

ISC Agenda
DATE: August 11, 2021

Joseph Griego City Council	Brian Osterloh Dept. of Technology & Innovation (DTI)	Dr. Stephen D. Burd UNM
Timothy P. Thackaberry	Jesse Muniz City of Albuquerque	Tim Skelton COA, Planning Department
Christopher Schroeder Real Time Solutions		

WHAT	AGENDA
Announcements	
Call to order	
Roll Call	
Review and Approve Agendum	
Review and Approve Minutes from Previous ISC Meeting	
Public Comment	
ISC Actions	<p>Grid Modernization – BRAIN</p> <p>1. Description To meet our 100% renewable energy usage goals and effectively interact with the modern grid, the City of Albuquerque’s Energy and Sustainability Management Division (ESMD) Energy Command Center (ECC) seeks to establish a data repository and computer-based analytics platform that enables real time interaction with our current and historical utility related data streams. This data resource will be named the Balanced Resource Acquisition and Information Network (BRAIN). BRAIN will enable real time visibility, flexibility and responsiveness with the City of Albuquerque’s existing and future energy storage, generation and building controls resources to benefit the public, the City’s critical systems and infrastructure, the State of New Mexico and PNM.</p> <p>2. Business Case / Justification By speeding up our energy decision making capability and enhancing our storage, generation and building controls resources, we envision achieving City of Albuquerque’s ‘interoperability’ with the electric grid combined with the City’s behind the meter flexibility to enhance ‘resiliency’. Our flexible energy resources will participate with PNM during periods of critical peak demand as we opt into current and future demand side market instruments like demand response and future firm dispatchable market instruments. Our vision with 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, ultimately residing behind each entities’ secure firewalls. The City’s Energy and Sustainability Management Division (ESMD) manages over 4,500 utility accounts, approaching 39 MW of solar, 9 battery installations and 50 building management systems across over 600 facilities. City of Albuquerque spends approximately \$23.3M per year in Utilities. This equates to \$11M in electricity, \$1.3M in gas and \$11M in water.</p>

Savings associated with our current initiatives project to Solar Direct (\$4M/yr.), LED streetlights (\$1.35M/yr.), on-site solar (\$1.28M/yr.), batteries (\$148K/yr.), 3% CIP (\$2.5M/yr.), GESPC (\$350K/yr.) approaching nearly \$10M/yr. Justification for the BRAIN initiative is to enable fast, flexible, and expert management of our renewable and energy saving resources to maximize their effectiveness. By building the energy data infrastructure for the future, ESMD will enable City of Albuquerque's participation and flexibility with the new demands of the modern electric grid. This positions City of Albuquerque to capture the future economic benefits of shifting electric loads and helping to balance the grid as constraints occur.

3. Maintenance, Training and Other Associated Costs

The ESMD Brain project is designed to show the efficacy of a data-based system within the Information Technology requirements of CABQ including, but not limited to cyber security and reduction time to determination and event or anomalies. Training on the database platform and visualization functions will be provided to the city as each phase of technology is deployed. Feedback will be performed by all Departments and stakeholders involved in the project. As the project is developed a determination will be made by ESMD/DMD and an ongoing Maintenance and Costs will be developed. Depending upon the Information Technology requirements of CABQ, costs associated with internal cloud and server access along with IT personnel assistance would be required for external inbound data and system setup. We believe that this would be well within the current staffing of CABQ IT and Operations teams to support. Costs for an external cloud installation would be within the funding provided by the Grant.

4. Impact to City / Dept Resources

ESMD will provide insight, guidance, and oversight on the inbound data feeds to the BRAIN as well as the overall operator/user interface features and functions. Over the last year, ESMD and Mountain Vector Energy have shaped the many forms of source data and visualizations that would be planned for coded software automation and dashboard features. We believe that within the current ESMD business objectives, the BRAIN project will have a minimal impact to ESMD personnel. CABQ IT, Operations, and other technology departments would be asked to define and ensure compliance with IT requirements, possibly provide systems, servers and/or a cloud-based environment and reviewing the BRAIN architecture. Over the course of the project, we estimate that approximately 6 hours per month or 72 total hours would be required by CABQ IT over the twelve months of the initial project.

International District Library Community Room Audio Video System

1. Description

Epson Projector and audio video for Library Community Room

2. Business Case / Justification

New Projector and audio video system for the International District Library Community Room

3. Maintenance, Training and Other Associated Costs

1 Year Maintenance by vendor and supported by Library IT

4. Impact to City / Dept Resources

None

Technology Overview	Tim Skelton with the City of Albuquerque Planning Department will provide a brief overview of technology used by the Planning Department.
General Information	Brian Osterloh to provide general updates to ISC members.
Adjourn	