



FISCAL YEAR

20

LOS ALAMOS  
Department of Public Utilities

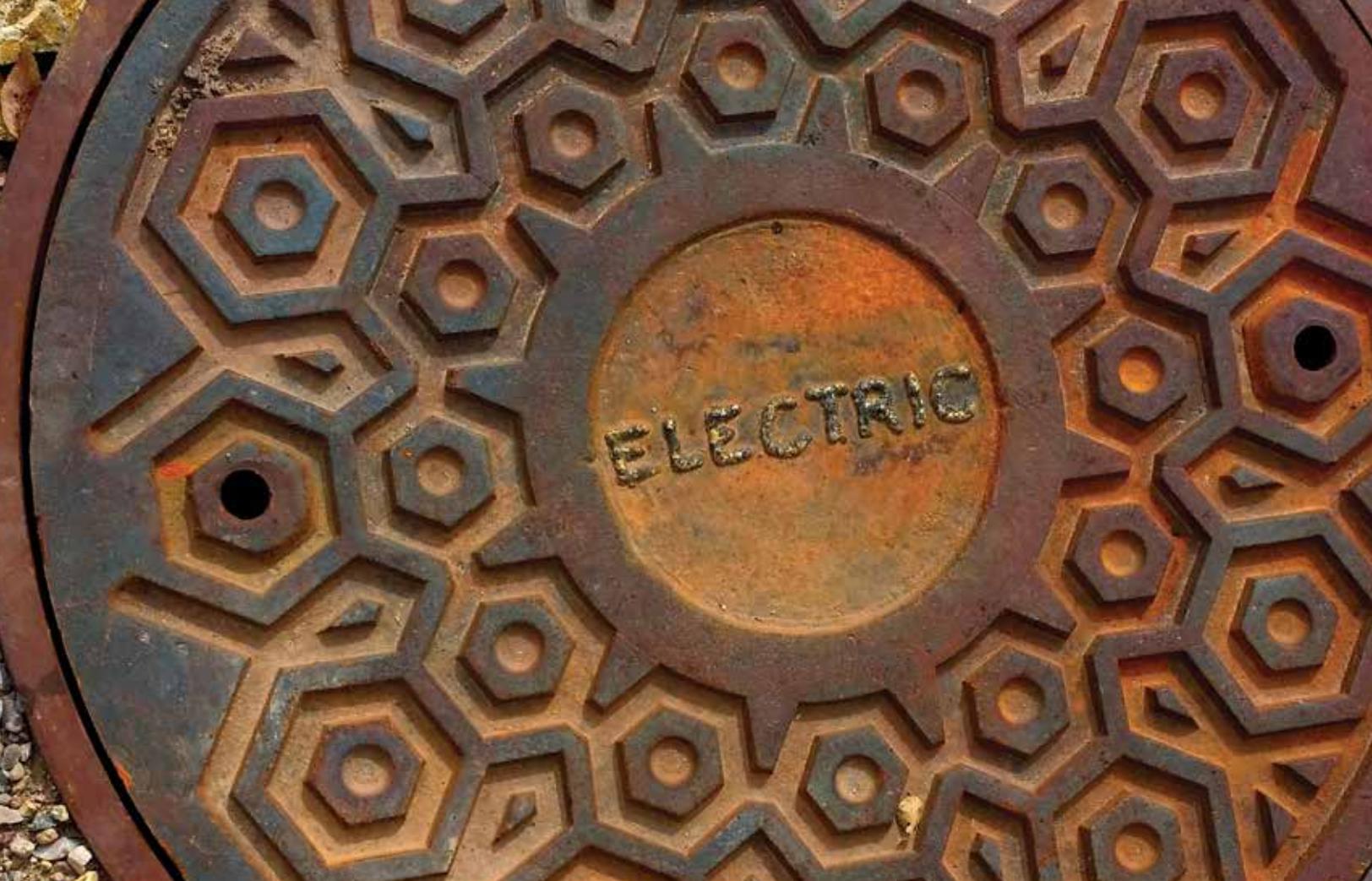
# Quarterly Performance Report

Quarter 1: July 1 - September 30, 2019  
(Issued January 2020)



