



**ALBUQUERQUE
ENERGY COUNCIL**
FY 2024 Annual Report
July 1, 2023, to June 30, 2024



THE CITY OF ALBUQUERQUE ENERGY COUNCIL

Established in 2003, the City of Albuquerque Energy Council (AEC) serves as an advisory committee comprised of professionals in the energy and environmental areas. The committee has responsibility for working with City staff to affect energy conservation programs within the residential, commercial, industrial, city government, energy conservation interest groups, transportation, and utility sectors of the community.

Part of the AEC's responsibilities includes oversight of the Capital Improvement Program (CIP) monies for energy conservation projects. In 2001, the City of Albuquerque provided a 1 percent set aside for energy conservation and renewable energy capital improvements. This amount was increased to 3 percent in 2007. Energy conservation projects must adhere to strict guidelines to ensure their cost-effectiveness. The return on investment of the CIP set aside funds must be below the life expectancy of the equipment.

The previous investment made by the City of Albuquerque to fund energy projects has been highly effective in reducing the City's energy use and operating costs at City facilities. Since early in the program, the City has accomplished the following:



CITY OF ALBUQUERQUE ENERGY COUNCIL MEMBERS (CURRENT)

- Adam Harper, OE Solar
- Carlos Lucero, PNM
- Danyel Kahumoku
- Gabriel Pacyniak, University of New Mexico School of Law
- Linda Sapochak
- Samatha Salazar
- Susan Altman,
- Tara Trafton, Yearout
- Tom Quirk, Sandia National Laboratories
- David Mueller, B & D Industries

CITY OF ALBUQUERQUE STAFF

- Saif Ismail, Energy and Sustainability Division Manager, Department of General Services
- Nelson Montoya, Construction Project Manager
- Michael Aultman, Automated Control Specialist
- Michael Nguyen, System Analyst
- Muhamed Abdel-Hack, Energy Specialist





ENERGY EFFICIENCY AT THE CITY

Hundreds of energy-saving projects have been completed since an original 1 percent, then the increased 3 percent set aside, was put into place in the City. In the past two years, these projects have resulted in 220,178,023 kWh savings of electricity; since the program's inception, the City has saved more than 855 thousand kWh savings of electricity.

In this report, the AEC highlights a few recently completed projects that are excellent examples of initiatives that are reducing the City's energy use, saving the City money (ultimately saving taxpayer money), and reducing greenhouse gas emissions to protect the environment.

GAS SAVINGS PROJECTS

- **Balloon Museum – Cultural venue hosting the annual International Balloon Fiesta.**

Savings: \$737.63



- **APD & 401 Marquette – Albuquerque Police Department and administrative building.**
Savings: \$8,635.50
- **Law Enforcement Center – Main city law enforcement operations hub.**
- **Transit – Parking Division – Manages city parking infrastructure.**
Savings: \$29,649
- **Fiesta RV Parking – Recreational parking facility.**
Savings: \$8,976
- **Johnny Tapia Community Center – Community center named after local boxing legend.**
Savings: \$8,976

SOLAR PROJECTS

- **Gateway Center – Healthcare facility benefitting from solar power implementation.**
Savings: \$75,000

Savings: \$10,615.5

- **SEM Project Savings – Sustainability & Energy Management initiatives across multiple locations.**

Savings: \$24,225.75

WATER METER SAVINGS PROJECTS

- **ABQ Convention Center – Downtown events and exhibitions venue.**
Savings: \$67,723
- **Railyards Market – Community market and urban agriculture space.**
Savings: \$67,723
- **Montano Storm Station 47 – Water management facility.**
Savings: \$37,710
- **DMD Drainage – Paseo Alameda – Drainage infrastructure under Department of Municipal Development.**
Savings: \$29,649

LIGHTING UPGRADE PROJECTS

- **Palo Duro Senior Center – Community support center for seniors.**
Savings: \$19,796.78
- **Taylor Ranch Community Center – Regional community center.**
Savings: \$17,179.53
- **Herman Sanchez Community Center – Community and recreational space.**
Savings: \$11,635.80
- **Northeast Area Command – Police command center.**
Savings: \$13,711.08



- **AFR Station 1 – Albuquerque Fire Rescue site.**

Savings: \$13,977.71

- **Valley APD Command – Police facility with both interior and exterior upgrades.**

