentives in addition to those already offered by third party program implementation contractors, including market research, public recognition and sales training. Other utilities have shown that such efforts result in increased trade ally engagement with programs and improved program outcomes, including increased customer participation and energy savings.

HOME ENERGY ANALYZER

PNM has contracted with EnergySavvy to offer a web-based online assessment survey, the Home Energy Analyzer. This user-friendly survey allows residential customers to quickly analyze the potential for energy saving opportunities in their homes while also promoting other PNM EE program offerings. PNM has also created an option for residential customers completing the Home Energy Analyzer survey to receive rebates for energy efficient appliances and smart thermostats upon meeting certain eligibility



requirements, which were previously only available to customers completing the onsite Home Energy Checkup in person.

4 2018 PROGRAM PLAN SUMMARY

4.1 SUMMARY TABLES

The tables in this section present the key performance measures and assumptions for each program in the 2021 Plan. Table 4-1 shows the customer participation and unit targets forecasted for each program.

Table 4-1

Programs	Unit Type	2021	2022	2023
Residential Comprehensive		14,632	15,557	15,391
Res. Comp. - Refrigerator Recycling	Unit	7,200	7,200	7,200
Res. Comp. - HEC - Mkt	Participant	1,400	1,400	1,400
Res. Comp. - HEC - LI	Participant	675	675	675
Res. Comp. - Cooling	Unit	4,000	4,200	4,000
Residential Midstream	Unit	1,357	2,082	2,116
Residential Lighting/Retail Products	Unit	975,110	1,000,230	1,025,230
Commercial Comprehensive		676	654	633
Comm. Comp. - Retrofit/NC/Mid	Participant	272	267	262
Comm. Comp. - QuickSaver	Participant	302	287	272
Comm. Comp. - Bldg Tune-Up	Participant	32	32	32
Comm. Comp. - Multifamily	Participant	70	69	67
Behavioral Comprehensive		329,179	329,179	329,179
Behavioral (SEM)	Participant	45	45	45
Behavioral (Residential)	Participant	329,134	329,134	329,134
Easy Savings	Participant	7,000	7,000	7,000
Energy Smart (MFA)	Participant	200	200	200
New Home Const.	Unit	850	750	750
Home Works	Participant	12,850	12,850	12,850

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

Table 4-2

Programs	EUL	Per Unit Net kWh Savings	Per Unit Net kW Savings	Per Unit Average Rebate Amount
Refrigerator Recycling	5	734	0.17	\$50
HEC - Mkt	9	850	0.16	\$190
HEC - LI	9	883	0.09	\$396
Res Cooling	14	673	0.54	\$286
Res Midstream	14	536	0.24	\$287
Res Lighting/Retail Produc	9	36	0.00	\$3
Retrofit/NC/Mid	9	109,220	21.07	\$11,124
QuickSaver	9	24,996	5.94	\$4,376
Bldg Tune-Up	9	19,401	2.61	\$2,586
Multifamily	6	67,200	10.08	\$15,000
Easy Savings	11	247	0.04	\$41
Energy Smart (MFA)	16	1,800	0.16	\$66
New Home Const.	15	893	0.32	\$500
Behavioral (SEM)	3	218,500	41.50	\$0
Behavioral (Residential)	1	39	0.00	\$0
Home Works	11	150	0.01	\$27

Tables 4-3, 4-4, and 4-5 show the net present value (NPV) of program costs, the NPV of program benefits and the ratio of benefits to costs which is the UCT for each program. NPV Costs are different from program budgets because they are discounted for the time value of money. Additional detail on the UCT calculations for each program is in Appendix E.

Table 4-3

2021 Programs	NPV Benefits	NPV Costs	2021 UCT
Residential Comp.	\$ 4,510,690	\$5,542,831	0.814
Refrig. Recycl.	\$ 983,661	\$1,159,442	0.848
HEC - Mkt	\$ 346,213	\$986,853	0.351
HEC - LI	\$ 147,975	\$738,337	0.200
Cooling & Midstream	\$ 3,688,875	\$2,658,199	1.388
Residential Lighting/Retail Products	\$ 7,571,230	\$3,628,489	2.087
Commercial Comp.	\$ 12,543,282	\$9,080,785	1.381
Easy Savings	\$ 603,391	\$535,567	1.127
Energy Smart (MFA)	\$ 133,793	\$228,572	0.585
New Home Const.	\$ 486,850	\$674,124	0.722
Behavioral (SEM)	\$ 1,040,423	\$1,219,483	0.853
Behavioral (Residential)	\$ 261,075	\$498,609	0.524
Home Works	\$ 423,343	\$539,913	0.784
Power Saver (LM)	\$ 6,338,486	\$4,960,831	1.278
Peak Saver (LM)	\$ 3,047,349	\$2,350,310	1.297
Total	\$ 37,615,946	\$ 29,259,513	1.29

Table 4-4

2022 Programs	NPV Benefits	NPV Costs	2022 UCT
Residential Comp.	\$ 5,698,535	\$6,045,422	0.94
Refrig. Recycl.	\$ 1,109,860	\$1,165,754	0.95
HEC - Mkt	\$ 375,558	\$1,009,080	0.37
HEC - LI	\$ 161,738	\$753,127	0.21
Cooling & Midstream	\$ 4,319,027	\$3,117,461	1.39
Residential Lighting/Retail Products	\$ 8,452,213	\$3,396,623	2.49
Commercial Comp.	\$ 13,211,278	\$8,885,852	1.49
Easy Savings	\$ 647,065	\$548,342	1.18
Energy Smart (MFA)	\$ 142,375	\$229,876	0.62
New Home Const.	\$ 450,978	\$636,978	0.71
Behavioral (SEM)	\$ 1,082,619	\$529,366	2.05
Behavioral (Residential)	\$ 324,263	\$481,019	0.67
Home Works	\$ 458,217	\$542,994	0.84
Power Saver (LM)	\$ 7,022,637	\$5,275,602	1.33
Peak Saver (LM)	\$ 3,192,108	\$2,363,209	1.35
Total	\$ 40,949,937	\$ 28,935,282	1.42

Table 4-5

2023 Programs	NPV Benefits	NPV Costs	2023 UCT
Residential Comp.	\$ 5,525,676	\$5,966,458	0.93
Refrig. Recycl.	\$ 1,135,226	\$1,172,567	0.97
HEC - Mkt	\$ 335,850	\$1,036,738	0.32
HEC - LI	\$ 166,762	\$771,426	0.22
Cooling & Midstream	\$ 4,148,987	\$2,985,727	1.39
Residential Lighting/Retail Product	\$ 8,849,653	\$3,562,440	2.48
Commercial Comp.	\$ 13,073,049	\$8,718,565	1.50
Easy Savings	\$ 660,898	\$561,464	1.18
Energy Smart (MFA)	\$ 145,930	\$231,284	0.63
New Home Const.	\$ 453,697	\$650,963	0.70
Behavioral (SEM)	\$ 1,127,129	\$529,366	2.13
Behavioral (Residential)	\$ 331,829	\$481,019	0.69
Home Works	\$ 474,518	\$546,320	0.87
Power Saver (LM)	\$ 7,019,163	\$4,337,216	1.62
Peak Saver (LM)	\$ 3,190,529	\$2,019,180	1.58
Total	\$ 41,113,220	\$ 27,604,275	1.49

4.2 NON-ENERGY BENEFITS

4.2.1 ECONOMIC BENEFITS

The PNM Energy Efficiency Program has a positive economic impact on New Mexico through the creation of new jobs associated with delivering efficiency products, services and incentives to customers. As determined by the independent M&V evaluation of the programs, most projects would not have been completed without the program incentives. 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 through a multiplier effect. The incentive levels in the 2021 Plan are designed to cover between 25% and 50% of the incremental cost of performing retrofits and encourage investments that would otherwise not be made. Although PNM is not aware of specific studies that quantify additional economic benefits due to funding energy efficiency improvements in New Mexico, one conservative approach to estimating the increased investment caused by the rebate payments would be to assume that the rebates cause spending on retrofits valued



at twice the rebate level, assuming the rebates cover about half of the incremental cost. Based on the estimated customer incentives of about \$14,000,000 this would result in about \$28,000,000 in investment in energy efficiency improvements that would otherwise not have been made.

The number of direct jobs created by the existing PNM Energy Efficiency Program is shown in Table 4-6. These jobs are full-time positions created by the third-party contractors to implement the programs. The Commercial Comprehensive program, for example, directly employs nine people locally. In addition to the jobs shown in Table 4-6, many additional jobs are being supported in the trade ally and contractor community to install the measures associated with PNM’s EE programs. According to a national study completed in 2018, there are over 5,000 energy efficiency-related jobs in PNM’s service area.⁶

Table 4-6

Program	Direct Energy Efficiency Jobs
Commercial Comprehensive	8
Comm. Comp - Multifamily	1
Res. Comp. - Refrigerator Recycling	6
Res. Comp. - Energy Checkup	6
Res. Comp. - Cooling	2
New Home Construction	1
Residential Lighting/Retail Prod	2
Energy Smart (MFA)	1
Power Saver	6
Peak Saver	1
TOTAL	34

4.2.2 EMISSIONS REDUCTIONS

The energy savings attributed to the proposed 2021 Plan, if approved and implemented, would result in significant reductions of various environmental emissions and in water needed for the generation of electricity. The CO₂ reduction is estimated to be about 57,000 metric tons per year in 2021, 2022, and 2023. The water reduction is estimated at about 35,000,000 gallons per year in 2021, 2022, and in 2023, assuming PNM average generation portfolio production values.

4.3 TARIFF RIDER AND CUSTOMER BILL IMPACT

⁶ <https://e4thefuture.org/wp-content/uploads/2018/09/EE-Jobs-in-America-2018.pdf>



PNM Rate Rider No. 16 (Rider) recovers the program costs and approved profit incentive associated with the PNM's EE and LM programs. Beginning in January 2020, the program cost element of the Rider is set to 3% of bills and the profit incentive element set at 0.210 percent⁷. PNM is filing a reconciliation of 2019 program costs and profit incentive concurrently with the 2021 Plan on April 15, 2020. The reconciliation of program costs shows an over collection in 2019 compared to actual 2019 program costs. The 2021 Plan budget has been adjusted to reflect the under-spent amount using the method prescribed in the Certification of Stipulation in Case No. 17-00076-UT⁸, and as prescribed in 17.7.2.8(E). The reconciliation filing also includes a proposed adjustment to the Rider to account for under-collection of profit incentive costs in 2019. The Rider element for recovery of the 2019 Plan program costs will be 3.71 percent of bills which is the same as the current program cost element, not including profit incentive elements.

