PNM Energy Efficiency Program

2020 Annual Report

April 15, 2021

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Introduction

The PNM Energy Efficiency Program enables individuals and businesses across PNM's service area to save energy and money by installing measures and/or adopting practices that result in the reduction of electric consumption or demand curtailment within their homes and businesses. In 2020, the COVID-19 pandemic forced adaptability and flexibility in how we interacted with our customers while still providing a positive customer experience. This innovation and adaptability not only helped us in maintaining program offerings during these unprecedented circumstances, but also in exceeding our goals. Any necessary modifications that occurred due to the pandemic will be described in the specific program sections throughout the report below.

Program Results Summary

PNM submits this annual report on the performance of the PNM Energy Efficiency and Load Management Program for calendar year 2020, ("2020 Program"). This annual report is based on the measurement and verification of PNM's 2020, programs performed by Evergreen Economics ("Evergreen"). The Evaluation of the 2020 Public Service Company of New Mexico Energy Efficiency and Demand Response Programs ("M&V Report") prepared by Evergreen is submitted as a separate document.

- The 2020 Program was cost effective, as measured by the Utility Cost Test ("UCT"), with a UCT of 2.32 for the portfolio of programs.
- The total annual net savings after free rider and other adjustments were accounted for was 87.1 GWh at the customer meter.
- The two load management programs represent an average hourly capacity of approximately 44 MW.
- Total program expenses were about $26 million.
- The average cost per kWh of lifetime energy savings from the energy efficiency programs, not including load management, was 2.05¢/kWh.

The programs evaluated in this annual report were approved by the New Mexico Public Regulation Commission ("NMPRC" or "Commission") in Case No. 17-00076-UT. This report covers all costs incurred in the implementation of the programs and all customer participation in the programs from January 1, 2020 through December 31, 2020.

This is the thirteenth annual report on PNM's Energy Efficiency Programs. Results are based upon independent measurement and verification.

Table 1 provides the definition of "Participants or Units" by program.

Table 1

Program	Participants	Units	Description
Residential Comprehensive	X	X	A/C units/Homes/Refrigerators
Residential Lighting		X	Light Bulbs
Commercial Comprehensive	X	X	Apartments/Projects/Distributors
Easy Savings		X	Kits mailed to Homes or from Agencies
Energy Smart (MFA)	X		Homes
New Home Const.	X		New Homes
PNM Home Works	X		Kits
Lrg. Cust. Self-Direct	X		Projects
Power Saver (LM)		X	A/C units and Small Businesses
Peak Saver (LM)	X		Premises

Table 2 shows the total number of customer participants (or units), the annual energy and demand savings, the lifetime energy savings, and the total costs for each of the programs for calendar year 2020.

Table 2

Program	Participants or Units	Annual Savings (kWh)	Annual Savings (kW)	Lifetime Savings (kWh)	Total Program Costs
Residential Comp.	9,934	7,569,784	3,177	72,574,497	$ 4,004,031
Residential Lighting	1,383,725	27,509,725	5,377	309,484,406	$ 2,705,199
Commercial Comp.	585	43,541,623	5,341	461,541,199	$ 10,197,849
Easy Savings	13,481	3,004,915	183	39,664,877	$ 912,208
Energy Smart	161	269,972	41	4,360,048	$ 197,918
New Home Const.	1,362	1,868,507	757	32,325,163	$ 865,421
PNM Home Works	12,553	2,576,280	144	28,777,050	$ 559,135
Lrg. Cust. Self-Direct	-	-	-	-	$ -
Power Saver (LM)	50,577	280,142	31,028	280,142	$ 4,717,574
Peak Saver (LM)	130	554,550	12,890	554,550	$ 2,032,709
Total	**1,472,508**	**87,175,497**	**58,939**	**949,561,931**	**$ 26,192,044**

Program Information

This section highlights the successful strategies and accomplishments of the following programs in 2020.

(1) Commercial Comprehensive

(2) Residential Comprehensive

(3) Residential Lighting

(4) Energy Smart

(5) PNM Home Works

(6) New Home Construction

(7) Easy Savings Kit

(8) Power Saver load management

(9) Peak Saver load management

(10) Market Transformation

(11) Self-Direct

"Albuquerque Public Schools (APS) is committed to the goal of substantially reducing our carbon footprint and creating a culture of conservation and responsibility throughout the District. The APS Energy Team is charged with implementing that vision. Along this journey, PNM is an invaluable partner, assisting the Energy Team regularly with things like financial incentives/rebates, utility data and analysis, educational programs, field support, conservation pilot programs, etc. We rely on their expertise and advocacy to make steady progress toward our goals. APS' success in that effort is shared with PNM."

--Tony Sparks
APS Energy Team Coordinator
Sustainability Project Manager

Commercial Comprehensive

PNM contracted with DNV, Inc. to implement the Commercial Comprehensive energy efficiency program which is comprised of seven sub-programs. DNV implements the New Construction, Retrofit Rebates, Building Tune-Up, Quick Saver small business, Distributor Discount programs and the Multifamily sub-programs in 2020. In 2020, the Commercial Comprehensive program instituted a twenty-percent bonus across all programs in the commercial portfolio in Q3 and Q4 (except for AC tune-up and builder operator certification) to help businesses that were impacted by the pandemic. Personnel adopted standard pandemic protocols and use of personal protective equipment ("PPE"). Field inspections pivoted to virtual inspections, accepting customer photos during the post inspection process and outdoor inspections if projects allowed.

New Construction and **Retrofit Rebates** offer pre-set and custom incentives for installing qualifying equipment in new and existing buildings, and for implementing efficient designs in new buildings. Eligible equipment includes energy efficient lighting, HVAC, refrigeration, food service equipment, motors and variable speed drives, window film and plug load controls. **Building Tune-Up** offers incentives for building owners and operators to improve whole-system building efficiency through retro-commissioning, to do

advanced tune-ups of air conditioning systems, and to support building operator certification training. In the PNM **Distributor Discount** program, a participating distributor sells high-efficiency equipment from an approved product list to an eligible PNM customer; the customer receives an instant discount at the point of purchase, and PNM pays the rebate directly to the distributor.

