

New Construction Rebate Program Case Study



V. Sue Cleveland High School – Rio Rancho



V. Sue Cleveland High School;
a 416,000 square foot facility.

PNM Rebate and LEED® Silver Certification

As a result of the design teams' ability to implement the energy reduction goals set by the district, V. Sue Cleveland High School received a rebate check from PNM for \$102,401 as well as a U.S. Green Building Council LEED®/Silver certification.

The design of the high school exceeds the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) standards for energy efficiency.

Project Financials

Project Cost:	\$120,073,346
PNM Rebate:	\$102,401
Annual Energy Savings (kWh):	2,115,862
Annual Utility Cost Savings:	\$178,899
Annual Water Savings (Gallons): ..	244,099
Annual CO₂ Savings (Metric tons):	1,493
Project Completed:	2009

Annual Energy Savings

The energy efficiency improvements integrated into the facility and campus have provided a 22% improvement over a standard facility design. The annual energy savings are approximately 2 million kWh equivalent to \$178,000 annual savings in utility costs.

Design Team: The school was designed by Van H. Gilbert Architect PC (VHGA) and Fanning Howey (Associate Architect). Bridgers and Paxton consulted as mechanical and electrical engineers.



Why improve energy efficiency?

- 1 Cuts your operating costs and improves profitability.
- 2 Reduces maintenance demands.
- 3 Distinguishes your business as being eco-friendly or “green.”
- 4 Allows you to use energy savings to finance business growth.
- 5 You get money from PNM when you do it.

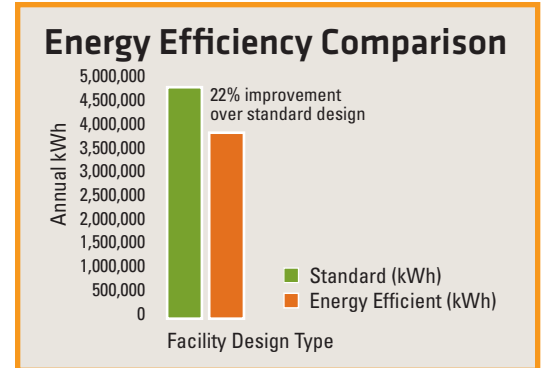
To learn more about the PNM Retrofit Rebate Program, please visit www.PNMenergyefficiency.com

For information on all PNM Business Energy Efficiency Programs, please visit PNM.com/bizrebates

Energy Efficiency Improvements Implemented

The building integrates the following environmental considerations:

- East/west building orientation to maximize the use of natural daylight and solar energy.
- High-performance exterior glazing to maximize natural light while reducing glare and heat-gain and to provide a higher insulating value.
- Shading devices for glazing to decrease glare and heat-gain.
- Interior glazing to maximize natural light throughout the facility.
- Highly reflective, white roof coating to reduce heat island effect and cooling loads.
- Geothermal wells (600 total) set 200 feet below the parking lots to support the primary heating and cooling system. The system reduces energy consumption by using the earth as a heat sink to provide pre-heated or cooled water depending on seasonal requirements.



Payback Period Comparison

By taking part in the PNM New Construction Rebate Program, Rio Rancho Public Schools (RRPS) was able to reduce their payback period from 5.8 years to 4.17 years, based on a rate of \$.10 per kWh. Payback period in years = net cost of Energy Efficiency investment (total cost - PNM rebate) divided by utility cost savings.

Customer Raves

The PNM Energy Efficiency Rebate Program for New Construction offers a great opportunity for schools to be rewarded for their commitment to school-wide energy efficiency, said VHGA Principal, Van H. Gilbert, FAIA. “VHGA was excited for the opportunity to submit the firm’s Sue Cleveland High School application for a PNM Rebate. We thank PNM for the \$102,401 rebate on behalf of the Rio Rancho School District.”

To achieve the rebate, the VHGA design team members met with the PNM Rebate Program Managers and employed energy model calculations to predict the school’s overall energy consumption. “The focus on sustainability, natural light to reduce kilowatt hours used, water conservation, and innovative design materials, resulted in the largest rebate check awarded to a school to date!” said VHGA’s Director of Sustainability, Andy Benson, AIA, LEED AP BD+C .