Savings: \$32,569.51

CONTROLS AND BUILDING AUTOMATION PROJECTS

- **DMD Plaza Del Sol – Downtown city services center.**

Savings: \$29,056.00

- **Transit Daytona Facility – City transit vehicle management center.**

Savings: \$20,524.00

- **APD Metro Forensics Science Center – Crime lab and forensic research facility.**

Savings: \$20,356.00

- **AWD Eastside Animal Shelter – City animal care and adoption center.**

Savings: \$3,266.00

CONCLUSION

These projects represent a collaborative effort to enhance city infrastructure while reducing utility expenditures. Continued investments in smart systems, clean energy, and conservation measures will yield long-term savings and sustainability.

LED LIGHTING PROJECTS



Skate Parks



Los Altos Skate Park

- **Project Cost: \$18,059.04**
- **Project Annual Avoided Energy Cost: \$4,831.19**
- **Years Pay Back: 3.74**
- **Annual kWh Savings: 80,531.42 kWh**

Alamosa Skate Park

- **Project Cost: \$7,399.97**
- **Project Annual Avoided Energy Cost: \$9,570.13**
- **Years Pay Back: 0.77**
- **Annual kWh Savings: 95,701.29 kWh**

Northwest Modelfular Skate Park

- **Project Cost: \$7,350.49**
- **Project Annual Avoided Energy Cost: \$3,580.66**
- **Years Pay Back: 2.05**
- **Annual kWh Savings: 35,806.61**

Tower Skate Park

- **Project Cost: \$7,350.49**
- **Project Annual Avoided Energy Cost: \$1,953.09**
- **Years Pay Back: 3.76**
- **Annual kWh Savings: 19,530.88**