# Table Of Content

1. Manager Statement	4
<hr/>	
2. About DPU	6
<hr/>	
3. Safety Culture	8
<hr/>	
4. Electric Distribution	10
<hr/>	
5. Electric Production	14
<hr/>	
6. Future Energy Resources	15
<hr/>	
7. Gas, Water, Sewer	18
<hr/>	
8. Engineering	20
<hr/>	
9. Capital Improvement Projects	22
<hr/>	
10. Sustainability	26
<hr/>	
11. Finance and Administration	28
<hr/>	
12. Natural Gas Rates	30
<hr/>	
13. Operations	32
<hr/>	
14. Consumption	36



**LOS ALAMOS**  
Department of Public Utilities

### Information

Municipal Building  
1000 Central Avenue, Suite 130  
Los Alamos, NM 87544

Tel. 505 662 8333  
Email. [CustomerCare@lacnm.us](mailto:CustomerCare@lacnm.us)  
Web. [www.ladpu.com/dpu](http://www.ladpu.com/dpu)

Philo S. Shelton, III  
Utilities Manager



Los Alamos Department of the Public Utilities is the county-owned provider of electric, water, natural gas and wastewater services to the community of Los Alamos, New Mexico.



FY  
20  
Q1

## Manager Statement

The first quarter of the fiscal year is always busy constructing projects and working to get these projects completed before the winter season is upon us.

The NM-502 road reconstruction project got into full swing. This calendar year is primarily focused on replacing aging utilities infrastructure. Water lines and low- and high-pressure gas lines have been replaced and electric infrastructure upgraded. These are important improvements to enhance reliability of the County's utility systems.

In White Rock, the Department of Public Utilities (DPU) has been working to upgrade the electrical substation by adding a new circuit to serve the new Mirador

development. Also, DPU has been receiving equipment for the Advanced Metering Infrastructure (AMI) project. Currently crews are in the process of installing radio towers to serve the AMI network. Installation of electric smart meters and communication modules for DPU's customers are anticipated to begin in White Rock around April 2020.

Finally, DPU retained a consultant this quarter to design the replacement for the 1966 White Rock wastewater treatment plant.

Other activities during the first quarter included discussions with the Board of Public Utilities for multiyear increases for both water and sewer rates.

A joint meeting with the County Council and BPU was held for a presentation on the Energy Imbalance Market (EIM). As more renewable energy resources come online, it is causing an energy imbalance on the electrical grid. DPU is making plans to address these new challenges. While the EIM will allow Los Alamos County to take advantage of the cost saving associated with excess renewables (solar) on the western grid, at the same time power operations needs to be cognizant of spiking market prices in the evenings when demand for power peaks and the solar power is coming offline.

As electric resource planning is ongoing and dynamic, DPU is exploring entering into a Power



Purchase Agreement, comprising wind and solar generation here in New Mexico. Staff also continues to move forward with the approaching next phase of the Carbon Free Power Project (CFPP). This is a project to build a nuclear power generating facility at the Idaho National Laboratory using small modular reactor technology.

Additionally, Council and BPU approved increasing the County's CFPP subscription for an additional 3.186 megawatts through the U.S. Department of Energy's Joint Use Modular Plant (JUMP). DOE intends to draw from two modules of the twelve-module CFPP. The JUMP project will designate one module to be used for research activities. After DOE research activities cease, 3.186 megawatts of the JUMP module will be assigned to Los Alamos County at a cost that only reflects ongoing operations and maintenance and decommissioning costs. The CFPP is potentially an important dispatchable electric generating resource in solving and

balancing the EIM issues.

One of the Department's sustainability goals is to continue to improve and enhance the reclaimed water system which supports conservation of limited potable groundwater resources. DPU made application to the 2020 Water Trust Board (WTB) funding cycle to construct a new one-million-gallon effluent water storage tank (\$1,080,000). It will be located next to the existing Bayo booster station in Pueblo Canyon adjacent to the composting facility. The Los Alamos effluent conveyance system which pumps treated reclaimed water from the Los Alamos wastewater plant to irrigate the golf course and North Mesa ballparks is limited by the amount of existing storage. This additional million gallons of storage will alleviate supply limitations to the Golf Course and ball parks and allow for expansion of reclaimed water use in Los Alamos.

*Photo above: Solar panels located at the capped landfill. DPU is currently exploring adding wind and solar from New Mexico to its electric generation portfolio through a Power Purchase Agreement.*



# About the Dept of Public Utilities

The Department of Public Utilities is county-owned. It provides Los Alamos County with electric, natural gas, water and wastewater services. Established under Article V of the 1968 Charter for the Incorporated County of Los Alamos, the DPU falls under the jurisdiction of the Board of Public Utilities.