4.4 MEASUREMENT AND VERIFICATION (M&V)

The Act requires that M&V be performed by an independent program evaluator that, pursuant to the Rule, is approved by the NMPRC. The independent evaluator prepares a report that documents the total portfolio and individual program-level expenditures, measured and verified savings, and cost-effectiveness of all the EE and LM programs plus 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 and documentation matches rebate applications; and that measures are operating properly within program quality standards and expected to generate the predicted savings. In addition to providing measured and verified information regarding PNM's programs, the M&V report also provides guidance for how PNM can assess its own program metrics, and informs future program design and budget allocation decisions.

PNM will work closely with Evergreen Economics as the evaluator approved by the NMPRC for evaluation of the 2021 Plan programs.

4.5 REPORTING

PNM will make annual filings, currently required on April 15 each year that will provide program evaluation information, as required by 17.7.2.14 NMAC, 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.

⁷ Advice Notice 559, Effective June 16, 2019.

⁸ The Stipulation was approved by the Final Order issued on January 31, 2018.

5 PROGRAM DESCRIPTIONS

Continuing programs and enhancements 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. 17-00076-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 businesses 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 implemented for PNM by DNV-GL. In collaboration with DNV-GL, PNM continuously monitors market conditions and changes in the status of commercial and



industrial technologies in order to keep the list of eligible upgrades current and the rebates appropriate. For example, PNM regularly consults the DesignLights Consortium⁹ web site to search for new energy efficient lighting technologies that could be added to the program. The DesignLights Consortium is a non-profit membership organization that promotes quality, performance and energy efficient commercial sector lighting solutions.

The Commercial Comprehensive program has six components: Retrofit Rebates, New Construction, Building Tune-Up, Distributor Discount, Multifamily and PNM QuickSaver™ for small business customers. Each of these is described in detail below. Complete program details, including the customer application and a list of all rebates, is available on the PNM web site.¹⁰

RETROFIT REBATES

The Retrofit Rebate 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; and 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. Complete program details including a list of all rebates are available on the PNM web site.¹¹

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 American Society of Heating, Refrigerating and Air-Conditioning Engineers' (ASHRAE) 90.1-2016 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 2016 standard. There are two levels of incentives available based on the following conditions:

⁹ <https://www.designlights.org/>

¹⁰ <https://www.pnm.com/bizrebates>

¹¹ <https://www.pnm.com/bizrebates>



- Surpass ASHRAE 90.1 2016 on a new building by 10 percent and receive an incentive based on first-year kilowatt-hours saved.
- Surpass ASHRAE 90.1 2016 on a new building by 20 percent and receive a higher incentive based on first-year kilowatt-hours saved.

BUILDING TUNE-UP

Building tune-up refers to the process of bringing a building's mechanical and electrical systems, including building controls, to peak performance. Existing systems are analyzed, parameters are adjusted and equipment repaired as necessary. Low-cost operational improvements that deliver high energy savings are also identified. For more complex systems, a building analysis may be performed. In return for the building analysis, the customer is 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 electricity consumption is estimated. PNM pays a rebate based on the 1-year annualized rate of energy savings. For more complicated buildings, the program also provides a rebate for a portion of the study expenses.

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 Retrofit Rebate component, the customer will generally receive rebates through the Retrofit Rebate component.

WHOLE BUILDING ENERGY CONSUMPTION DATA ACCESS

The Building Tune-up Program has been supporting building owners since 2017, when the first energy benchmarking initiative was proposed to analyze the electricity consumption of whole buildings. In 2017, PNM received approval for a policy to provide whole building electricity consumption data to building owners in such a way as to reduce the administrative burden to building owners, while still protecting the privacy of all customers. This policy is needed to provide clarity and to overcome the difficulty in acquiring consent from a large number of building tenants.

The data access policy for energy efficiency program participation related data requests is as follows: Upon the written or electronic request and authorization of a building owner, and subject to parameters specified below, PNM will provide the building owner with at least 12 consecutive months of energy consumption data for the specified building in its entirety, including consumption data derived from readings of separate utility-grade meters that measure energy consumption in tenant-occupied spaces.

PNM may provide data in a form that aggregates energy consumption data from tenant meters. Aggregated data shall be provided to the building owner without prior consent from tenants, provided that the data:



- Does not contain the individual identities of tenants or other personally identifying information.
- Does not contain additional customer-specific billing data; and
- Otherwise provides adequate protections for the security of the information and the privacy of the owner and tenants.

PNM will provide aggregated data without explicit authorization where there are at least four (4) tenant meters in an eligible building, and where no one meter accounts for more than 50 percent of the total annual kWh consumption for the whole building. Where these thresholds are not met and tenant authorization is needed, PNM will provide a standard electronic release form for tenants to authorize release of their consumption data to the building owner or the owner's agent.

DISTRIBUTOR (MIDSTREAM) INCENTIVES

In 2015, PNM expanded program outreach through “midstream” marketing for HVAC measures that are also available through the Retrofit Rebate component. In 2019, commercial cooking measures were added to the program. Midstream refers to providing incentives at the distribution level rather than, or in addition to, the customer. As pointed out in a SWEEP report¹²; deeper market penetration of certain energy efficient products is possible if this approach is used. Without midstream incentives, distributors tend to stock basic equipment that is less expensive to install. Energy efficient alternatives are generally more expensive and must be “special ordered.” Therefore, if a customer's piece of equipment fails and it must be replaced under time constraints, the energy efficient alternative is often not installed. Moreover, the midstream model allows for incentives to be paid to the counter sales staff. This further motivates sales staff to promote efficient equipment. Also, midstream incentives show the point-of-sale discount on the quotation or invoice which will further motivate contractors and customers to select the energy efficient choice. The current list of equipment included in Distributor Incentives is based on an assessment of technologies that are not readily available or stocked in the high efficiency option. The program currently provides incentives for HVAC equipment and vending machine controls. Additional items will be considered for 2021 based on market conditions. The program will also work to recruit additional distributors throughout PNM's service area.

MULTIFAMILY

The Multifamily program targets a unique and hard-to-reach customer segment. The target audience consists of owners of multifamily (apartment) dwellings, who are eligible to receive rebates and direct-install measures for energy efficiency upgrades in common areas and residential housing units. For the purpose of this program, PNM defines multifamily dwellings as those that include five or more residential housing units. The goal is to offer a program that is streamlined and offers a simple approach

¹² Upstream Utility Incentive Programs: Experience and Lessons Learned, Maureen Quaid and Howard Geller, May 2014, http://swenergy.org/publications/documents/Upstream_Utility_Incentive_Programs_05-2014.pdf



to participation, and that will make their buildings more energy efficient. Making recommended, cost-effective energy efficiency upgrades, including lighting retrofits, appliance upgrades, and direct installation of smaller measures, is a good investment for the property owner and will also benefit tenants and property owners with lower utility bills, increased comfort, and improved security. The program is administered by DNV-GL, a third-party implementer. DNV-GL manages all components of the program, including marketing, outreach, and rebate processing. A central part of the program delivery includes utilizing a primary point of contact or liaison either employed by or contracted with the implementer to assist the property manager throughout the entire project.

The program has special incentives available to multifamily participants with a majority of low-income tenants who are at or below 200% of the federal poverty level. These properties are typically operated by a recognized low-income housing provider including, but not limited to, government entities, nonprofit agencies, and private-market Section 8 providers.

Energy savings are achieved through both prescriptive and custom measures. Projects that include custom measures that are not included in the prescriptive list can receive rebates provided that building system analysis shows them to be cost-effective. The program will soon add new construction to the performance incentive path for multifamily properties that include up to three floors, in addition to, trade ally performance incentives to encourage contractor engagement, deeper achieved energy savings, and for quality assurance purposes. PNM will continuously monitor participation in the program and make modifications to the measure list and rebate amounts as needed to achieve participation and budget goals. Complete program details including a list of all rebates are available on the PNM website.¹³

PNM QUICKSAVER

The PNM QuickSaver component provides special incentives for PNM small-business customers who are considered a hard-to-reach segment because of their limited access to capital and other barriers to participation. Beginning In 2015, the upper threshold for eligibility in QuickSaver was increased from business accounts with peak demand of 100 kW to those with 200 kW in 2016 to reach even more small business customers and has maintained this level since. Qualifying businesses contact an approved PNM QuickSaver contractor to schedule an energy efficiency evaluation. The PNM QuickSaver-approved contractor 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 contractor 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

¹³ <https://www.pnm.com/bizrebates>



65% 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 costs incurred by the business participant in less than one year.

Fewer energy savings measures are available under the QuickSaver component as compared to the Retrofit or New Construction components. QuickSaver focuses on measures that are the most common and cost-effective measures for the typical small business such as refrigeration components, lighting fixtures and lamps, and lighting control upgrades. These measures are also ones that can be installed quickly and provide immediate electric cost savings to participating small business owners. Many of the retrofits that have been done have focused on lighting, but contractors are also promoting more refrigeration and controls retrofits. In addition, PNM's third-party contractor is providing analytics to support targeted marketing of the program to increase participation and engagement of eligible customers.

REFRIGERATOR RECYCLING

The Refrigerator Recycling program is primarily a residential program but is also available to commercial customers. Please see the residential Refrigerator Recycling program description 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. Qualifying customers apply for the credit through submitting a proposed EE project they intend to implement at their facility. The PNM Self-Direct program manager reviews the application. If the project meets the program requirements the application is approved and the customer's electric bill is credited. Projects must not utilize funding from any other PNM EE program in order to be eligible.

5.2 RESIDENTIAL PROGRAMS

5.2.1 CONTINUING PROGRAMS – APPROVED IN CASE NO. 17-00076-UT

RESIDENTIAL COMPREHENSIVE

The Residential Comprehensive program is the primary incentive program for residential customers. The program has three components; Home Energy Checkup (including a low-income option), Residential Cooling and Pool Pumps, and Refrigerator Recycling. All of these programs provide energy efficiency options for customers' homes and have similar offers and benefits. For example, cooling options are available through Home Energy Checkup and Residential Cooling and customers recycling their refrigerators may also wish to take advantage of rebates on new appliances. PNM will continue to



monitor the market for efficient appliances and HVAC equipment and make additions and modifications to the rebates to reflect market conditions and achieve budget and savings targets. Complete program details including customer applications and a list of all rebates is available on the PNM web site¹⁴.