In 2020, there were 303 customer projects in the New Construction, Retrofit Rebate, Building Tune-Up and Distributor Discount programs. The projects completed at these customers' facilities paid customers approximately $3,612,000 in rebates.

PNM **Quick Saver** is a direct-install program for small business customers who have an annual peak electric demand of 200 kW or less. It offers business customers pre-set incentives for installing qualifying lighting products and refrigeration in existing buildings. An important aspect of the program is ongoing training of participating contractors for continued and successful program implementation. About $1,727,000 in incentives was paid on 244 customer projects.

The **Multifamily** program is designed to meet the needs of the hard-to-reach multifamily customer segment by offering an attractive mix of low-cost direct install measures, such as lighting replacement, along with deeper savings measures, such as upgrades to cooling equipment, all in one package. The program reached many new property owners in 2020 and particularly with low-income communities. The program completed 38 projects and paid about $489,000 in rebates. However, several projects were delayed due to the COVID-19 pandemic and will be addressed as conditions improve and restrictions are lifted.

Residential Comprehensive

Refrigerator Recycling: ARCA, Inc., the third-party contractor utilized for the Refrigerator Recycling program, operates a center in Albuquerque that disassembles and recycles all refrigerators and freezers collected through the program. The program recycled 5996 units in 2020. Due to the COVID-19 pandemic, ARCA technicians adopted protocols to protect customers and staff as well as technician training on the proper use of PPE. For customers who preferred no contact with technicians in their homes, curbside pick-up was made available. As stay-at-home orders and non-essential business closures persisted, PNM offered a limited-time incentive increase to motivate and sustain participation in the program. A vigorous 2021 marketing plan has been developed and is currently in place for continued momentum in 2021.

Home Energy Checkup and Low-Income Checkup: In this program, participants pay a small fee for a Home Energy Specialist to come to their home and complete a walk through energy assessment and provide a comprehensive report which includes personalized recommendations based on the conducted assessment. The Energy Specialist installs a selection of direct installation ("DI") measures, including LEDs, efficient water measures, advanced power strips, and a Wi-Fi smart thermostat for an additional co-pay. The Energy Specialist also visually inspects and makes recommendations regarding existing windows and level of insulation in the home as well as the age and condition of the existing appliances and provides information about available rebates for early appliance replacement with new ENERGY STAR® qualified appliances. Rebates for installing high efficiency cooling equipment are also available for eligible participants with old inefficient cooling equipment.

The program fee is waived for income-qualified participants who receive the same walk-through assessment, installed DI measures, and a comprehensive assessment report as referenced in the above paragraph. Eligible participants may also qualify for a free ENERGY STAR® refrigerator replacement and installation of a Wi-Fi smart thermostat for homes with refrigerated air conditioning.

PROSPERITY WORKS
POWERING OPPORTUNITY

Prosperity Works is a non-profit and external stakeholder working to assist New Mexicans in removing barriers to economic prosperity. In 2020, PNM and Prosperity Works continued their collaboration to help customers in need through the PNM Home Energy Checkup program, providing 185 Checkups and 114 customers qualified for a refrigerator replacement to replace an older inefficient model.

Due to an implementer change in January 2020, and in combination with the COVID-19 pandemic, the program did not kick off until June. To continue to offer customers a way to participate in this program and minimize impacts due to the pandemic, PNM collaborated with the third party Measurement and Verification evaluator and the program implementer to design a virtual program. The virtual offering includes: A video phone audit, rebate applications for appliances and/or cooling equipment, and customized DI measures are directly mailed to participants to self-install. Two weeks after the initial video phone audit, participants receive a follow-up installation call with an Energy Specialist to answer any questions, review personalized energy saving tips and ensure that the (DI) measures were properly installed. 1,072 customers throughout PNM's service territory received a Home Energy Checkup or rebate. 866 Home Energy Checkups were either virtual or by appointment. 37% of the Home Energy Checkups were virtual. 58% (500) of Home Energy Checkups (virtual and by appointment) were provided to low-income customers. Participants that prefer an Energy Specialist to complete a walk-through in-home assessment have been placed on a waitlist until pandemic restrictions are lifted.

Residential Cooling: This program offers rebates on the purchase and installation of advanced evaporative coolers, high efficiency air source heat pumps, ENERGY STAR® room air conditioners, high efficiency refrigerated air conditioners, and ENERGY STAR® variable speed pool pumps. The program paid 2,866 rebates; 820 of which were for high efficiency air conditioning and heat pump units. Also rebated were 68 pool pumps and 123 Wi-Fi smart thermostats. PNM promoted this program through point-of-purchase materials at big-box stores and pool supply stores and also conducted outreach with contractors who install the various technologies and who are part of a registered trade ally list to increase ease of use for customers to participate. Currently there are approximately 152 participating contractors in the program. In 2021, PNM will transition this program from a traditional mail-in rebate program into a midstream program to encourage higher volume of efficient cooling equipment at the distributor and contractor levels. Field staff interacted with contractors, store employees and customers when they felt able to do so safely while ensuring adequate social distancing was properly maintained and proper PPE was utilized.

Residential Lighting

In 2020, the Residential Lighting program provided rebates for 1,383,725 LED bulbs. There were a total of approximately 179 participating retail stores in the Residential Lighting program throughout 2020, comprised of about 19 different retail chains and stores that offered the markdown rebates. Participating retailers included large home improvement stores, warehouse clubs, discount retailers, drug stores, and independent hardware and dollar stores throughout the PNM service area. The average incentive was $1.42 per bulb. PNM is expanding the program in 2021 to include additional retail measures.

Each participating retailer displayed point-of-purchase (“POP”) materials describing the benefits of LEDs, the different options available and information on the discounts provided by the program. Field staff conducted 4 outreach events prior to state restrictions put in place due to the COVID-19 pandemic. All four events were held at Home Depot or Lowe’s locations within Albuquerque or Santa Fe. While field staff refrained from conducting promotional events during the final nine months of the year, they did continue to interact with store employees and customers when they felt able to do so safely and while ensuring adequate social distancing was properly maintained and proper PPE was utilized.