North Domingo Baca Skate Park

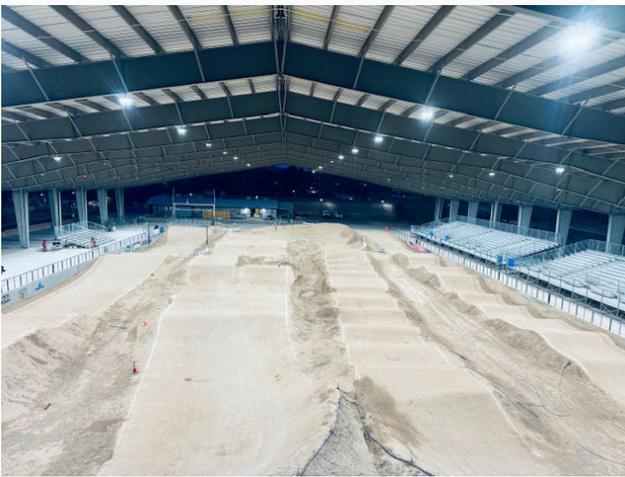
- **Project Cost: \$0**



- **Project Annual Avoided Energy Cost: \$5,924.37**

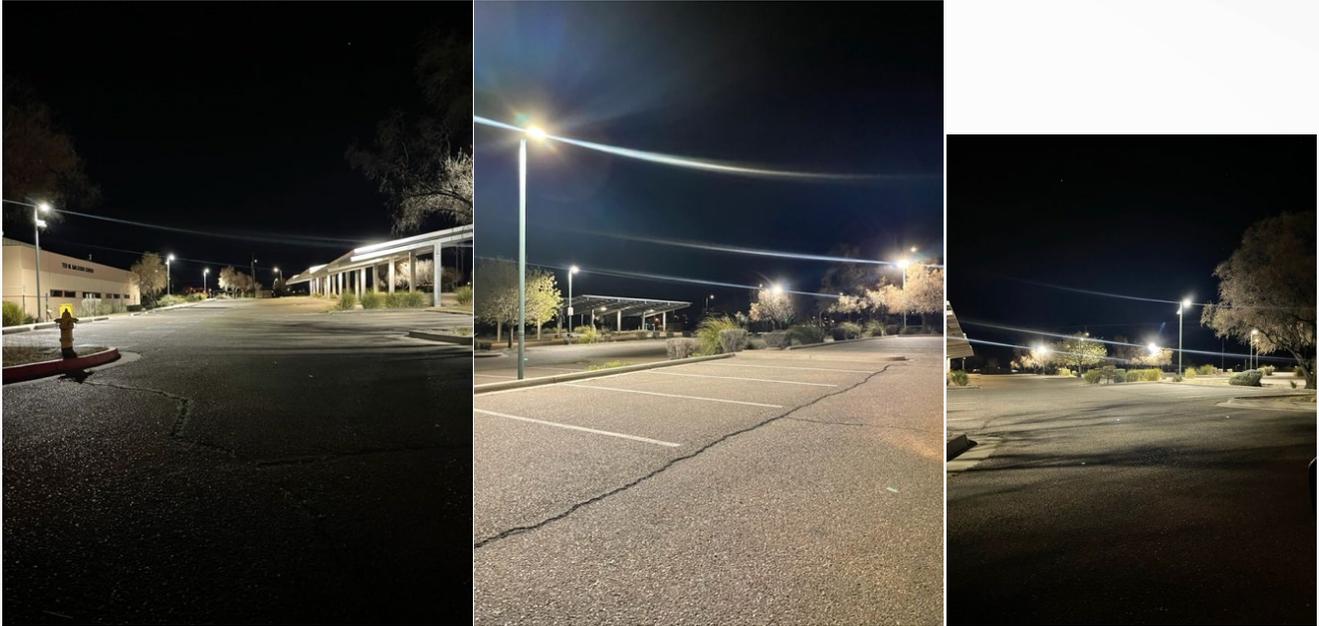
- **PNM Rebate: \$10,,649.37**
- **Annual kWh Savings: 59,243.66**

BMX Park



- **Project Cost: \$53,510.75**
- **Project Annual Avoided Energy Cost: \$6,237.36**
- **Years Pay Back: 8.58**
- **Annual kWh Savings: 62,373.57**

Community Centers



Alamosa Community Center Parking

- Project Cost: \$9,503.23
- Project Annual Avoided Energy Cost: \$3,699.98
- Years Pay Back: 2.57
- Annual kWh Savings: 36,999.82

- Years Pay Back: 2.42
- Annual kWh Savings: 203,998.3

West Mesa Community Center

- Project Cost: \$4,340.54
- Project Annual Avoided Energy Cost: \$3,699.98
- Years Pay Back: 1.17
- Annual kWh Savings: 72,347.78

Taylor Ranch Community Center

- Project Cost: \$44,444.93
- Project Annual Avoided Energy Cost: 17,179.53
- Years Pay Back: 2.59
- Annual kWh Savings: 171,795.3
-

Senior Affairs

Highland Senior Center

- Project Cost: \$41,692.37
- Project Annual Avoided Energy Cost: \$13,269.24
- Years Pay Back: 3.14
- Annual kWh Savings: 134,692.4

Valley Command Center Parking Lot

- Project Cost: \$49,467.63
- Project Annual Avoided Energy Cost: \$20,399.83



North Valley Senior Center Interior

- Project Cost: \$43,494.28
- Project Annual Avoided Energy Cost: \$16,770.26
- Years Pay Back: 2.56
- Annual kWh Savings: 167,702.6

AFR & APD

Albuquerque Fire Rescue 1

- Project Cost: \$4,993.35
- Project Annual Avoided Energy Cost: \$1,920.63
- Years Pay Back: 2.60
- Annual kWh Savings: 19,206.34

AFR 1 Interior

- Project Cost: \$41,314.81
- Project Annual Avoided Energy Cost: \$13,977.00
- Years Pay Back: 2.96
- Annual kWh Savings: 139,777

APD Valley Command Interior

- Project Cost: \$38,257.91
- Project Annual Avoided Energy Cost: \$16,724.81
- Years Pay Back: 2.29
- Annual kWh Savings: 167,248

AFR Fleet Lighting

- Project Cost: \$7,570.84
- Project Annual Avoided Energy Cost: 3,260.19

- Years Pay Back: 2.32
- Annual kWh Savings: 32,601.91

AFR Logistics

- Project Cost: \$11,922.00
- Project Annual Avoided Energy Cost: \$4,411.19
- Years Pay Back: 2.70
- Annual kWh Savings: 44,111

Others

Gateway West Interior

- Project Cost: \$23,601.68
- Project Annual Avoided Energy Cost: \$5,946.40
- Years Pay Back: 3.97
- Annual kWh Savings: 59,464