## Mission

Provide safe and reliable utility services in an economically and environmentally sustainable fashion.

## Vision

Be a high-performing utility matched to our community, contributing to its future with diversified and innovative utility solutions.

## We Value

- Customers by being service-oriented and fiscally responsible;
- Employees and partnerships by being a safe, ethical and professional organization that encourages continuous learning;
- Natural resources through innovative and progressive solutions; and
- Community by being communicative, organized and transparent.

Adopted: 2012

## Goals/Objectives

### 1.0 Provide safe & reliable utility services

- Efficiently deliver safe and reliable electric, gas, water & wastewater services;
- Efficiently implement and maintain secure and reliable business systems;
- Ensure utility control and mapping systems and processes are accurate, safe and secure;
- Develop a culture of continuous improvement.

### 2.0 Achieve & maintain excellence in financial performance

- Utilize revenues to provide a high-level of service while keeping rates competitive with similar utility providers;
- Conduct cost of service studies for each utility at least every five years;
- Meet financial plan targets by 2025;
- Achieve workplans while operating within budget.

### 3.0 Be a customer service-oriented organization that is communicative, efficient & transparent

- Ensure customer service processes and systems are efficient and user-friendly;
- Engage and inform stakeholders on utilities' operations affecting the community.

## Goals/Objectives

### 4.0 Sustain a capable satisfied, engaged, ethical & safe workforce focused on customer service

- Invest in employee training and professional development;
- Promote a culture of safe and ethical behavior;
- Engage employees, improve employee satisfaction and compensate fairly.

### 5.0 Achieve environmental sustainability

- Be a carbon neutral electric provider by 2040;
- Promote electrical and heating efficiency and water conservation through targeted conservation programs;
- Reduce per capita per day potable water use by 9 percent by 2030;
- Improve heating efficiency to reduce customer gas usage by 3 percent by 2030;
- Provide class 1A effluent water in White Rock.

### 6.0 Develop & strengthen partnerships with stakeholders

- Communicate with stakeholders to strengthen existing partnerships and identify new potentially beneficial partnering opportunities.

Adopted: 2018



# Board of Public Utilities

Consisting of five voting members and appointed by the Los Alamos County Council, the BPU is the governing body for the department. Members reside in Los Alamos and are customers of the Department of Public Utilities. Calendars, policies and procedures, agendas, minutes, and videos of meetings are available at <https://ladpu.com/BPU>



Carry Walker, Chair



Jeff Johnson, Vice Chair

BPU meets on the third  
Wednesday of each  
month at 5:30 p.m.  
Join us in  
Council Chambers  
1000 Central Avenue  
Los Alamos, NM.



Stephen McLin, Member



Kathleen Taylor, Member



Stephen J. Tobin, Member

# Safety



The word "safe" is right there in the Department of Public Utilities' mission statement. "Provide safe and reliably utility services ...." Reasons for focusing on a safe work environment go without saying, to protect our most valuable resource: people (employees and customers). Further a focus on safety is proven to improve productivity, quality of product, and even the financial position. In 2012, the Board of Public Utilities adopted a safety culture vision. The goal is to promote how safety is managed in the workplace by creating a work environment which reflects the attitudes, beliefs, perceptions and values that employees share when it comes to safety.

*DPU held a tabletop exercise on July 16, 2019 with Los Alamos county police and fire departments to test communication and coordination of a rescue at the Los Alamos Canyon dam*

## Safety Culture Vision

DPU seeks to create a safety culture where employees practice safety every hour on the job, while no one is watching, because employees want to and not because employees have to. To create this safety culture, DPU employees believe in:

- Putting safety first
- Leading by example
- Establishing and enforcing a high standard of work performance
- Briefing or tailgating before every job
- Making work and safety suggestions.

**Adopted: 2012**

## Safety Committee

DPU employees representing each utility division comprise the 13-person Safety Committee. They hold a committee meeting quarterly to review and share best practices. They also analyze accidents, incidents and near misses and discuss and implement appropriate prevention measures.

Each member of the Safety Committee is responsible for discussing the accident, incident or near miss with the rest of the staff at the next available weekly group meeting and share agreed upon prevention measures.