PNM Home Works

The PNM Home Works program provides energy efficiency education and energy saving kits to fifth graders and to high school students through the Energy Innovation program. Due to the COVID-19 pandemic, the Home Works and Energy Innovation programs were delivered through an Energy Champion e-learning course, 100% virtual presentations, and a Kahoot game. The Energy Champion e-learning course is a self-guided online game where students earn “badges” related to 8 energy efficiency topics and receive a certificate of completion once all 8 badges are earned. Presentations were 100% virtual via a secure URL and password that was provided to each teacher. Although presentations were virtual, they were still highly interactive with post-presentation discussions and Q&A sessions for both 5th grade students and high school students and

their teachers. For the high school Energy Innovation program, a Kahoot energy game was available online to support the presentation learning. The program teaches students about energy efficiency, renewable and non-renewable natural resources, and how electricity is created and delivered into homes and businesses. The high school presentation also includes a special emphasis on sustainability and the unique energy usage footprint of a high school-aged student in the home.

"This is a rural community that is dependent on some non-renewable natural resources. This was an eye-opener for my students as well as their families. A continuation of this program is a definite must!" - 5th Grade Teacher at Albuquerque Bilingual Academy

Through kit "pick-up only" distribution at schools, each fifth grade and high school student safely received a sealed energy efficiency kit to install at home which includes easy-to-install technologies such as a low-flow showerhead, faucet aerators, efficient light bulbs, and an LED night light. The kit also includes a written guide to assist students and parents with installation of the efficient technologies while also learning about additional ways to reduce energy waste. The high school kit contains a tier-two advanced power strip. Participating teachers have the opportunity to receive a mini-grant to use in their classrooms to help maximize the number of surveys returned from students and to confirm students installed the kits at home. The value of the mini-grant is based on student participation levels. The program provided 12,553 kits to 137 schools throughout the PNM service territory during the 2020 spring and fall semesters. 87% of elementary schools were located in the central and north central part of the PNM service area, while 13% were located in regional areas including Ruidoso, Deming and Silver City. The 29 participating high schools were located in the central and north central portions of the state.

New Home Construction

This program incentivizes home builders to exceed the level of energy efficiency required by the applicable building code. The program offers participants incentives for building new, highly efficient, single-family residential homes through either a prescriptive or a performance path. Under the prescriptive path, home builders receive rebates for specific energy efficient technologies, whereas under the performance path home builders can choose to receive rebates for overall home performance upon verification by credentialed home energy raters. The program provided incentives for 1362 homes in 2020, 289 of which were prescriptive homes and 1,073 of which were performance homes. A total of 38 builders participated in the program in 2020, including 24 custom builders, eight production builders, two affordable builders, and four new builders. The COVID-19 pandemic has caused supply chain delays, as well as increased building costs and delayed home completion time.

Low-Income Focused Programs

Easy Savings Kit

In 2020, a total of 13,481 kits that include LEDs, low-flow showerheads and other items were distributed to low-income PNM customers. The primary channel for recruiting customers is direct mail. Mailers are sent to PNM customers who are LIHEAP-qualified and had not received an Easy Savings Kit in the past five years. In 2020, 98% of participants received a kit by responding to the direct mail campaign. In 2020, PNM also partnered with three New Mexico assistance agencies across the service area, including Rio Grande Food Project, The Store House New Mexico, and CitiLife Church, and created an online enrollment portal so kits could be sent directly to customers. Agency participation was lower in 2020 due to agency site closures and limited staff as a result of the COVID-19 pandemic. PNM is working with agencies to retain continued awareness of the PNM Easy Savings Kit program and to encourage agencies to provide information and links on their websites as applicable. PNM is also partnering with foodbanks to distribute postcards in food boxes in PNM service territories to reach customers due to assistance agency closures.

Energy Smart

PNM contracted with the New Mexico Mortgage Finance Authority (“MFA”) to install LEDs and replace inefficient refrigerators. Additional weatherization efficiency measures such as attic insulation, air and duct sealing and programmable thermostats are also offered through the program to help income-qualified customers save money and energy in their homes. In 2020, MFA and its subcontractors leveraged PNM and federal funding, while adhering to proper safety COVID-19 protocols, and provided services to 161 income-qualified homes which included replacing 91 old and inefficient refrigerators with new ENERGY STAR® -qualified refrigerators at no cost to the customer. PNM also provided additional funding that was used towards increasing program participation.

Other Low Income Programs

In addition to the three programs dedicated to low-income customers, Low Income Home Energy Checkup, Easy Savings and the Energy Smart program, a large percentage of participants in two other programs – the Multifamily program and the PNM Home Works program - are low-income. Many Commercial Comprehensive program participants such as non-profit organizations, churches, and retail stores provide services in low-income communities as well. In 2020, these participants received approximately $481,000 in rebates through the Commercial Comprehensive program.

Market Transformation

The goal of the Market Transformation (“MT”) strategy increases awareness of energy efficiency to induce behavioral changes that result in the adoption of energy efficient measures. In 2020, MT strategy continued to focus on outreach across the PNM service territory to help customers better understand how they use energy and how to make better-informed decisions on ways they can use energy more efficiently. This outreach took a variety of forms, including social media outreach and promotional campaigns highlighting the benefits of energy efficiency.

Additionally, PNM offers an online energy audit tool–PNM Home Energy Analyzer–for residential customers who opt to complete a short survey about their home. This tool helps customers by providing analysis and insight about how their home uses energy, offering tips to help reduce energy use and save money, and recommending other PNM programs as applicable, including rebates for replacing existing appliances with ENERGY STAR® -qualified appliances.

Power Saver and Peak Saver Load Management

Peak Saver and Power Saver are the PNM load management programs. PNM customers with annual peak demand of 50 kW or greater can participate in Peak Saver and customers with annual peak demand of less than 50 kW, including residential customers, can participate in Power Saver. The load management programs were successfully utilized to offset the need for peaking resources during the summer of 2020. PNM dispatched the load management resource ten times for a total of about 40 hours. The peak 15-minute load curtailment amount was 59 MW. Table 3 shows the times and durations of the load curtailment events in 2020. Enbala implements the Peak Saver program on behalf of PNM.