HOME ENERGY CHECKUP

Home Energy Checkup, managed by Franklin Energy Services, provides PNM residential customers, including low-income customers, the opportunity to participate in a Home Energy Checkup to save money and energy by choosing between two individually priced direct installation packages. The Home Energy Checkup applies a one-stop-shop approach that includes a walk-through assessment and informative discussion between the program participant and energy specialist explaining the assessment results, while also providing additional educational materials including conservation tips, ENERGY STAR appliance rebate eligibility, and information about other energy efficiency programs available to participants. Once the assessment has been completed and the results and educational materials have been presented, the specialist installs applicable energy efficiency measures, from the direct installation package that the customer chose. Each package contains a varied mix of the following measures: A low-flow showerhead, faucet aerator, LEDs, and advanced power strips. AC diagnostic performance testing and smart thermostat installation are available for additional copays. Other low-cost measures may also be introduced if they are cost-effective, can be delivered within the program budget and help achieve the program savings goals. Franklin Energy Services' duties include recruitment and training of contractors, energy specialists and retailers (trade allies), rebate fulfillment, marketing and advertising, data tracking, reporting, and quality assurance. PNM is collaborating and cost-sharing with the New Mexico Gas Company (NMGC) on this program for an even more robust program offering to customers.

The customer pays a small fee for the initial assessment and report depending on which option they select. The fee may be adjusted in response to program participation and is waived for income qualified customers. Income qualified customers do not pay a copay for installation of smart thermostats and may also qualify to receive an ENERGY STAR refrigerator to replace an older, inefficient model. For income-qualified participants, the energy specialist determines if the home's primary refrigerator is eligible for replacement.

Rebates are also provided for the purchase of ENERGY STAR appliances, heat pump water heaters, replacement of existing and working HVAC units with more efficient units and adding insulation for homes with refrigerated air-conditioning. The program identifies customers who may qualify for additional incentives on advanced evaporative cooling.

To encourage even greater energy and cost savings, participants also receive tailored combinations of rebate applications for ENERGY STAR qualified appliances, HVAC replacement to higher efficiency

¹⁴ <https://www.pnm.com/rebates-and-discounts>



equipment and high efficiency evaporative cooling equipment as applicable. Appliances and HVAC equipment that qualify for rebates currently include the following:

- *Standard size refrigerator*
- *Freezer*
- *Clothes washer*
- *Dryer*
- *Air Purifier*
- *Insulation Rebates*
- *Dishwasher*
- *Smart Thermostat (mail-in rebates only applicable for Home Energy Analyzer and those customers that choose not to have the unit installed during HEC)*
- *Air Conditioning Tune-Up*
- *Advanced Evaporative Cooling*
- *Advanced evaporative cooler window units*
- *ENERGY STAR qualified window A/C units*
- *HVAC Early Replacement*
- *HVAC Replacement with CEE Tier 1*
- *HVAC Replacement with CEE Tier 2*
- *HVAC Replacement with CEE Tier 3*
- *Heat Pump Water Heater*

PNM will continue to evaluate the market for high-efficiency appliances and other efficient measures that could be included as rebate options, provided they are cost-effective and can be provided within the program budget.

RESIDENTIAL COOLING AND POOL PUMPS

The Residential Cooling and Pool Pump component offers PNM residential customers cost and energy savings during the summer 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.

High efficiency refrigerated air conditioning options are also part of the Residential Cooling program. Customers who purchase new or replacement refrigerated air conditioners are offered incentives for purchasing unit(s) with higher efficiency standards than the minimum required by code. Window air conditioning units and pool pumps are other targets of this program. ENERGY STAR qualified refrigerated window units are available in the market, but have a higher cost than the less efficient models. 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 electricity consumption. Pools are much



more efficient if they have a variable speed pump. The cooling and pool pump equipment that qualifies for rebates include the following:

- *Advanced evaporative coolers*
- *Advanced evaporative cooler window units*
- *ENERGY STAR qualified window A/C units*
- *Refrigerated A/Cs listed as CEE tier 1*
- *Refrigerated A/Cs listed as CEE tier 2*
- *Refrigerated A/Cs listed as CEE tier 3*
- *High Efficiency Heat Pumps and Split Systems*
- *Variable speed pool pump with integrated controller*
- *ENERGY STAR rated smart thermostats*

A midstream component will also be added in 2021 to incentivize distributors and contractors to stock higher efficiency equipment that can be readily available for customers, including ductless CEE Tier one, two and three mini-split heat pumps, refrigerated air conditioning equipment, and smart thermostats and any additional measures that pass cost effectiveness analysis.

Participants and contractors can find a complete list of all qualifying equipment by visiting the PNM website.¹⁵

REFRIGERATOR RECYCLING

The Refrigerator Recycling component 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 program provides a rebate for each unit that is recycled. The rebate amount is currently \$50 per refrigerator or freezer.

PNM has contracted with ARCA, 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, and more than two refrigerators and/or freezers for business customers with PNM program manager approval. PNM is increasing marketing efforts going forward maintain adequate participation and cost effectiveness in this legacy program.

¹⁵ <https://www.pnm.com/rebates-and-discounts>

RESIDENTIAL LIGHTING

The Residential Lighting program provides incentives to PNM customers to replace incandescent light bulbs with primarily LED bulbs through instant, markdown discounts and coupons at participating retailers in the PNM service territory. A list of retailers that offer discounts is available at <https://www.pnm.com/homelighting>. The list of participating retailers is also shown in Appendix D. The primary focus of the 2021 Plan program will be the promotion of LEDs, in addition to, other products which will be described at the end of this section. LEDs use 75% less electricity than traditional incandescent bulbs and can last up to 20 times longer than a traditional incandescent. An LED placed in a frequently used lamp can save about \$35 or more over the lifetime of the bulb.

The residential lighting market has been undergoing transformative change over the last few years and change is expected to continue as LEDs become more affordable and new halogen incandescent bulbs continue to claim market share. The Energy Independence and Security Act of 2007 (EISA) prescribed minimum efficacy standards (lumens per watt) for regular duty light bulbs and required the 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; although certain specialty bulbs are exempt, including candelabra bulbs, reflectors, and three-way bulbs.

A second phase of EISA was due to begin in January of 2020 requiring general service lamps (GSL) to be approximately 65% more efficient than the traditional incandescent bulbs by including a “back stop” provision requiring a 45 lumen/watt minimum efficiency standard on sales of GSLs.¹⁶ However, the current federal government administration rolled back this phase and standards were not put in place as initially required.

Despite the major lighting market change driven by EISA as a whole, there will be a continued need for LED promotions. Customers are now 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. Over the past several years, the styles and application types of LEDs have expanded significantly and are less expensive making lighting still one of the most cost effective energy efficiency program options. Smart bulbs and plugs are the latest technologies being piloted through home energy management systems (HEMS) in utilities across the United States as well.¹⁷

Beginning in 2021, PNM intends to incorporate additional retail products such as advanced power strips, evaporative cooling equipment and room air conditioners to the current residential lighting program. PNM will continue to expand the program with additional cost effective products as advised by results of

¹⁶ https://www.energystar.gov/sites/default/files/asset/document/3.%20%20Claire%20Miziolek_NEEP%20-%20Plenary.pdf

¹⁷ <https://www.esource.com/129191aavb/smart-home-pilots-and-programs-2020-snapshot-utility-initiatives>



a residential appliance and socket saturation survey to be conducted in 2020. Incorporating additional offerings provides customers with a more comprehensive program of discounted products at the point of sale and will also assist in offsetting reduced lighting savings in the future. Due to these modifications, this program will be referred to as the Residential Lighting and Retail Products program beginning in 2021.

The participation goal of the Residential Lighting program is to encourage the purchase of about 925,000 LED bulbs in 2021, in addition to, a varied mix of the new measures referenced above. Independent M&V will determine impacts on the free-rider rates or net energy savings and PNM will make modifications over time as indicated.

PNM HOME WORKS AND ENERGY INNOVATION

PNM Home Works and Energy Innovation are 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 with their parents. The program has two main goals: energy savings and market transformation through student education.

PNM contracted with National Energy Foundation (NEF) to implement this program which consists of general program oversight, student and teacher presentations, 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 energy savings measures and interactive hands-on education home with motivated students. The 2021 Plan program will have two presentations and kits designed for 5th grade students and high school students. Each student will receive educational materials designed to build knowledge and demonstrate simple ways to save by changing habits in conjunction with easy-to-install measures. The teacher and student 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 program, including all presentation time and materials is about \$74 per kit.

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 students take home an activity kit that includes high efficiency water and lighting measures. With the help of their parents, the students install the measures at home and complete a home survey. The high school presentation includes a special emphasis on sustainability and on the unique energy usage footprint of a high school-aged student in the home and the kit will contain a Tier one or Tier two advanced power strips. The NEF staff tabulates all the responses, including home survey information, teacher responses, student input and parent responses, and generates a program summary report. By installing and monitoring the efficient measures at home and discussing the importance of energy efficiency, students are able to reinforce what they have learned through measurable water, energy and monetary savings. PNM will target approximately, 8,450 5th grade students and 4,400 high school students each year across the service territory.



The educational and energy awareness training is a crucial part of the PNM Home Works program but is not directly linked to specific energy savings. Rather, the education builds awareness of the importance of energy efficiency in general and supports the goals of the 2021 Plan in general. Therefore, PNM funds the general energy efficiency educational materials and presentations activities of the program, about 35-40% of the program cost, through the Market Transformation (MT) program, which is described in the MT section of the 2021 Plan below.

NEW HOME CONSTRUCTION

In 2017, PNM relaunched a hybrid version of the former ENERGY STAR New Homes program that has proven successful in similar utility programs¹⁸. The target audience consists of custom, semi-custom, and production home builders and includes consumers, realtors, trade allies, raters, developers and architects. The goal is to offer a streamlined program that offers participants incentives for highly efficient new single-family residential construction through either a prescriptive or a performance path.

ICF International is the third-party implementer managing this turnkey program which includes marketing and outreach, builder and HERS rater outreach and training, quality assurance, data tracking and reporting, and rebate processing. PNM is collaborating and cost-sharing with the New Mexico Gas Company (NMGC) on this program for an even more robust program offering to home builders.

The combined prescriptive and performance program approach is less stringent than the previous ENERGY STAR only approach because it offers a performance path approach for homes exceeding the IECC 2009 building code while continuing to encourage home builders to participate in ENERGY STAR®, Zero Energy Ready Homes (ZERH) and Build Green NM initiatives. The performance incentive path is not cost effective in the Santa Fe homebuilder market due to current Santa Fe building codes, however, Santa Fe builders are able to take advantage of the prescriptive rebates offered in this program.