## Safety Employee

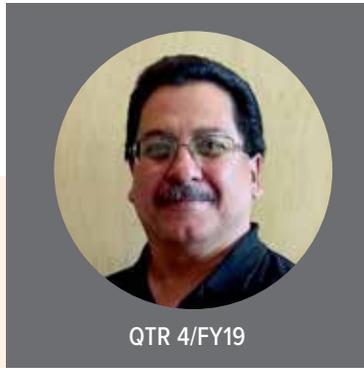
The Safety Employee of the Quarter program was developed by the safety committee with an intent to reward those who most clearly and effectively demonstrate DPU's safety culture vision.

Each quarter all DPU employees nominate fellow employees who exemplify the safety culture vision. A review of the nominee applications is conducted and voted on by the safety committee members and forwarded to DPU's senior management team for concurrence. The selected employee is recognized and earns an additional day of administrative leave.



### Tyler Randolph

Tyler Randolph is an apprentice II employee in the wastewater treatment division. Following safety protocol, He understands safety concerns in an environment with multiple possible hazards. He looks for potential safety hazards on the job and will stop work to render the area safe for his coworkers.



### Stephen Marez

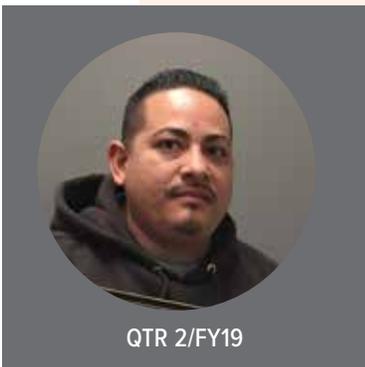
Stephen Marez is the electrical engineering manager for Electric Distribution. Steve relentlessly works to keep his crews safe, developing switching procedures that are kept up-to-date and reviewed regularly.



### Dennis Segura

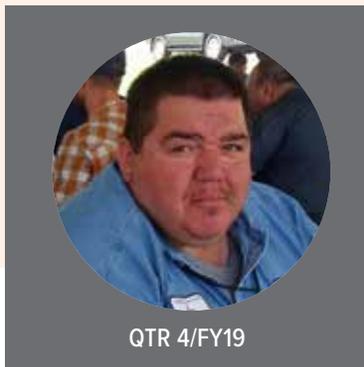
Dennis Segura is an engineering project manager for the Engineering Division. Among his many duties, he completely recreated and improved DPU's cathodic protection monitoring and tracking procedure for enhanced safety.

## Safety Employee Of The Quarter



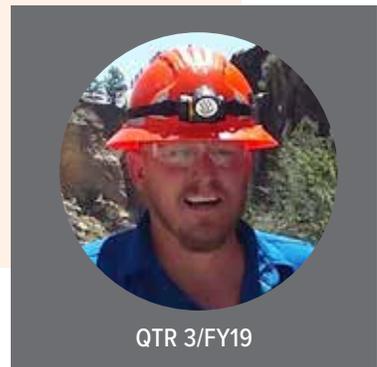
### Joel Martinez

Joel Martinez is the electrician for the Water Production Division. Joel safely oversees everything from 4160V AC switchgear at water production wells to 24V DC control circuits in wastewater collection system lift stations.



### Victor Tanuz

Victor Tanuz is a senior water systems operator in the Water Production Division. Victor safely maintains and operates wells and booster pump stations in isolated canyons.



### Adam Cooper

Adam Cooper, hydroelectric plant engineer, works in the Electric Production Division. Adam oversees the safe operation of both the Abiquiu and El Vado hydroelectric facilities.

## Stephen Marez Electrical Engineer



The Electric Distribution Division provides electricity to over 8,500 customers in Los Alamos townsite and White Rock. Crews maintain the underground and overhead system 24/7.



FY  
20  
Q1

## Electric Distribution

Engineering and line operations comprise the Electric Distribution Division. Engineering is responsible for planning; design and project management for all distribution powerline construction; developing material specifications and standards; ordering materials for critical projects; and ensuring sufficient material inventory for critical infrastructure. Support is provided to the Finance and Administration Division for metering and customer issues.

Line operations is responsible for keeping the power on 24/7. The linemen perform the safe operations and maintenance of the distribution grid and undertake the majority of new powerline construction.

The electric department is in the process of testing commercial meters for the implementation of the advanced metering infrastructure (AMI) project. Accuracy of the large customer meters will be verified prior to installation.

Crews will review the large customer accounts for proper multipliers, beginning in White Rock and then move to townsite.