Table 3

Date	Start Time	End Time	Duration (Hr)
6/4/2020	3:00 PM	7:00 PM	4.0
6/25/2020	3:00 PM	7:00 PM	4.0
7/6/2020	3:00 PM	7:00 PM	4.0
7/13/2020	3:00 PM	7:00 PM	4.0
7/14/2020	3:00 PM	7:00 PM	4.0
7/29/2020	3:00 PM	7:00 PM	4.0
8/14/2020	3:00 PM	7:00 PM	4.0
8/18/2020	4:00 PM	8:00 PM	4.0
8/19/2020	4:00 PM	8:00 PM	4.0
8/20/2020	4:00 PM	8:00 PM	4.0
10 Events in 2020			**40.0**

On January 31, 2018, the NMPRC issued a final order in Case No. 17-00076-UT, PNM's energy efficiency program application for 2018 and 2019 that was also extended to 2020, which directed Evergreen Economics, as independent program evaluator for PNM's energy efficiency and load management ("EE/LM") programs, to do the following:

- In PNM's future M&V reports, the independent evaluator shall verify that load reductions from deployment of PNM's LM Programs avoided or offset the need for or use of additional peaking units or power purchases or shifted demand from peak to off peak period.

Evergreen addressed these points in the Load Management as a Resource Section of the M&V Report. Evergreen concluded that "in 2020, the LM Programs served a capacity resource that avoided the need for additional supply-side peaking capacity."

Program Benefits and Goals

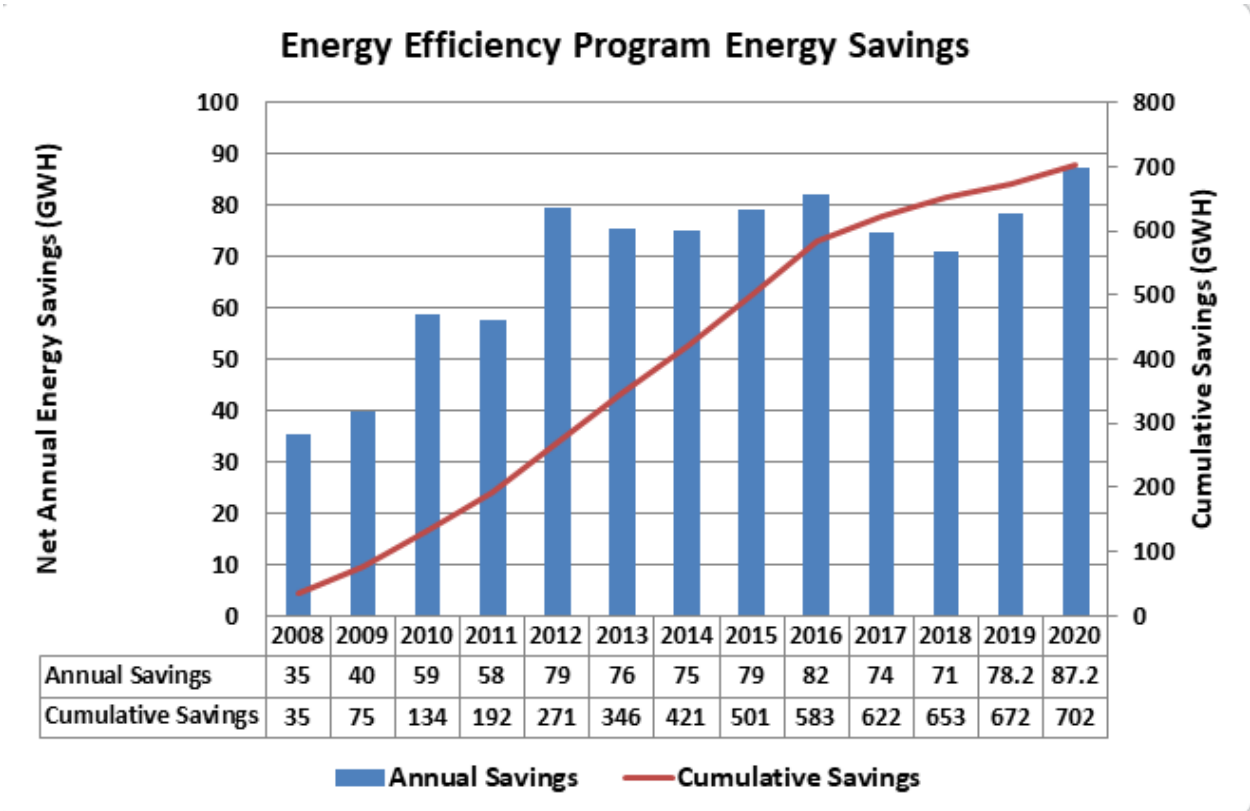
The 2020 Program benefitted the PNM system, customers in all customer classes, the environment, and the New Mexico economy.

The Efficient Use of Energy Act ("EUEA") required that PNM achieve cumulative savings of 411 GWh by 2014, equal to five percent (5%) of PNM's retail sales in 2005, and 658 GWh by 2020, equal to eight percent (8%) of 2005 retail sales. PNM's cumulative savings of 421 GWh through 2014 exceeded the 2014 savings requirement specified in the EUEA. PNM's cumulative savings of 702 GWh exceeded the 2020 savings target and represents approximately 8.6% of 2005 retail sales. Figure 1 shows the annual incremental savings on the left axis and annual cumulative savings achieved through 2020 on the right axis.