The proposed 2021, participation goal is 850 homes, which assumes 95% of builders will choose the performance path and 5% will choose prescriptive. Home builders who choose the prescriptive path are not required to use a HERS rater, but program staff will perform random installation verification of homes for quality assurance purposes.

The average savings per newly constructed home is approximately 1,050 kWh. Energy savings will be achieved through either the prescriptive or performance incentive paths. The initial prescriptive incentive path as listed below requires that home builders install at least two measures to qualify. PNM will monitor market conditions and will adjust the incentive amounts as needed to meet program performance goals while maintaining cost-effectiveness of the program.

¹⁸ PNM administered a new homes program from 2010-14. The program was discontinued because it was not cost-effective under the total resource cost test in effect during those years.

Table 5-1

PNM Equipment Measure	Amount
Air Conditioning:	
SEER 16 (from SEER 14)	\$ 71 per ton
SEER 17 (from SEER 14)	\$100 per ton
SEER 18 (from SEER 14)	\$129 per ton
LED Lighting: 100% LED (from 50% CFL)	\$100 per home
Water Heating: Heat Pump ≥ 2.0 EF	\$300 per unit
Radiant Barrier: (from None)	\$50 per home
Refrigerator: ENERGY STAR® Refrigerator (from Standard Appliance)	\$15 per unit
ENERGY STAR® Certified Smart Thermostats:	\$50

Under the performance incentive path, home builders receive rebates for overall home performance upon verification by a RESNET credentialed energy rater. The chart below describes the initial performance path incentive structure. Incentives may be adjusted in response to market and program conditions. Specific information about program options is available on PNM’s website.¹⁹

Table 5-2

PNM Performance Incentive	Amount
Base kWh Incentive (10% minimum)	\$0.15
20% - Performance Bonus	\$200
25% - Performance Bonus	\$300
30% - Performance Bonus	\$600
Maximum incentive for Performance-based incentives (based + performance bonus)	\$1,500
ENERGY STAR®	\$100

MULTIFAMILY

The Multifamily program is described in detail in the previous Commercial section. It is included as a commercial program because the ultimate participant in the program is the property owner rather than the residents. However, the residents benefit directly from the program, especially if they have PNM electric accounts. Therefore, the Multifamily program benefits both commercial and residential customers.

¹⁹ www.pnm.com/newhomeconstruction

5.3 LOW INCOME PROGRAMS

5.3.1 CONTINUING PROGRAMS – APPROVED IN CASE NO. 16-00096-UT

EASY SAVINGS KIT

The Easy Savings Kit program is implemented by Resource Action Program and provides free LED lightbulbs, a showerhead, and educational materials on saving energy to low-income PNM customers. The program is implemented by Resource Action Programs, Inc. This program currently targets low-income PNM customers through direct mail. PNM may also distribute enrollment cards through various channels that serve the target population.

Customers who receive the enrollment postcard, either in the mail or through a participating community agency, can request the energy efficiency kit. Customers can order by mail, over the phone, or online at the program website printed on the enrollment card. This program is only available to customers who receive the opt-in card; therefore, PNM does not have a website link for this program available from our main page.

In 2021, the targeted population customers will have the flexibility to choose a pick and pull custom kit configuration by mail, phone or online. Customers will have the flexibility to choose from a menu of predetermined measures, informative educational materials, conservation tips and installation materials will also be included in each kit. This addition of the pick and pull kit option will create a customized experience for the customer and allow PNM quickly add additional efficient measures that could be included, provided they are cost-effective and can be provided within the program budget. For those customers that prefer the conventional utility provided kit, that option will still be available with the addition of an advanced power strip.

ENERGY SMART – MFA

The Energy Smart program provides funding to the New Mexico EnergySmart weatherization program implemented by New Mexico Mortgage Finance Authority (MFA). PNM funding is used by MFA to supplement federal and state funding they receive to administer the low-income weatherization program. In recent years, the program has focused on installation of LED bulbs, weatherization, and replacement of older inefficient refrigerators with ENERGY STAR qualified models. In 2017, the program was expanded to include a number of additional items for PNM customers who have electric space heating, electric water heating or refrigerated air-conditioning. The new options include: Weatherization, attic insulation, duct and air sealing, pipe and tank insulation, programmable thermostats, low-flow showerheads and aerators. The expanded offerings allowed federal funding to be leveraged to assist more homeowners at or below poverty level. To be eligible, homeowners must have incomes relative to family size at or below 200% of the federal poverty level. In 2021, door and window options will be added to the list of weatherization measure offerings. PNM will continue to evaluate opportunities for additional efficient measures that could be included, provided they are cost-effective and can be provided within the program budget.

HOME ENERGY CHECKUP (LOW-INCOME)

This program is a component of the Home Energy Checkup program described in the Residential Programs section above. The program is the same as the Home Energy Checkup program with the exception that copays for the assessment and smart thermostat which includes installation are waived and a free replacement refrigerator may be available through the program if eligibility criteria are met.

To be eligible, participants must have incomes relative to family size at or below 200% of the federal poverty level. A program participant's refrigerator must meet the following criteria to be eligible for replacement:

- Be in working condition.
- Be the primary refrigerator used in the home.
- Be at least 10-30 cubic feet to qualify for replacement.
- Be at least ten years old, or 12 years or older if it is ENERGY STAR
- Consumption must be at least twice that of the efficient model being installed, or have an observed physical condition causing excessive consumption such as poor door seal and an inability to cool

PNM actively seeks out ways to collaborate in the community. PNM is collaborating with New Mexico Gas Company (NMGC) to offer Home Energy Checkup to income qualified residential customers living in Native American communities. For the second year in a row PNM will partner with Prosperity Works and Partnership for Community Action to offer income qualified Home Energy Checkups and will continue to look for more opportunities to collaborate with community organizations.

PNM HOME WORKS (LOW INCOME)

The PNM Home Works program is described in detail in the previous Residential section. Although it is not a low-income program specifically, because so many students are from low-income families, this program benefits many low-income PNM customers. PNM estimates that at least 40% of students are from families with annual income below 200% of the federal poverty level.

MULTIFAMILY (LOW INCOME)

The Multifamily program is described in detail in the previous Commercial section. Although it is not a low-income program specifically, because so many residents of multifamily properties qualify as low-income, this program benefits many low-income PNM customers. Approximately 90% of the projects in the Multifamily program in 2019 were low-income qualified properties.

5.4 NEW BEHAVIORAL-BASED ENERGY EFFICIENCY PROGRAMS

In Case No. 17-00076-UT, PNM was ordered to issue an RFP for a behavioral-based energy efficiency program. PNM received responses from eight bidders; three commercial-focused, and five residential-



focused. Through an RFP committee process in the fall of 2019, PNM chose two vendors to offer two separate programs; a residential home energy reports (HER) and commercial strategic energy management (SEM) program. These programs were presented and discussed at a public advisory stakeholder meeting on February 20, 2020 and the determination was made that these programs are in the interest of customers and will be proposed in the 2021 program plan filing.

If approved, the SEM program will target all commercial and industrial customer classes by focusing on business practice change from senior management through employee staff positively affecting organizational culture to reduce energy waste and improve energy intensity. The SEM approach emphasizes the importance of equipping and enabling plant management and staff to impact energy consumption through behavioral and operational change and structured planning of facility upgrades and process improvements.

Up to a total 45 customer sites will be grouped into cohorts to encourage collaborative and interactive learning to identify energy savings opportunities within an organized curriculum, fixed schedule of modules and activities including webinar materials, workshops, technical support, presentations and toolkits, to name a few.

In addition to a commercial SEM program, PNM is also proposing a behavioral-based residential program in the 2021 program plan filing. This program will be delivered through a combination of customizable and personalized home energy reports (both paper and digital), customer web portal and personalized insights and cross-promotion, along with an online marketplace offering discounts on energy efficient measures.

In comparison to the old Opower business model, this program will be more digital versus paper focused and either self-comparisons and/or similar home comparisons regarding energy consumption are optional. Paper reports can be more costly and have limited reach; whereas digital is less expensive and has a broader customer reach beyond high users. The treatment group will consist of approximately 70% of PNM residential customers with the remaining 30% in the control group.

This platform can function with either Non-AMI or AMI enabled metering, however, with the existing Non-AMI structure, customers can still receive information about their consumption through higher level end use disaggregation. The total combined 2021 annual budget for these programs is approximately \$1,800,000 and decreases in years 2022 and 2023 while maintaining or exceeding savings targets. Combined annual energy savings targets range between 10 - 20 GWh.

EE AMI Pilot

The Final Order in Case No. 15-00312-UT (AMI), issued April 11, 2018, required that “consistent with PNM’s statement . . . that it will continue to evaluate implementation and AMI technology, PNM should include in its next Energy Efficiency Plan application a proposal on the inclusion of an AMI pilot project.” This case is PNM’s first energy efficiency plan application case since the Commission issued its final order in Case No. 15-00312-UT.



As part of a residential EE behavioral home energy report (HER) program, this pilot would utilize advanced meters that would allow customers access to real-time consumption data. This pilot would allow customers to receive paper HERs and access to a user-friendly information retrieval tool that would help them monitor and control their energy use through behavior changes. The proposed pilot would include 5,000 participants at a total cost of approximately \$3.5M for equipment installation and third party administration. While PNM believes customer and operational benefits exist within an AMI metering structure, industry research has shown minimal energy savings if any, are achieved between AMI and non-AMI customers.

5.5 LOAD MANAGEMENT PROGRAMS

CONTINUING PROGRAMS – APPROVED IN CASE NO. 17-00076-UT

The load management programs provide PNM with a demand-side resource that can be used to meet peak demand requirements for up to 100 hours per year, June 1st through September 30th, 1pm to 8pm, Monday through Friday, excluding holidays and weekends. PNM has successfully dispatched the load management resource for peak reduction during each summer season beginning in 2008. Table 5-2 below lists the dates and times in which PNM utilized load management in 2019.

Table 5-3

Date	Start Time	End Time	Duration (Hr)
7/10/2019	3:00 PM	7:00 PM	4.0
8/27/2019	3:00 PM	7:00 PM	4.0
9/4/2019	3:00 PM	7:00 PM	4.0
3 Events in 2019			12.0

PEAK SAVER

The PNM Peak Saver program targets non-essential electric loads that can be reduced during periods of peak system demand and is available to commercial and industrial customers with peak loads of 50 kW or greater. Participating customers receive an incentive based on their level of load reduction at the end of each control season.