Summer and fall projects in the county are moving ahead rapidly to avoid the winter shutdowns. The first quarter schedules included the continuation of work on NM 502 road reconstruction project that includes the relocation of several utilities. The contractors installed conduit,

switch sleeves, and vaults. The line crew will install conductors and equipment as the facilities are made ready.

Electric line crews were also busy replacing power poles and cross-arms throughout the county.

In White Rock the El Mirador subdivision is in full construction mode with housing units on Confianza Street. Electric line crews are installing conductors, transformers and meters in the subdivision. Electric utility services along Confianza are installed and homes are being connected.

The White Rock substation project is complete. As of October the new metal enclosed switch



station on the Unit 1 transformer was completed. Los Alamos National Laboratory (LANL) line crews reconnected the 115kv line to the transformer to energize the transformer and allow DPU engineering to commission the station. The Unit 1 transformer is in service.

Throughout the county, the tree trimming contractor was busy trimming trees in the canyons and the Ski Hill. In preparation for winter, these areas are always prioritized during quarter 1.

The Los Alamos switchgear substation (LASS) project has been delayed due to site construction issues that the Los Alamos National Laboratory is addressing. When completed, Los Alamos will have a second substation and eight new power lines with which to distribute power. The LASS project is the single most important project related to reliability for the department.

It will be powered by the Los Alamos National Laboratory's new TA-3 substation. LASS and LANL's new TA-3 substation are located near the main LANL guard entrance. The anticipated new date for completion is now late 2020.

We continue to interconnect net metering PV systems each month. Note that for PV electrical equipment protection and for the safety of our linemen, utility interconnect agreements are required. Also, there are interconnection requirements for the general county and the Construction Industries Division for the State of NM. The utilities web page has detailed Net Metering interconnect instructions and guidance for customers convenience.

*Photo above: Los Alamos National Laboratory (LANL) line crews reconnected the 115kv line to the transformer to energize the transformer and allow DPU engineering to commission the new White Rock substation.*

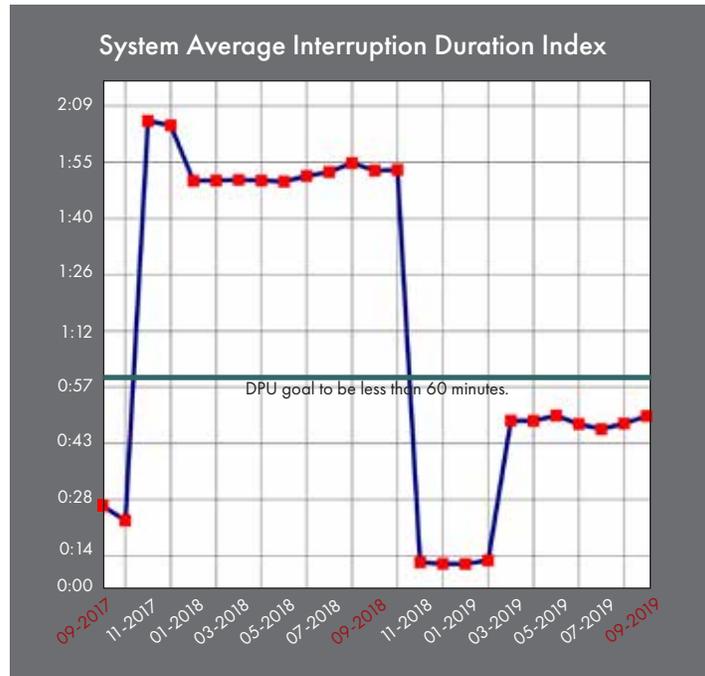


# Electric Distribution Update

## System Average Interruption Duration Index

Improving system reliability and reducing outage times became a primary focus for the Los Alamos Department of Public Utilities (DPU) in 2008. The System Average Interruption Duration Index (SAIDI) rose to an all-time high, exceeding 300 minutes as the annual average time that a DPU customer could expect to be without power. Accordingly, DPU set a goal to reduce its SAIDI to below 60 minutes (including major events).

The SAIDI rose to 48 minutes by the end of quarter 3 in FY 2019, due to a wind storm on March 13.



### SAIDI comparison for Quarter 1 rolling 12 month results as of:

Sep. 30, 2019	FY20	46 min	Goal 60 min
Sep. 30, 2018	FY19	113 min	Goal 60 min
Sep. 30, 2017	FY18	27 min	Goal 60 min



The FY 2020 quarter 1 SAIDI results are at 46 minutes.