The energy efficiency measures installed by PNM customers participating in PNM programs in any specific year will continue to save energy in years to come. However, for cost-effectiveness analysis and for purposes of determining the cumulative savings applicable to the EUEA goals in 2014 and 2020, the average effective useful life ("EUL") of the portfolio is applied. The average EUL for the portfolio is determined by dividing the total lifetime savings by the annual savings. The average portfolio EUL for the 2020 Program is almost eleven (10.9) years. The average portfolio EUL has historically averaged 10 years. The annual savings from 2008 through 2011 no longer contribute to the cumulative savings since the average ten-year life for those savings has ended. Therefore, cumulative savings for 2020 are the sum of all annual savings beginning in 2012.

The latest amendment to the EUEA requires that PNM achieve energy efficiency savings of 5 percent of 2020 retail sales. When PNM filed its application for approval of its 2021 through 2023 EE&LM Program Plan, this target was estimated to be approximately 403 GWh. PNM programs will have to achieve, on average, 80 GWH of annual savings in years 2021 through 2025.

Figure 1



The 2020 program provided about $11 million in rebates and helped a wide range of customers with direct incentives that offset the cost of energy efficiency improvements and lowered their electric bills. Highlights include:

- 5,996 inefficient refrigerators and freezers were removed from the market;
- 1,383,725 LED bulbs were discounted through the Residential Lighting program;
- More than 19,000 low-income customers benefited from the five programs that serve low-income customers;
- 607 commercial customers, including over 244 small commercial accounts, participated in the business energy efficiency programs; and
- 1,253 apartment common areas were renovated with high-efficiency equipment.

Approximately 51,000 residential and business customers participated in the demand response programs. The 2020 Program also had a significant impact on the New Mexico economy. Customer incentives are designed to pay between 25 and 75 percent of the incremental cost of an efficiency improvement. Using a multiplier factor of two, the economic impact of the customer incentives would be about $22 million dollars. The 2020 Program also had a significant impact on local employment. Most of the PNM programs are implemented by third-party contractors who employ local staff. The 2020 third-party

program implementers directly supported approximately 45 local employees. In addition, much of the $11 million in incentives paid to customers supported additional employment by local companies and trade allies that provided the energy efficiency improvements.

In addition, the energy savings from the 2020 Program will result in a reduction in water consumption and CO_2 emissions. Estimated water savings and reductions of CO_2 are shown in Table 10 below.

The PNM Energy Efficiency Program, now in its thirteenth year, was a key resource in PNM's 2020 Integrated Resource Plan ("2020 IRP"). The 2020 IRP evaluated many different portfolio options that could be implemented to meet expected growth in the demand for electricity for a planning period of 20 years. Energy efficiency and load management programs are found to be cost-competitive alternatives when compared to meeting system needs with traditional supply-side resources. PNM identified its most cost-effective portfolio to meet the objective of the NMPRC IRP rule which is to "identify the most cost effective portfolio of resources to supply the energy needs of customers."[1] The IRP rule further provides that "For resources whose costs and service quality are equivalent, the utility should prefer resources that minimize environmental impacts."[2] PNM's IRP included the impacts of the 2020 Program Plan and projected growth of programs that allow PNM to achieve the spending requirements and energy saving goals specified in the EUEA.

Tariff Collections

The costs of implementing the 2020 Program are recovered through the Energy Efficiency Rate Rider No. 16 ("Rider") on customer bills. The current Rider includes a program cost rate element that is currently assessed monthly as a percentage (3.405%) of the monthly bill charge. A profit incentive rate element is also assessed monthly as a percentage (0.235%).

In 2020, PNM collected $26,701,844 in program funding through the 3% Rider No. 16 rate element. In 2018, PNM's plan year Rider No. 16 collections exceeded expenditures by $284,732, resulting in an underage to be added to the amount available for program expenditures in 2020 pursuant to 17.7.2.8(E) NMAC. Accordingly, the amount of the rider collections available for program funding in 2020 was $26,986,576 ($26,701,844 + $284,732) PNM's actual expenditures in 2020 were $26,192,044, resulting in an under-expended amount of $794,532. Accounting for carrying charges on monthly balances in 2020 resulted in a net underage of $870,666. The Final Order in Case No. 17-00076-UT authorized PNM to earn a Profit Incentive in 2020. PNM submitted the documentation for a tariff rider adjustment, including the program cost under-expenditure and profit incentive reconciliation, with supporting testimony, along with this annual report.

2020 Cost Reconciliation and Impact on 2022 Program Budget

In compliance with the Final Order, PNM will add the 2020 under-expended amount of $870,666 to the approved 2022 program plan budget as approved in Case No. 20-00087-UT.

[1] 17.7.3.6 NMAC.
[2] *Id.*

Regulatory Proceedings

On November 4, 2020, the Commission voted to renew the contract with Evergreen Economics to perform independent measurement and verification of New Mexico energy efficiency and load management programs for the 2021 and 2022 program years.

On April 15, 2020, PNM filed Advice Notice 566 to reconcile the collection of the 2019 program costs and profit incentive. Rider 16 was modified to reflect the profit incentive reconciliation, and the new rates went into effect on May 28, 2020.

Energy Efficiency Rule Reporting Requirements

The following section of the annual report provides detailed information on the performance of the 2020 Program including information required by the NMPRC Energy Efficiency Rule, Section 17.7.2.14 – Annual Report.

Documentation of Program Expenditures

All 2020 Program expenses including labor, materials, third-party expenses, and all other costs, are tracked through a unique set of accounts. Likewise, all revenue collected through the tariff rider is booked to a special regulatory asset account which is balanced against the expenses. These costs and revenues are kept separate from PNM rate-base accounting; therefore, there is no cross-subsidization and no impact on PNM's allowed rate of return. Costs specific to an individual program, such as customer incentives and targeted promotion, are allocated directly to that program. Shared costs, such as internal administration, are allocated to each program in proportion to their direct costs.

Total calendar year expenditures for the 2020 Program were $26,192,044. These expenditures include all expenses incurred by PNM to develop and implement the individual programs. The same total expenditure data was provided to Evergreen to be included in the M&V Report. Table 4 shows the allocation of costs to the various programs for calendar year 2020.