PNM selected a new third-party contractor, Enbala, to manage and market this program. Enbala is responsible for building and operating a direct load control system that provides PNM with the ability to achieve contracted load reductions through control of end-use equipment at participating businesses. Enbala responsibilities include marketing, installing load control equipment, data collection and analyses required for validating the contract capacity.

ENHANCEMENTS AND GROWTH

The Peak Saver program retains all of the same program elements that are currently available to customers with the addition of better energy usage and monitoring options for participants. Enbala has a strong technology offering that could be used in the future to help integrate distributed energy resources including: controllable load, batteries, distributed generation, smart inverters, and electric vehicles. Enbala employs their Symphony platform to aggregate resources. Enbala expects to automate as many participant sites as possible with their Symphony load monitoring and control system which provides easy access to participant energy usage data as well as automated load control during dispatch events. The Symphony system also allows for integrating a large number of smaller loads to make DR attractive to small and medium size customers. PNM and Enbala anticipate that these enhancements will result in the resource growing over time.

POWER SAVER

The PNM Power Saver program is the load management program for residential customers and small commercial customers who are not served under the Peak Saver program. This program cycles non-critical loads, such as refrigerated air conditioning units, on and off during summer peak hours. Participating customers receive a modest incentive at the end of each control season. PNM retained its third-party contractor, ITRON), to manage this program. ITRON is responsible for marketing the program to customers, installing load control equipment, data collection and analyses required for validation of the contract capacity.

ENHANCEMENTS AND GROWTH

The Power Saver program retains all of the same program elements that are currently available to customers with the addition of Wi-Fi thermostat options. The existing switch network, representing about 40 MW of reliable capacity, will be maintained and a new, attractive Wi-Fi thermostat option will be marketed to customers who have previously dropped out and offered as an option to new participants. Customers with existing thermostats are also allowed to participate under the bring-your-own-thermostat ("BYOT") option. Wi-Fi enables a more enhanced customer experience by interactively engaging the customer via any internet connected device (such as a mobile phone or computer). Participants have the option of having a ITRON-provided thermostat installed at no charge or enrolling in the program using their own qualifying thermostat. In either case, ITRON will initiate control events through interacting with the thermostats through the participants' home Wi-Fi networks. The thermostat option provides the additional benefits of potential energy savings through using verifiable set-back strategies and providing a higher level of customer satisfaction. PNM and ITRON anticipate that new participants will be attracted to the thermostat option and that some participants that have previously left the program will reenroll, thereby increasing the resource over time.

5.6 MARKET TRANSFORMATION

OVERVIEW AND DESCRIPTION

The goals of the Market Transformation (MT) strategy are to 1) achieve a measurable increase in awareness of the importance of energy efficiency; 2) encourage behavior changes that result in the adoption of energy efficient measures; and 3) promote emerging technologies that are not part of existing EE programs but have the potential to be included in programs in the future. MT uses mass-market advertising channels and conducts targeted efforts aimed at specific customer segments, including hard-to-reach segments and schools. In addition to current awareness-building activities that are ongoing. MT costs are allocated on a pro rata basis across the portfolio.

2021 PLAN PROGRAM SCOPE

In prior years, the strategy has focused on EE promotional events including community events and presentations, engaging customers on energy efficiency through on-line PNM channels and tools (including Home Energy Analyzer, the on-line home energy assessment), funding the educational component of the PNM Home Works and Energy Innovation school kit program, and supporting a modest level of mass market advertising to promote energy efficiency and highlight selected program offers, and any potential studies or residential saturation surveys to assist in designing attractive and cost effective programs. PNM will continue to use Market Transformation funding to provide these awareness building services as well as fund updates to the energy efficiency potential study, residential appliance and socket saturation survey, and continuing funding for the Home Energy Analyzer.

PNM will continue funding the general energy efficiency educational activity that is currently part of the PNM Home Works and Energy Innovation program with Market Transformation funding. While PNM has received very positive feedback from teachers and students on the education component of the program, the training by itself is not directly linked to energy savings. Rather the education builds awareness of the importance of energy efficiency in general and supports the goals of the 2021 Plan.

As mentioned previously, the Home Energy Analyzer is a web-based home energy assessment tool, which has helped many customers to easily and quickly analyze their potential for energy savings opportunities and to direct them to the programs they can use. PNM also created an option for customers completing the online assessment to receive rebates for energy efficient appliances and smart thermostats, which previously were only available to customers completing the onsite Home Energy Checkup.

ONGOING RESEARCH AND DEVELOPMENT

PNM understands that its energy efficiency plans and programs will need to continue being responsive to evolving markets and technologies. It will maintain an active research and program design effort throughout the next planning cycle and for the foreseeable future. While specific initiatives may be modified over time to reflect the changing needs of the energy efficiency portfolio, the anticipated initiatives that may be developed over the next year or two include:

- Proposing two innovative and reliable behavioral approaches in the 2021 filing to achieve additional savings for both residential and commercial customers.
- Continued collaboration with New Mexico Gas Company and other community organizations and public entities where appropriate to encourage robust and comprehensive program offerings with maximum customer appeal.
- Continued expansion of outreach/education-based initiatives either through Market Transformation or within specific programs.
- Increasing incentive budgets in programs with higher energy savings and participation potential and lower market saturation
- Continued monitoring of any potential new program design concepts being developed or offered in similar utility programs.
- Expansion to a midstream market approach within the current residential cooling program
- Adding new upstream and downstream retail product incentives to the existing lighting discounts in the newly named Residential Lighting and Retail Products program.
- Expansion of direct marketing for efficiency programs – Finding customers that need efficiency improvements and that are most likely to participate in programs is becoming more difficult.

6 APPENDICES

6.1 APPENDIX A – AVOIDED COSTS

The benefits of energy efficiency and load management are evaluated over the life of the programs in the UCT model using PNM avoided costs and a discount rate of 7.20%. Avoided costs are the costs that PNM would not incur as a result of lower energy consumption and demand resulting from implementation of energy efficiency and load management measures. Energy efficiency avoided cost forecasts were developed by staff in the PNM Planning and Resources department and are shown in Table 6-1 below.

Table 6-1

Avoided Energy and Capacity Costs EE and DR	EE Energy Capacity (\$/kWyr)	EE Avoided T & D (\$/kWyr)	EE Total Capacity MW (\$/kW-yr)	EE Energy (incl CO2) (\$/kWh)	DR MW (\$/kW-yr)	Avoided Energy Cost (DR) \$/kWh
2021	\$79.28	\$5.00	\$84.28	\$0.008	\$87.15	\$0.000
2022	\$146.97	\$5.08	\$152.05	\$0.013	\$128.00	\$0.000
2023	\$135.03	\$5.15	\$140.18	\$0.015	\$149.83	\$0.000
2024	\$95.77	\$5.23	\$101.00	\$0.014	\$70.98	\$0.000
2025	\$161.34	\$5.31	\$166.65	\$0.017	\$133.78	\$0.000
2026	\$153.28	\$5.39	\$158.67	\$0.016	\$130.17	\$0.000
2027	\$165.60	\$5.47	\$171.06	\$0.016	\$153.35	\$0.000
2028	\$139.21	\$5.55	\$144.76	\$0.021	\$188.02	\$0.000
2029	\$133.86	\$5.63	\$139.49	\$0.025	\$141.63	\$0.000
2030	\$130.29	\$5.72	\$136.01	\$0.025	\$110.69	\$0.000
2031	\$101.96	\$5.80	\$107.76	\$0.028	\$64.89	\$0.000
2032	\$125.91	\$5.89	\$131.80	\$0.025	\$106.61	\$0.000
2033	\$129.11	\$5.98	\$135.09	\$0.025	\$123.95	\$0.000
2034	\$121.61	\$6.07	\$127.68	\$0.027	\$123.49	\$0.000
2035	\$116.20	\$6.16	\$122.35	\$0.028	\$123.02	\$0.000
2036	\$113.96	\$6.25	\$120.21	\$0.028	\$122.55	\$0.000
2037	\$119.68	\$6.34	\$126.03	\$0.030	\$135.94	\$0.000
2038	\$93.50	\$6.44	\$99.94	\$0.030	\$91.45	\$0.000
2039	\$100.09	\$6.54	\$106.63	\$0.031	\$111.79	\$0.000

6.2 APPENDIX B – PUBLIC ADVISORY GROUP MEMBERS

Table 6-2 lists the organizations that have been invited to participate in the energy efficiency advisory group and who receive regular updates on the status and progress of PNM’s energy efficiency efforts.

Table 6-2

Name	Organization
Amanda Evans Hatherly	SF Community College
April Elliot	WRA
Bradford Borman	State of NM
Bud Wilden	Retired UNM professor
Camilla Fiebelman	Sierra Club
Carla Sonntag	Utility Shareholders Alliance
Cholla Khoury	NM Attorney General's Office
Chuck Noble	Coalition for Clean Affordable Energy
Cherise Urioste	State of NM
Cissy McAndrew	Southwest NM Green Chamber of Commerce
Claudia Borchert	Santa Fe County
Cydney Beadles	WRA
Darren Wong	Enbala
Dave Nelson	AARP
Dru Jones	NM Gas Company
Gavin Hume	Enbala
Gideon Elliot	NM Attorney General Office
Howard Geller	Southwest Energy Efficiency Project
Jim Folkman	Foundation for Building/Green Building Foundation
Joan Brown	Interfaith Power & Light
John Reynolds	NM Public Regulation Commission
Justin Brant	Southwest Energy Efficiency Project
Keith Herrmann	Stelzner Law
Kelly Darshan	NM Area
Kelly Gould	NMIEC
Ken Baker	Walmart
Kurt Albershardt	Southwest Energy Generators (silver City)
Mardsen deLapp	DeLapp Engineering
Mark Tupler	State of NM
Michael Pascucci	Excel Energy
Mona Blaber	
Nan Winter	Stelzner Law
Ona Porter	Prosperity Works
Pat Cardona	AARP

Patrick O'Connell	WRA
Peter Gould	NMIEC
Rick D. Chamberlain	Behrens, Wheeler & Chamberlain
Rick Rennie	Downtown Improvement District
Robb Hirsch	Santa Fe Green Chamber of Commerce
Robert Howell	Sierra Club
Robert Lundin	NM Attorney General Office
Robert Mang	Smart Home Project
Shawn M. White	Xcel Energy
Steve Casey	NM Gas Company
Steve Michel	Western Resource Advocates
Susanne Stone	El Paso Electric
Tammy Fiebelkorn	Southwest Energy Efficiency Project
Tom Singer	Western Environmental Law Center
Wayne Hofeldt	Retired So. Cal Edison