Jerry Cline Tennis Complex

- Phase One:
- Project Cost: \$148,383.40
- Project Annual Avoided Energy Cost: \$15,023.30
- Years Pay Back: 9.88
- Annual kWh Savings: 150,233
- Phase Two:
- Project Cost: \$7,727.32
- Project Annual Avoided Energy Cost: \$1,864.33
- Years Pay Back: 4.14
- Annual kWh Savings: 18,643.32



Krough Park

- **Project Cost: \$5,101.32**
- **Project Annual Avoided Energy Cost: \$1,321.42**
- **Years Pay Back: 3.86**
- **Annual kWh Savings: 13,214.22**

Tingley Park Walkway

- **Project Cost: \$13,183.53**
- **Project Annual Avoided Energy Cost: \$3,841.34**
- **Years Pay Back: 3.43**
- **Annual kWh Savings: 38,413**

THE FUTURE OF ENERGY SAVINGS AT THE CITY OF ALBUQUERQUE

The City of Albuquerque has a roadmap to achieve a 100% Renewable goal by 2025. City staff is currently working on building efficiency and renewable projects as well as implementing smart building technologies which would impact all City government facilities. The City will also be working on Purchase Power Agreements and other mechanisms to achieve its 100 percent renewable goal

BALANCED RESOURCE ACQUISITION INFORMATION NETWORK (BRAIN)

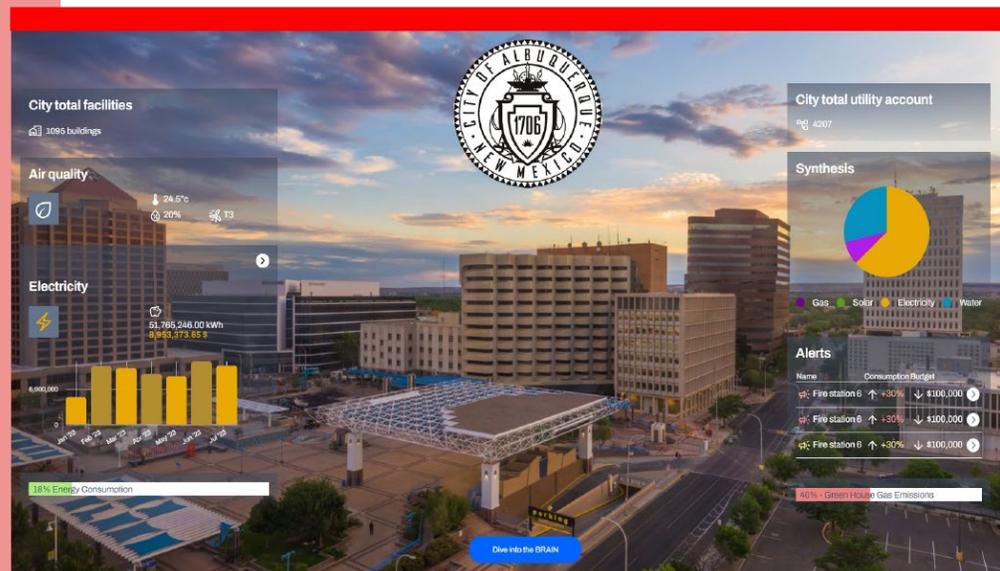
On October 18th, 2021, City of Albuquerque (CABQ) Energy and Sustainability Management Division (ESMD) and State of New Mexico Energy Minerals and Natural Resources Department's (EMNRD) Energy Conservation and Management Division (ECMD) agreed to establish the Balanced Resource Acquisition and Information Network (BRAIN). The defined Scope of Work is to establish the BRAIN data center and computer platform that enables real-time interaction with CABQ's current and historical utility-related data streams to enable real-time visibility, flexibility and responsiveness with our existing and future storage, generation and building controls resources to benefit the public, our critical systems and infrastructure, the State of New Mexico and the Public Service Company of New Mexico (PNM). We are providing this first quarterly report as requested on 11/22/2021 with a final due date of 06/21/2022.