Table 2

Programs	Admin	M&V	Promotion	Incentives (Rebates)	Third-Party Costs	Market Transformation	Total Costs
Residential Comp.	$ 169,178	$ 92,520	$ 77,961	$ 1,452,029	$ 2,106,127	$ 106,216	$ 4,004,031
Residential Lighting	$ 64,188	$ -	$ 29,579	$ 1,972,146	$ 598,987	$ 40,299	$ 2,705,199
Commercial Comp.	$ 431,912	$ 211,722	$ 199,036	$ 5,852,461	$ 3,231,547	$ 271,170	$ 10,197,849
Easy Savings	$ 39,454	$ -	$ 18,181	$ 450,856	$ 378,945	$ 24,771	$ 912,208
Energy Smart	$ 7,862	$ 16,147	$ 3,623	$ 150,312	$ 15,039	$ 4,936	$ 197,918
New Home Const.	$ 23,480	$ 35,433	$ 10,820	$ 571,925	$ 209,020	$ 14,742	$ 865,421
PNM Home Works	$ 24,183	$ -	$ 11,144	$ 388,624	$ 120,000	$ 15,183	$ 559,135
Power Saver (LM)	$ 203,190	$ 19,685	$ 93,635	$ 55,290	$ 4,218,204	$ 127,569	$ 4,717,574
Peak Saver (LM)	$ 87,066	$ 19,685	$ 40,122	$ -	$ 1,831,173	$ 54,663	$ 2,032,709
Total	**$ 1,050,513**	**$ 395,193**	**$ 484,103**	**$ 10,893,644**	**$ 12,709,042**	**$ 659,548**	**$ 26,192,044**

The total approved budget for 2020 was $25,691,063 and the total actual expenses for the year were $26,192,044; therefore, total spending was about 2% percent above the approved budget. Table 5 shows the budgeted amounts, the actual expenditures, and the variances for each program.

Table 3

Programs	Approved Budget	2020 Actual Costs	Variance ($)
Residential Comp.	$ 4,600,696	$ 3,897,816	$ (702,880)
Residential Lighting	$ 2,317,129	$ 2,664,900	$ 347,770
Commercial Comp.	$ 9,401,141	$ 9,926,680	$ 525,538
Easy Savings	$ 478,992	$ 887,437	$ 408,445
Energy Smart	$ 182,386	$ 192,983	$ 10,597
New Home Const.	$ 755,825	$ 850,679	$ 94,854
PNM Home Works	$ 672,310	$ 543,952	$ (128,358)
Power Saver (LM)	$ 4,967,872	$ 4,590,004	$ (377,868)
Peak Saver (LM)	$ 2,314,712	$ 1,978,046	$ (336,666)
Market Transf.	$ -	$ 659,548	$ 659,548
Total	**$ 25,691,063**	**$ 26,192,044**	**$ 500,981**

Estimated and Actual Participation and Savings

Table 6 presents estimated and actual customer participation (or units), annual energy savings and annual peak demand savings for each program. Estimated values represent the targets for calendar year 2020. Please note that all energy savings are reported as the savings at the customer meter.

Table 4

Program	Estimated Participants or Units	Actual Participants or Units	Estimated Savings (kWh)	Actual Savings (kWh)	Estimated Savings (kW)	Actual Savings (kW)
Residential Comp.	12,556	9,934	9,732,621	7,569,784	3,725	3,177
Residential Lighting	900,000	1,383,725	17,010,000	27,509,725	1,985	5,377
Commercial Comp.	807	585	36,237,238	43,541,623	6,024	5,341
Easy Savings	7,000	13,481	1,560,300	3,004,915	95	183
Energy Smart	144	161	198,576	269,972	133	41
New Home Const.	900	1,362	1,553,760	1,868,507	612	757
PNM Home Works	12,000	12,553	1,802,760	2,576,280	136	144
Power Saver (LM)			535,000	280,142	47,000	31,028
Peak Saver (LM)			880,000	554,550	22,000	12,890
Total			**69,510,255**	**87,175,497**	**81,709**	**58,939**

Estimated and Actual Costs and Avoided Costs (Benefits)

Table 7 presents the net present value of estimated and actual monetary costs and benefits for each program. Estimated costs and benefits are those contained in the 2020 Program Plan, which was the continuation of the 2019 Program Plan approved in Case No. 17-00076-UT. The actual net present value of monetary benefits was determined by taking the discounted value of the annual avoided costs times the annual savings over the effective useful life of each program. Please see Appendix A for PNM avoided costs.

Table 5

Program	Estimated NPV of Monetary Costs	Actual NPV of Monetary Costs	Estimated NPV of Monetary Benefits	Actual NPV of Monetary Benefits
Residential Comp.	$ 4,366,777	$ 3,653,647	$ 8,282,543	$ 6,328,236
Residential Lighting	$ 2,219,532	$ 2,468,472	$ 10,241,907	$ 16,886,901
Commercial Comp.	$ 7,964,600	$ 9,305,456	$ 19,512,340	$ 20,518,735
Easy Savings	$ 339,544	$ 832,382	$ 1,009,677	$ 1,639,258
Energy Smart	$ 204,662	$ 180,599	$ 260,328	$ 236,367
New Home Const.	$ 518,314	$ 789,689	$ 705,198	$ 2,570,721
PNM Home Works	$ 474,714	$ 510,206	$ 678,756	$ 1,096,123
Power Saver (LM)	$ 3,721,745	$ 4,304,748	$ 7,088,655	$ 4,344,385
Peak Saver (LM)	$ 1,457,789	$ 1,854,831	$ 2,765,028	$ 1,819,592
Total	**$ 21,267,677**	**$ 23,900,031**	**$ 50,544,432**	**$ 55,440,318**

Cost Effectiveness Evaluation

Table 8 presents the Utility Cost Test ("UCT") ratio for each program and for the total portfolio of programs. The UCT ratio is the ratio of actual monetary benefits to monetary costs that are shown in Table 8. The UCT of the total portfolio of programs was 2.32

Table 6

Program	UCT
Residential Comp.	1.73
Residential Lighting	6.84
Commercial Comp.	2.21
Easy Savings	1.97
Energy Smart	1.31
New Home Const.	3.26
PNM Home Works	2.15
PNM Power Saver	1.01
PNM Peak Saver	0.98
Total	**2.32**

Self-Direct Program Participation and Evaluation

PNM received no Self-Direct applications in 2020.