6.3 APPENDIX C – LOAD MANAGEMENT CONTRACT TERMS

Table 6-3

	Comverge, Inc.	Enbala, Inc.
Contract Term	Two 5 year terms; requires PRC re-approval for 2 nd 5 year term.	5 years
Contract Effective Date	October 1, 2017	January 1, 2018
Contract Start Date	Date of PRC approval of the 2018 Power Saver program	Date of PRC approval of the 2018 Peak Saver program
Projected Total Contract Cost	\$22M over 5 years	\$8M over 5 years
Contract Pricing	All-inclusive pay-for-performance pricing. Payment per MW of delivered capacity.	All-inclusive pay-for-performance pricing. Payment per MW of delivered capacity.
Basis of Capacity Payments	12 monthly payments based on installed capacity and number of events per week plus energy payments for each hour of dispatch.	4 monthly payments during the control season based on installed capacity plus energy payments for each hour of dispatch.
Customer Incentives (paid to participants by Comverge and Enbala)	Approximately \$25 annually for each residential unit and \$25/kW for commercial. Adjustable based on participation goals.	Approximately \$40/kW but variable based on the complexity and nature of the load. Includes a kW payment and kWh payment.
Minimum Contract Capacity	38 MW	10 MW
Maximum Contract Capacity	60 MW	25 MW
Control Season (for dispatch)	June 1st - September 30	June 1st - September 30
Control Times	1:00 PM – 8:00 PM M-F (excluding holidays)	8:00 AM – 8:00 PM M-F (excluding holidays)
Dispatch Limits	Maximum of 100 hours per control season. Maximum 4 hours per day. Capacity is temperature dependent.	Maximum of 100 hours per control season. Maximum 4 hours per day. Capacity is not temperature dependent.
Emergency Dispatch	Emergency Non-Program Hour dispatch @ \$1,000/MWh (or DJ PV Index, whichever is higher). Hours count against the maximum of 100 hours per control season.	Additional Curtailments can be called upon during non-program hours. They count against the maximum of 100 hours per control season.
Minimum Response Time	10 minutes	10 minutes
Method of Event Activation	Web-based application	Web-based application
Verification of Actual Capacity	Statistical samples of customers with and without control units (A-B method). The average load reduction per unit (kW factor) is applied to the population. At the discretion of PNM, as AMI data becomes available the A-B method can be replaced by population baseline calculations.	All units will have interval meters and the load will be validated after each dispatch event. Baseline consumption will be determined for each customer.

	Comverge, Inc.	Enbala, Inc.
Penalty for Not Meeting Minimum Contract Capacity	Schedule of liquidated damages applied to the capacity deficit per year.	Contract is in default if failure to meet demand in two consecutive events.
Early Termination Costs	Early termination by PNM allowed if cost recovery is disallowed by the PRC during the term of the contract. Termination costs based on NPV of new installed capacity after August 2016 for remaining term of contract.	Early termination by PNM allowed if cost recovery is disallowed by the PRC. Termination costs based on NPV of installed capacity for remaining term of contract.
Target Customers	Residential and small commercial less than 50 kW peak demand plus apartment complexes. Some larger customers are grandfathered from existing program.	Medium to large commercial and industrial greater than 50 kW peak demand.
Target Loads	Central refrigerated AC units. Electric water heating, pool pumps, small commercial loads may be considered in future.	HVAC components, refrigeration, non-essential lighting, pumps, process loads.
Technology Employed	1) Pager or radio controlled switches installed on exterior AC units. Controlled through web-based activation system. AC compressor is cycled, fans remain on. 2) Wi-Fi thermostats controlled through web application at time of dispatch.	Customized energy management controls installed at each site. Controlled through web-based activation system.
Local Office	Local office to manage recruiting, installation and maintenance using local staffing and contractors. Regional call center to respond to customer inquiries and initiate dispatch events	Local office with program manager and sales staff. Regional call center to respond to customer inquiries and initiate dispatch events.
Marketing Plan	Multi-channel approach including direct mail, bill inserts, radio, print, web and co-marketing. All materials approved by PNM.	Primarily one-on-one selling with all materials approved by PNM.



6.4 APPENDIX D – TRADE ALLY BUSINESS LIST

Trade Ally Businesses Supporting PNM Residential and Commercial Programs

Name	Area Served			
	Central	Northern	South Central	Southwest
A.B. Plumbing Inc.	X	X		
Absolute Mechanical	X	X		
Aire Mechanical Inc.	X			
Aztec Mechanical, Inc.	X			
Comfort Solutions of New Mexico LLC	X	X		
Daniels Heating & Air Conditioning LLC	X			
Desert Suns Heating & Cooling Inc.	X			
Four Winds Mechanical HTC/AC Inc.	X			
Mechanical Control Solutions LLC	X	X	X	X
Morrison Supply Co	X	X		
Norman S Wright Co	X	X		
RE Michel Co LLC	X	X		
Sigler Inc.	X			
TLC Plumbing & Utility Inc.	X	X	X	X

Trade Ally Businesses Supporting PNM Commercial Programs

Name	Area Served			
	Central	Northern	South Central	Southwest
3B Builders Inc.	X			
3B Electrical LLC	X			
A-1 Electric Inc.	X	X		
Abraxas Electric LLC	X	X	X	X
Allied Electric Inc.		X		
B&D Industries Inc.	X	X	X	X
Becco Inc.			X	
Benchmark Group Inc.	X			
Bernard TME LLC	X	X	X	X
Beyond Electric	X			
BidEnergy	X			
Bixby Electric Inc.	X	X		
Black and Silver Services LLC	X			
Border States Electric (BSE)	X			
Bridgers & Paxton Consulting Engineers	X			
Bright Ideas Inc. dba The Lamp shop	X	X	X	X
Broken Arrow Electric Co Inc.	X	X	X	X



Building Energy Solutions and Technology, dba Bes-Tech Inc.	X			
Bulldog Energy Solutions Inc.	X	X	X	X
Burgos Group dba Northridge Electric	X			
Burque Electric Co	X			
Caldwell Electrical Contractors Inc.	X	X	X	X
CB Power LLC	X	X	X	X
Centauri Sales	X			
Comfort Systems USA SW	X	X	X	X
Corrales Electric Inc.	X	X		
Crescent Electric Supply Company dba National Electric Supply	X	X		
DAC Electric	X	X		
DKD Electric	X	X	X	X
DRB Electric Inc.	X	X	X	X
E.R.M. electric LLC			X	
ECOterra Energy Consulting	X			
EEA consulting Engineers	X	X	X	X
Electro Data LLC	X	X	X	X
Energy Management Collaborative LLC	X			
Engie Services U.S. Inc.	X	X	X	X
Engineering Economics	X	X	X	X
Enterprise Builders Corp	X	X	X	X
Escudo Resturant Solutions, LLC dba Chef Link	X	X	X	X
Facility Solutions Group	X	X	X	X
Financial Energy Management Inc.	X	X	X	X
Franks Electric	X			
Graybar	X			
Greenleaf Energy Solutions	X	X	X	X
HEI Inc.	X			
Hoffman's Electric Inc.	X	X	X	X
J & C Ortiz Electric LLC	X	X		
Johnson Controls	X			
Kimbrough Electric	X	X	X	X
LaMay LLC			X	
LE Electric Inc.			X	X
Leidos Engineering LLC	X			
LTBL Electric LLC	X			
M Squared Electric LLC				X
McNiel Electric Co Inc.	X	X		
Mechanical Control solutions LLC	X	X	X	X
Mechanical Systems Inc.	X	X	X	X
Mountain Vector Energy	X	X	X	X
New Line Technology Inc.	X	X		



Nex Rev	X			
Norman S Wright Co	X	X		
Omega Contractors	X	X	X	X
Phaze One Electric	X	X		
Prime Electric Inc.	X			
Pumps & Service	X			
Randy's Electric Co Inc.	X	X		
RE Michael Co LLC	X	X		
Reliable Relamping	X			
Red Mountain Lighting Inc.	X			
RKL Sales Corporation	X		X	
ROI Energy Investments LLC	X	X	X	X
Royalty Enterprises			X	X
Russel Sigler Inc.	X			
Schroeder Sales Inc.	X			
Siemens Inc.	X			
Silverado Enterprises Inc.	X	X		
Standard Restaurant Supply	X	X	X	X
Stone Electric and Power LLC				X
Strategic Lighting	X	X		
Summit Electric Supply	X	X	X	X
Sustainable Building Solutions LLC	X	X		
Top Tier Service Inc.	X	X	X	X
Trane SW	X	X	X	X
Travers Mechanical	X			
Tru Energy Solutions LLC	X	X	X	X
Voss Lighting	X			
WH Pacific	X			
Yearout Service LLC	X			

Trade Ally Businesses Supporting PNM Residential Programs

Name	Area Served			
	Central	Northern	South Central	Southwest
#1 Plumbing And Air	X			
1 of a King Heating, A/C and Plumbing	X			
1-Call Mechanical, LLC	X			
3Js Plumbing & Heating	X			
5 Star Services Plumbing, Heating & Cooling	X			
505 M & C	X			
A-Gee Whiz Mechanical	X			
A & G Heating and Air Conditioning, Inc.	X			
A & G Mechanical, Inc.	X			



A & J Services	X			
A And G Heating And Air Conditioning, Inc.	X			
AAG, Inc.		X		
A B Honest 1 Plumbing, Heating & Cooling, LLC	X			
A.B. Plumbing	X			
A.I.O. Trades	X			
A1 Pool Supply	X			
Action Plumbing Heating & Cooling	X			
AAA Master Services	X			
Abel Plumbing & Heating	X			
Able Service Pro's LLC	X			
Abq Temperature Management LLC	X			
AC&R Heating, Cooling and Plumbing Inc.	X			
Academy	X			
Active Refrigeration's A/C & Htg Inc.	X			
Advanced Refrigeration & HVAC	X			
Affordable Service, Inc.	X			
Air Comforting Experts, LLC		X		
Air Conditioning & Heating Service Co.		X		
Air Conditioning Systems, Inc.	X			
Air One Cooling And Heating, LLC	X			
Air Pro, Inc.	X			
Air Service of NM, LLC	X			
Albuquerque Plumbing Heating And Cooling	X			
Albuquerque Winair	X			
All Temperature Systems	X			
Alpine Air	X			
Amazon.Com	X	X	X	X
AMI Mechanical Corp	X			
Ancae Heating, Air Conditioning & Plumbing	X			
Anderson Air Corps	X			
Anderson Refrigeration Inc.				X
Aranda's Plumbing, Heating And Supply, Inc.		X		
Arch Design	X			
Atar, Inc.	X			
Axiom Home Services	X			
B Carlson	X	X		
Backyardpoolsuperstore.Com				
Baker Distributing	X			
Barrera's Mechanical	X			
Bel Air Conditioning and Heating Systems, LLC		X		
Bentley Plumbing And Heating			X	