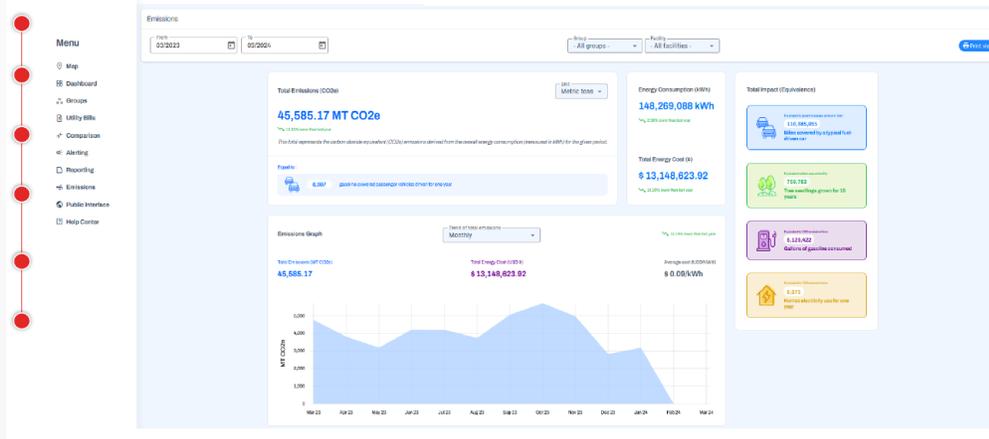
Our flexible energy resources will participate with PNM during critical peak demand periods as we opt into current and future demand side market instruments like demand response and future firm dispatchable market instruments. Our vision with the BRAIN is to build an integrated data lake, machine learning 'neural network based' predictive models and both internal and public-facing dashboards that are easy to use, outcome oriented, scalable, and easily adopted by other New Mexico public entities, residing behind each entities' secure firewalls.

CABQ Gets Smart with Unveiling of the BRAIN

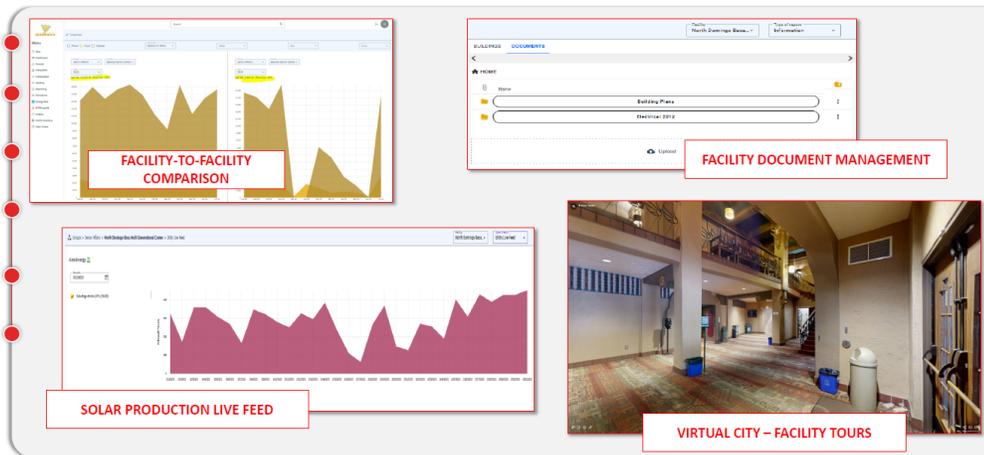
CABQ
BRAIN



Real-Time GHG Emission Capture



Additional BRAIN Functionality



FACILITY-TO-FACILITY COMPARISON

FACILITY DOCUMENT MANAGEMENT

SOLAR PRODUCTION LIVE FEED

VIRTUAL CITY - FACILITY TOURS



RECOMMENDATIONS

Projects, both ongoing and completed, have successfully fulfilled the AEC's -cost-effective, innovative energy management, energy, education, and community involvement mission. Given this success and the need to meet robust goals and improve the quality of life for Albuquerque residents, the AEC recommends the following:

- **City to increase the CIP from 3% to 5% for energy conservation and renewable energy capital improvements. Furthermore, the current 3% allocation was set in 2006, 16 years ago. Increasing the CIP from 3% to 5% will allow for the ability to accomplish the City's resolution to have 25 percent of its energy come from solar resources by 2025 and Mayor Keller's commitment to using 100 percent renewable energy for all municipal operations by 2025.**
- **Expand the eligibility of CIP projects to include water conservation**