Estimated Water and CO2 Savings

Table 9 shows the estimated carbon dioxide ("CO_2") emission reductions and water savings associated with the PNM portfolio of programs. The annual avoided CO_2 emissions and water savings for the 2020 Program were determined by multiplying the

PNM weighted-average emissions rate and water consumption by the annual and lifetime energy savings.

Table 9

Emission Impact	Avoided Electric Emissions Rate (Metric Tons/GWh)	Annual Avoided Emissions (Metric tons)	Lifetime Avoided Emissions (Metric tons)
CO_2 Reduced	504.8	44,010	479,385
Water Impact	**Water Consumption (gal/MWH)**	**Annual Water Saved (gal)**	**Lifetime Water Saved (gal)**
Water Saved	283.0	24,670,666	268,726,026

Independent Measurement and Verification Report

PNM contracted with Evergreen Economics to conduct the independent evaluation of the 2020 Program. The M&V Report is submitted as a separate document along with this annual report. A summary of some of the more important findings and recommendations, along with comment from PNM, is provided below.

Background and Purpose

On November 2, 2020 the Commission renewed the selection of Evergreen Economics as the state-wide independent evaluator and approved the M&V budget and scope of work for a two-year term to conduct annual measurement and verification analysis for the 2020 program year. Evergreen conducted independent evaluation of the 2020 Program and their M&V Report is based on data from January 1, 2020 through December 31, 2020. PNM worked closely with Evergreen to provide the data necessary to complete the 2020 M&V Report. This included rebate processing and participant files, budget data by program and avoided-cost information.

Summary of Findings and PNM Comments

The total portfolio of programs was found to be cost effective. The results of the M&V analysis will be used to adjust technical assumptions made by PNM regarding program performance, unit savings and net-to-gross values. The M&V Report contains specific findings and recommendations which are summarized in the following section.

Key Points

The evaluator performed a project sampling of engineering desk reviews for Commercial Comprehensive and New Homes programs, as well as desk reviews and deemed savings reviews for Residential Comprehensive programs, and statistical models for Peak and Power Saver programs. The reviews resulted in high realized gross savings, particularly for kWh. Due to several factors, savings adjustments were made to the Commercial Comprehensive programs: PNM work papers and savings calculations more closely matched the evaluators' calculations due to improved documentation and assumptions. There were still operating hour assumptions for lighting projects that required to be adjusted (with a focus on dusk to dawn assumptions).

High levels of satisfaction with PNM 2020 programs were determined by the evaluator through participant surveys for the Commercial and Residential Comprehensive programs and in-depth interviews with a small number of builders from the New Homes program.

Commercial Comprehensive

The Commercial Comprehensive program consists of the following sub-programs; Quick Saver, Retrofit Rebates, New Construction, Midstream and Multifamily. The process evaluation activities, which included surveys with Retrofit Rebate and Quick Saver participants as well as interviews with Multifamily and New Construction participants, noted that nearly all interviewees expressed high levels of satisfaction with the majority of participants reporting ratings of "very satisfied" for all eleven program components. The survey asked about PNM as an energy provider, the rebate program, time it took to receive the rebate, equipment and quality of installation, contractor interaction and quality of installation, and the overall value of program in regards to the time and effort it required to participate. The evaluator specifically mentioned that QuickSaver participants were the most satisfied overall of all eleven program components.

To determine the mix of projects to evaluate, a statistically significant sample of projects, stratified by savings and measure type, was defined for detailed desk reviews. The evaluator requested the implementer to continue to improve upon the documentation whenever changes in the calculation steps are made to ensure that the documentation can be followed to reproduce the reported savings estimates. Documentation including all project documents, NM Technical Reference Manual sources, and work papers are provided, but there is not always a clear path on how the calculations are arrived at. PNM is working with the implementer to include standardization of processes, calculation steps to facilitate their desk reviews and to establish methodologies for custom calculations and the necessary documentation. For each sub-program, the evaluator determined an Engineering Adjustment Factor ("EAF") by dividing the verified savings by the reported savings value. An EAF of 0.8947 was determined for kWh savings and 0.7065 was found for kW savings for 2020 programs.

Residential Comprehensive

The Prescriptive path under the Residential Comprehensive program is made up of three sub-programs: Refrigerator Recycling, Home Energy Checkup (including a low income component), and Residential Cooling and Pool Pumps. Home Energy Checkup includes a walk-through energy assessment and installation of a selection of DI measures and rebates for energy efficient appliances as well as a newly offered virtual home visit. The evaluator was able to evaluate the Residential Comprehensive program using a deemed savings approach and participant surveys. The participant survey was also used as a process evaluation tool that assessed how well the programs operate.

New Home Construction

The New Home Construction program offers two participation paths: The Performance path measures overall home performance and the Prescriptive path offer incentives for specific energy efficient technologies. The evaluation of this program was conducted through desk review for Performance projects and a deemed savings review for

Prescriptive measures. As part of the net impact analysis, free ridership was estimated by conducting builder interviews.

Energy Smart (Low Income)

In the PNM service territory, the Energy Smart program provides income qualified participant's weatherization energy efficiency upgrades as well as prescriptive measures. The prescriptive measures include duct sealing, insulation, water heater pipe insulation, low-flow showerheads, aerators and efficient lighting. A deemed savings review was conducted by the evaluator to evaluate this program.

Peak Saver

The Peak Saver program is a demand response program offered to non-residential customers with peak load contributions of at least 50 kW. The program compensates participants for reducing electric load upon dispatch during periods of high system load. Peak Saver was implemented by Enbala in 2020, who managed the enrollment, dispatch, and settlement with participating customers. During the summer 2020 demand response season, there were 130 participating facilities and ten demand response events.