Best Choice Builders, LLC	X			
Black Bear Mechanical, LLC	X			
Blazin Zia Mechanical	X			
Blue Water Pools Inc.	X			
Bopat Mechanical	X			
Bosque Heating Cooling and Plumbing LLC	X			
Brent's HVAC And Plumbing	X			
Brothers Electro Mechanical, Inc.	X			
Bryan Andrade	X			
Budget Climate Control	X			
Budget Climate Control	X			
Builders Mechanical, Inc.	X			
C&L Total Service, LLC	X			
Cait Co. Drain Works		X		
Carlile Electrical & Mechanical	X			
Cartwright's Plumbing & Roto Rooter		X		
Central NM Housing Corporation	X			
Chant Associates	X			
Clean Air Mechanical Inc.	X			
Climate Heating & Air Conditioning				X
Comfort Doctor Heating & Cooling		X		
Comfort Solutions of New Mexico	X			
Comfort Zone Heating and Air Cooling	X			
Controlled Comfort	X			
Copperstone Plumbing & Piping Systems	X			
Corrales Air LLC	X			
Courtesy Plumbing Heating & Air Conditioning Inc.	X			
CR Refrigeration, LLC	X			
Cross Unlimited, LLC				X
Cummings Construction, LLC	X			
Cunningham Distributing, Inc.	X			
Custom Plumbing & Heating LTD Co.	X			
D&L Plumbing and Heating	X			
Dahl Of Santa Fe		X		
Daniels Heating and Air Conditioning LLC	X			
David Holdren Heating	X			
Davis the Plumber	X			
Day & Night Plumbing Heating & Cooling Inc.	X			
Daylight Electric and Appliance			X	
Delta Mechanical	X			
Desert Mountain Plumbing And Heating Inc.		X		
Desert Pools And Spas	X			



Desert Suns Heating & Cooling	X			
DJ'S Plumbing & Mechanical, LLC	X			
Doc Savage Supply	X			
Doctor Plumbing	X			
Donner Plumbing & Heating Inc.	X			
Dub-L-EE LLC	X			
Duke City Heating And Cooling, LLC	X			
Durano Construction	X			
Eagle Eye Mechanical		X		
Ebay.Com	X	X	X	X
EcoAir	X			
Elevated Mechanical Services	X			
Em Plumbing Heating Mechanical	X			
Enchanted Hills Heating & Cooling	X			
Enchantment Refrigeration, LLC		X		
Energy Works, LLC				X
Exceptional Services	X			
Ferguson	X			
First Rate Plumbing, Heating & Cooling, Inc.	X			
FLM Enterprises	X			
FM Mechanical	X			
Four Seasons Plumbing & Heating		X		
Four Star Mechanical Services Inc.	x	x		
Frigid Mechanical	X			
G C Services, Inc.	X			
Gardner Plumbing	X			
Garley Heating & Cooling	X			
Garrity Insulation, Inc.	X			
Gimmesum HVAC	X			
Golden Sun Solar		X		
Goodman	X			
Gorman Industries	X			
Gustave Larson	X			
H.E.L.P., Inc.	X			
Harder Electrical & Mechanical Services	X			
Harper Heating And Air Conditioning	X			
Hart Heating & Air Conditioning, Inc.	X			
Hausermann Mechanical LLC	X			
Hercules Industries	X			
Hessinger's Plumbing, Heating & Air	X			
High Desert Air Conditioning And Heating		X		
Home Service Contractors, Inc.				X



HomeRun Plumbing Heating Cooling	X			
Hubbell Electro-Mechanical		X		
Husky Refrigeration HVAC & Mechanical		X		
IAB Mechanical	X			
Image Electric and Mechanical	X			
Innovative Plumbing Systems	X			
Insight Mechanical		X		
Inyopools.Com	X	X	X	X
ISHC	X			
J.C. Heating and Cooling	X			
JAC Heating & Cooling	X			
James Plumbing & Heating		X		
Jerome's Mechanical		X		
JLC Professional Plumbing & Heating, LLC	X			
John's HVAC	X			
Johnstone Supply Co	X			
Johnstone Supply Co		X		
Jones Mechanical, LLC	X			
JP Plumbery, LLC	X			
J&S Plumbing and Heating				X
Just Sprinklers	X			
Kokopelli Pool & Spa LLC		X		
KSM	X			
Lane Plumbing Company, Inc.				X
LC Heating & Cooling, LLC	X			
Lee-Sure Pools, Inc.	X			
Left-Handed Mechanical & Electrical		X		
Lennox Parts Plus	X			
Leonard's Plumbing And Heating			X	
Leslie's Pool Supplies	X			
Leslie's Pool Supplies #036	X			
Leslie's Pool Supplies #764	X			
Leslie's Pool Supplies #868				
Limitless Pool And Spa	X			
Lobo Tech, LLC		X		
Lobo Mechanical	X			
Macias Heating & Cooling				X
Magic Mobile Homes, Inc.	X			
Magnoliapools.Com	X	X	X	X
Marathon Mechanical Services	X			
Master Homecrafters, Inc.	X			
Mat's Mechanical	X			



McKee Service Company	X			
Mechanical Concepts Ltd Co	X			
Mechanical Control Solutions	X			
Mechanical Systems	X			
Medlin Mechanical		X		
Mel Muller Repair	X			
Metal Craft Company				
MGP Mechanical	X			
MGS Refrigeration, Heating, & Cooling				X
Mi Casa Heating LLC		X		
Miller's Insulation	X	X		
MMA Mechanical	X			
Moore Quality Air, LLC	X			
Morrison Supply Co				X
Morrison Supply Santa Fe		X		
MPC Enterprises				X
N Demand Test & Balance LLC	X			
N&J's Plumbing and HVAC			X	
Nativo Development Corporation		X		
Natures Creations Inc.		X		
New Mexico Pools & Spas	X			
Nowlin Mechanical	X			
NRG-Efficient	X			
Omni Mechanical Services	X			
Ortega Quality Mechanical	X			
Ortega's H.P.C.E.	X			
Otero Plumbing & Heating, Inc.				X
Paul's Plumbing & Heating, Inc.		X		
PDR Of Northern New Mexico, Inc.		X		
Pearl Mechanical LLC	X			
Perfection Pools & Plumbing	X			
Perkins Mechanical, LLP		X		
Perry Supply Co	X	X		
PHC Systems			X	
Pinos Altos Plumbing Corp				X
Plumbing Heating Cooling Systems			X	
Pool And Spa Doctor Inc.		X		
Pool Supply Unlimited	X			
Pool Works	X			
Poolcleaningparts.Com	X	X	X	X
Poolplaza.Com	X	X	X	X
Pools Plus	X			



Poolsupply4Less	X	X	X	X
Poolsupplyunlimited.Com	X	X	X	X
Poolsupplyworld.Com	X	X	X	X
Poper Construction LLC	X			
Porky's of Alamogordo				X
Precision Service LLC	X			
Preferred Plumbing, Heating, & Cooling, LLC	X			
Presidio Mechanical	X			
Priority Plumbing and Heating Inc.	X			
Pro-Tech Air Conditioning & Heating		X		
R & R Heating & Air	X			
Ray Sego Insulation, Inc.	X	x		
Redline Mechanical	X			
Reliable Tech Heating, Cooling & Plumbing LLC.		X		
Reliant Services	X			
Rich Duran Plumbing & Heating Inc.		X		
Rick's Heating & Plumbing				
Rio Grande Food Project	X			
RMS Services	X			
Roadrunner Air Conditioning, Heating & Refrigeration		X		
RS Heating & Cooling	X			
RT Biery LC	X			
Salazar Heating Cooling & Plumbing		X		
Salvation Army		X		
Salvation Army		X		
Santa Fe Habitat for Humanity		X		
Santa Fe Winnelson		X		
SCP	X			
Signature Heating and Cooling	X			
Simmons Plumbing Company	X			
Southwest Heating & Cooling				X
Southwest Service Company	X			
Southwestern Regional Housing Comm. Dev. Corp				X
Sr. Construction	X			
St. Francis Newman Center				X
STM Air Conditioning And Heating		X		
Stockton Mechanical		X		
Storm Electric	X			
Sun State Mechanical, Inc.	X			
Sunshine Plumbing & Heating, Inc.	X			
Tarango Heating & Cooling	X			
Territorial Plumbing, Heating and Electric LLC		X		X



The Storehouse	X			
Thompson Heating And Air Conditioning, Inc.	X			
Top Tier Service Inc.		X		
Total Comfort Heating & Cooling, Inc.	X			
Town & Country Plumbing, Heating, Cooling, LLC	X			
Townsend Pool Specialists	X			
Tru Air Systems	X			
United Refrigeration	X			
Universal Plumbing & Heating		X		
Unlimited Plumbing, LLC	X			
UV Plumbing LLC	X			
Valiant Mechanical & Electrical	X			
Vica Heating & A/C	X			
Viking Air	X			
Wagner Mechanical	X			
Watts Eastside Pools	X			
Weir Plumbing, Heating and Cooling	X			
Williams Mechanical – Alb.	X			
Winnelson- Alamogordo				X
www.Webpoolsupply.Com	X	X	X	X
Wolff Heating, Cooling, and Plumbing	X			
Wong Mechanical	X			

Trade Ally Businesses Supporting Retail Rebate Programs

Name	Location
Dollar General	Alamogordo
Dollar Tree	Alamogordo
Dollar Tree	Alamogordo
Home Depot	Alamogordo
Lowe's Home Improvement	Alamogordo
Samon's	Alamogordo
True Value	Alamogordo
Walmart	Alamogordo
Walmart	Alamogordo
Batteries Plus Bulbs (NE)	Albuquerque
Costco (NE)	Albuquerque