One-minute interval load data is used to calculate load impacts using a customer baseline ("CBL") method per the contract between PNM and Enbala. A CBL is an estimate of what participant loads would have been absent the DR event dispatch. Load impacts are the difference between the CBL and the metered load during the event. The evaluator was able to replicate the calculations used for contract settlement. The peak impact as reported by the implementer results in an average event capacity of 18,175 kW. Evaluator-calculated performance resulted in an average performance of 12,890 kW. The difference is largely a result of the baseline methodology between the implementer and evaluator.

Power Saver

Power Saver is a direct load control program offered to residential, small commercial (< 50 kW), and medium commercial (50 kW – 150 kW) Public Service New Mexico (PNM) customers. To facilitate load control, participants must have a device attached to the exterior of their air conditioning unit. This "paging" device is capable of receiving a radio signal that will activate a control sequence that cycles the unit's compressor for an interval of time (usually half the time as normal) to reduce peak demand in the summer. Residential and small commercial participants receive an annual $25 incentive for their participation. Medium commercial participants receive an annual incentive of $9 per ton of refrigerated air conditioning. A residential smart thermostat component was added to the program in 2018 and a residential bring your own thermostat ("BYOT") program was added in 2020. For these components, load curtailment is achieved via communication with the Wi-Fi-enabled thermostat.

There were ten Power Saver events during the summer 2020 demand response season. All events used a 50% cycling strategy where curtailment is based on the runtime in the previous hour.

The peak contract capacity as determined by the maximum 15-minute capacity during an event was 40,910 kW. The realized gross energy savings was 280,142 kWh and the realized gross demand savings (calculated as an hourly average reduction) was 31,028 kW.

Additional Regulatory Reporting Requirements

Pursuant to the recommended decision in PNM Case No. 20-00087 UT (PNM's 2021-2023 Energy Efficiency Program Plan), PNM was ordered to provide the following information in the 2020 annual report:

1. A lighting saturation survey;
2. A description of any updated guidance by the statewide independent evaluator about lighting savings; and
3. An analysis by PNM of the impact of the lighting saturation survey and any updated guidance from the independent evaluator about lighting savings on the prospective cost effectiveness and sustainability of the Residential Lighting Program in the 2021 Plan.

In regard to the first request, in 2020 PNM commissioned a Residential Appliance Saturation Survey from Applied Energy Group ("AEG"), which was completed in January 2021. The lighting saturation results are located on page 21 of the AEGs report and may be found at PNM.com/regulatory in the energy efficiency section of the referenced website page. A summary table is presented below:

TYPE OF INDOOR LIGHTING

Segment	Incandescent	Halogen	CFL	LED	Tube Fluorescent	Other
Single Family	19%	3%	9%	64%	3%	3%
Multi-Family	22%	2%	11%	54%	6%	4%
Mobile homes	12%	0%	13%	66%	1%	7%

The proportion of all bulbs that are described as incandescent continued to decrease since 2017.

- In 2017, 25% of the bulbs in SF, 30% in MF, and 25% in MH were described as incandescent.
- CFL's also decreased from 22% of SF home bulbs, 23% of MF home bulbs, and 22% of MH bulbs in 2013

Meanwhile, LED's have grown substantially as prices have come down.

- LED saturation is up from 23% in SF, 15% in MF and 23% in MH in 2013.

The table shows that; on average, no more than 65% of lighting is LED and substantial opportunity still exists for lighting programs.

In regard to the second and third requests, the statewide independent Measurement and Verification evaluator has confirmed in the latest edition of the 2021 New Mexico Technical Resource Manual that lighting savings are still estimated based on the Energy Independence and Security Act ("EISA") Tier-1 halogen equivalent baselines. Therefore, PNM is confident that residential lighting savings assumptions for the 2021 program year are reasonable and justifiable. The evaluator has informed PNM that the per-lamp savings for 2022 and 2023 may be adjusted based upon the potential adoption by the federal government of the EISA Tier-2 lighting standards.

The Energy Efficiency Potential Study also prepared by AEG in 2020 estimates that the residential lighting load reduction between 2021 and 2023 to be approximately 82 GWh. The Potential Study has already considered the adoption of EISA Tier-2 in its analysis. Based on PNM's per-lamp lighting savings assumptions, 82 GWh represents over 2.8 million lamps. Consequently, the PNM 2021-2023 energy efficiency program plan is assuming that approximately 2.1 million lamps will be incentivized. The 2020 UCT calculated result for the residential lighting program was determined to be significantly cost effective at 6.51. If EISA Tier2 standards are adopted in the future, PNM is confident this program will still remain sustainable and cost-effective for the foreseeable future.

Appendix A – PNM Avoided Costs

The following table provides the avoided energy, demand and carbon costs for calendar year 2020. These costs were used in the PNM cost-effectiveness model and by Evergreen in its program evaluation. These are the avoided costs included in PNM's most recently approved energy efficiency plan, Case No. 20-00087-UT.

	Energy ($/kWh)	Capacity ($/kW-yr)	CO2 ($/kWh)
2019	$ 0.0298	$129.00	$ -
2020	$ 0.0343	$129.00	$ -
2021	$ 0.0369	$129.00	$ -
2022	$ 0.0395	$129.00	$0.0030
2023	$ 0.0398	$129.00	$0.0027
2024	$ 0.0404	$129.00	$0.0023
2025	$ 0.0419	$129.00	$0.0028
2026	$ 0.0429	$129.00	$0.0032
2027	$ 0.0431	$129.00	$0.0041
2028	$ 0.0436	$129.00	$0.0050
2029	$ 0.0440	$129.00	$0.0055
2030	$ 0.0445	$129.00	$0.0060
2031	$ 0.0447	$129.00	$0.0065
2032	$ 0.0450	$129.00	$0.0066
2033	$ 0.0455	$129.00	$0.0067
2034	$ 0.0453	$129.00	$0.0068
2035	$ 0.0455	$129.00	$0.0069
2036	$ 0.0455	$129.00	$0.0070
2037	$ 0.0455	$129.00	$0.0070
2038	$ 0.0455	$129.00	$0.0070
2039	$ 0.0455	$129.00	$0.0070
2040	$ 0.0455	$129.00	$0.0070