Dollar Tree (SE)	Albuquerque
Dollar Tree (SW)	Albuquerque
Home Depot (NE)	Albuquerque
Home Depot (NW)	Albuquerque
Home Depot (NW)	Albuquerque
Home Depot (SE)	Albuquerque
Lowe's Home Improvement	Albuquerque
Samon's (NE)	Albuquerque
Samon's (NE)	Albuquerque
Samon's (NE)	Albuquerque
Samon's (NW)	Albuquerque
Samon's (SW)	Albuquerque
Sam's Club (NE)	Albuquerque
Sam's Club (NE)	Albuquerque
Sam's Club (NW)	Albuquerque
The Lamp Shop (NE)	Albuquerque
True Value (NE)	Albuquerque
True Value (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NE)	Albuquerque
Walmart (NW)	Albuquerque
Walmart (NW)	Albuquerque
Walmart (NW)	Albuquerque
Walmart (SE)	Albuquerque
Walmart (SW)	Albuquerque
Walmart (SW)	Albuquerque
Dollar General	Belen
Dollar General	Belen
Dollar General	Belen
Dollar Tree	Belen
Dollar Tree	Belen
True Value	Belen
Walmart	Belen

Dollar General	Bernalillo
Walmart	Bernalillo
Dollar General	Bosque Farms
Samon's	Bosque Farms
True Value	Cedar Crest
Dollar General	Clayton
Ranch Market	Clayton
True Value	Clayton
Dollar General	Deming
Dollar General	Deming
Dollar Tree	Deming
Dollar Tree	Deming
Sun Valley True Value	Deming
True Value	Deming
Walmart	Deming
Do It Best	Las Vegas
Do It Best	Las Vegas
Dollar General	Las Vegas
Dollar Tree	Las Vegas
Dollar Tree	Las Vegas
Family Dollar	Las Vegas
True Value (Pat Romero's)	Las Vegas
Walmart	Las Vegas
Dollar General	Lordsburg
Saucedo's	Lordsburg
Dollar General	Los Lunas
Dollar General	Los Lunas
Dollar General	Los Lunas
Dollar Tree	Los Lunas
Dollar Tree	Los Lunas
Home Depot	Los Lunas
Lowe's Home Improvement	Los Lunas
Walmart	Los Lunas
Dollar General	Rio Rancho
Dollar General	Rio Rancho
Dollar Tree	Rio Rancho
Home Depot	Rio Rancho
Lowe's Home Improvement	Rio Rancho



Samon's	Rio Rancho
True Value	Rio Rancho
Walmart	Rio Rancho
Walmart	Rio Rancho
Dollar General	Ruidoso
Dollar General	Ruidoso
Dollar Tree	Ruidoso
Dollar Tree	Ruidoso
Walmart	Ruidoso Downs
Dollar General	Santa Clara
Batteries Plus Bulbs	Santa Fe
Dollar General	Santa Fe
Dollar Tree	Santa Fe
Home Depot	Santa Fe
Ray of Light	Santa Fe
Sam's Club	Santa Fe
True Value	Santa Fe
True Value	Santa Fe
Walmart	Santa Fe
Walmart	Santa Fe
Dollar General	Silver City
Dollar Tree	Silver City
Sun Valley True Value	Silver City
True Value	Silver City
Walmart	Silver City
Dollar General	Tularosa
True Value	Tularosa



6.5 APPENDIX E – TECHNICAL MANUAL

The following page shows the UCT calculations for the various programs. These graphs are extracted from the PNM UCT model.

UCT Analysis										
2021										
	kWh	kW	Lifetime kWh	EUL	LP%	Total Cost	2021 UCT	kWh & CO ₂ NPV Factor	kW NPV Factor	
Residential Comp.	10,487,791	4,009	88,380,725	8	6.0%	5,941,915	0.814	\$ 0.0924	\$ 870	
Refrig. Recycl.	5,282,784	1,219	25,727,158	5	0.0%	1,242,922	0.848	\$ 0.0578	\$ 556	Residential Comp.
HEC - Mkt	1,190,098	231	10,651,377	9	0.0%	1,057,907	0.351	\$ 0.1066	\$ 950	Refrig. Recycl.
HEC - LI	596,025	63	5,334,424	9	100.0%	791,498	0.200	\$ 0.1066	\$ 950	HEC - Mkt
Cooling & Midstream	3,418,884	2,496	46,667,767	14	0.0%	2,849,589	1.388	\$ 0.1676	\$ 1,248	HEC - LI
Residential Lighting/Retail Products	32,623,280	4,309	291,978,357	9	0.0%	3,889,740	2.087	\$ 0.1066	\$ 950	Cooling & Midstream
Commercial Comp.	42,626,996	8,324	371,745,275	9	3.7%	9,734,602	1.381	\$ 0.1066	\$ 950	Residential Lighting/Retail Products
Easy Savings	1,729,000	252	18,154,500	11	100.0%	574,128	1.127	\$ 0.1339	\$ 1,077	Commercial Comp.
Energy Smart (MFA)	380,000	33	5,734,800	16	100.0%	245,029	0.585	\$ 0.1882	\$ 1,337	Easy Savings
New Home Const.	758,625	272	11,295,928	15	0.0%	722,660	0.722	\$ 0.1782	\$ 1,294	Energy Smart (MFA)
Behavioral (SEM)	9,832,500	1,868	29,497,500	3	0.0%	1,307,286	0.853	\$ 0.0397	\$ 348	New Home Const.
Behavioral (Residential)	12,757,234	856	12,757,234	1	35.0%	534,509	0.524	\$ 0.0135	\$ 84	Behavioral (SEM)
Home Works	1,928,200	124	21,595,840	11	40.0%	578,786	0.784	\$ 0.1339	\$ 1,077	Behavioral (Residential)
Power Saver (LM)	2,020,000	52,000	2,020,000	7	0.0%	5,318,011	1.278	\$ -	\$ 122	Home Works
Peak Saver (LM)	1,000,000	25,000	1,000,000	7	0.0%	2,519,532	1.297	\$ -	\$ 122	Power Saver (LM)
Total	116,123,626	97,046	854,160,158			\$ 31,366,158	1.29			Peak Saver (LM)
2022										
	kWh	kW	Lifetime kWh	EUL	LP%	Total Cost	kWh & CO ₂ NPV Factor	kW NPV Factor		
Residential Comp.	11,012,144	4,289	95,528,606	9	5.6%	6,480,892	\$ 0.1199	\$ 1,006		2022 Programs
Refrig. Recycl.	5,282,784	1,219	25,727,158	5	0.0%	1,249,688	\$ 0.0656	\$ 626		Residential Comp.
HEC - Mkt	1,192,128	231	10,669,546	9	0.0%	1,081,734	\$ 0.1199	\$ 1,006		Refrig. Recycl.
HEC - LI	596,025	63	5,334,424	9	100.0%	807,352	\$ 0.1199	\$ 1,006		HEC - Mkt
Cooling & Midstream	3,941,207	2,776	53,797,478	14	0.0%	3,341,918	\$ 0.1822	\$ 1,297		HEC - LI
Residential Lighting/Retail Products	33,393,979	4,420	298,876,111	9	0.0%	3,641,180	\$ 0.1199	\$ 1,006		Cooling & Midstream
Commercial Comp.	41,485,485	8,090	361,706,739	9	3.7%	9,525,633	\$ 0.1199	\$ 1,006		Residential Lighting/Retail Products
Easy Savings	1,729,000	252	18,154,500	11	100.0%	587,822	\$ 0.1473	\$ 1,129		Commercial Comp.
Energy Smart (MFA)	360,000	33	5,734,800	16	100.0%	246,427	\$ 0.2035	\$ 1,387		Easy Savings
New Home Const.	669,375	240	9,966,994	15	0.0%	682,841	\$ 0.1929	\$ 1,343		Energy Smart (MFA)
Behavioral (SEM)	9,832,500	1,868	29,497,500	3	0.0%	1,307,286	\$ 0.0397	\$ 371		New Home Const.
Behavioral (Residential)	12,836,226	856	12,836,226	1	35.0%	515,652	\$ 0.0135	\$ 152		Behavioral (SEM)
Home Works	1,928,200	124	21,595,840	11	40.0%	582,089	\$ 0.1473	\$ 1,129		Behavioral (Residential)
Power Saver (LM)	2,050,000	55,000	2,050,000	6	0.0%	5,655,445	\$ -	\$ 128		Home Works
Peak Saver (LM)	1,000,000	25,000	1,000,000	6	0.0%	2,533,360	\$ -	\$ 128		Power Saver (LM)
Total	116,296,909	100,170	856,947,315			\$ 31,618,623				Peak Saver (LM)
2023										
	kWh	kW	Lifetime kWh	EUL	LP%	Total Cost	kWh & CO ₂ NPV Factor	kW NPV Factor		
Residential Comp.	10,897,019	4,141	93,967,152	9	5.7%	6,396,043	\$ 0.1300	\$ 977		2023 Programs
Refrig. Recycl.	5,282,784	1,219	25,727,158	5	0.0%	1,256,992	\$ 0.0677	\$ 638		Residential Comp.
HEC - Mkt	1,192,128	185	10,669,546	9	0.0%	1,111,383	\$ 0.1300	\$ 977		Refrig. Recycl.
HEC - LI	596,025	63	5,334,424	9	100.0%	826,969	\$ 0.1300	\$ 977		HEC - Mkt
Cooling & Midstream	3,826,082	2,674	52,226,025	14	0.0%	3,200,700	\$ 0.1923	\$ 1,276		HEC - LI
Residential Lighting/Retail Products	34,014,261	4,530	304,427,634	9	0.0%	3,818,936	\$ 0.1300	\$ 977		Cooling & Midstream
Commercial Comp.	40,510,823	7,890	353,166,576	9	3.7%	9,346,302	\$ 0.1300	\$ 977		Residential Lighting/Retail Products
Easy Savings	1,729,000	252	18,154,500	11	100.0%	601,889	\$ 0.1560	\$ 1,115		Commercial Comp.
Energy Smart (MFA)	380,000	33	5,734,800	16	100.0%	247,936	\$ 0.2142	\$ 1,359		Easy Savings
New Home Const.	669,375	240	9,966,994	15	0.0%	697,833	\$ 0.2037	\$ 1,324		Energy Smart (MFA)
Behavioral (SEM)	9,832,500	1,868	29,497,500	3	0.0%	1,307,286	\$ 0.0426	\$ 379		New Home Const.
Behavioral (Residential)	12,836,226	856	12,836,226	1	35.0%	515,652	\$ 0.0148	\$ 140		Behavioral (SEM)
Home Works	1,928,200	124	21,595,840	11	40.0%	586,655	\$ 0.1560	\$ 1,115		Behavioral (Residential)
Power Saver (LM)	2,050,000	55,000	2,050,000	5	0.0%	4,649,495	\$ -	\$ 128		Home Works
Peak Saver (LM)	1,000,000	25,000	1,000,000	5	0.0%	2,164,561	\$ -	\$ 128		Power Saver (LM)
Total	115,827,404	99,933	852,387,222			\$ 29,591,783				Peak Saver (LM)