Energy Information Administration and available on its website - <https://www.eia.gov/electricity/data/eia861/>

As a point of reference, in 2018 the mean SAIDI was 142.27 minutes without major events and 319.39 minutes with major events for 1,027 utilities across the nation (excluding U.S. territories) per a 2018 reliability spreadsheet issued by the U.S.

## DISTRIBUTED GENERATION

Unlike conventional power generating stations that are centralized and require transmission lines, distributed generation resources are decentralized and close to the load, such as rooftop solar systems. In Los Alamos, several commercial and residential customers have opted to install small solar or photovoltaic distributed generation systems.

### Total Distributed Generation

As of the end of quarter 1, distributed generation resources totaled 808 kilowatts.

- Residential systems totaled 646 kilowatts, and
- Commercial systems totaled 162 kilowatts.

### New Distributed Generation

31 kilowatts of distributed generation were added to DPU's electric distribution grid during quarter 1.

### Pending Distributed Generation

Currently 10 residential customers are in the process of adding 61 kilowatts of distributed generation to DPU's electric grid.

## CARBON-NEUTRAL ELECTRICAL ENERGY PROVIDER

On January 20, 2016, the Board of Public Utilities adopted the following: The Department of Public Utilities will be a carbon-neutral electrical energy provider when the electricity distributed to Los Alamos County consumers is generated or purchased from sources that in their normal operation cause no net release of carbon dioxide to the atmosphere.

1. "Los Alamos County customers" means those customers scheduled in the Los Alamos County Code of Ordinances Section 40-121; this does not include DOE/LANL.
2. "No net release of carbon dioxide" means that purchases or generation of carbon-based electrical energy, necessary when carbon-free supplies are not practically available to supply Los Alamos County consumers, will be fully offset from previous sales of surplus carbon-free electricity to other entities.



**808 kW**  
Total DG

**646 kW**  
Residential

**162 kW**  
Commercial

**31 kW**  
New DG

**61 kW**  
Pending DG

Steve Cummins  
Deputy Utilities Manager



The Electric Production Division is responsible for scheduling generation resources and market purchases and sales to satisfy the electrical demand of the Los Alamos Power Pool and Sandia/Kirtland. It is also responsible for the operation and maintenance of the El Vado and Abiquiu hydroelectric facilities



FY  
20  
Q1

## Electric Production

Last Quarter DPU reported that Northern Rio Arriba Electric Cooperative or NORA approached DPU's electric production division expressing interest to purchase power from the county-owned hydroelectric facility in El Vado. The power would supply the electric load for the Chama region while NORA rebuilds a six mile section of 69 KV line between Abiquiu and Rio Cebolla. NORA also proposed that DPU pay for the controls upgrade at the El Vado hydroelectric facility to be able to follow the Chama load.

This past quarter, NORA reported that they were revisiting their alternatives and would contact us at a later date.

Proceedings Regarding Public

Service Company of New Mexico's Application for Approval of Abandonment of San Juan Generating Station Units is before the New Mexico Public Regulatory Commission. A prehearing will be held between December 10th and December 19th, 2019. Richard Virtue, LAC outside counsel is keeping apprised of the intervenors witnesses' testimonies. DPU and LAC Legal will attend specific days of the hearing as recommended by Richard Virtue.

Additionally, DPU was notified by the City of Farmington (COF) that it is pursuing along with Enchant Energy, a carbon sequestration project that would allow the San Juan Generating Station to remain open beyond the 2022 Agreement expiration date. DPU

notified the parties that LAC will be exiting the facility in 2022 as planned, however, it supports this endeavor as long as there is no cost to the County of Los Alamos. Should Farmington and Enchant Energy move forward, DPU will work with them and other facility owners to iron out the contractual details related to future plant closure obligations. Enchant Energy received a \$2.9 million grant from the Department of Energy for a preliminary Engineering and feasibility study.

Enchant Energy would like to have all of the contracts for the transfer of ownership completed between Enchant and the nine owners of the San Juan Generating Station by July of 2020. The nine participants generally

have the same concerns with the proposal regarding plant closure obligations and the potential for future liabilities with decommissioning and mine reclamation and who ultimately will pay the cost.

We anticipate that the NMPRC will not approve the abandonment filing until Enchant Energy has had time to complete the Preliminary Engineering and Feasibility Study for the carbon sequestration proj-

ect which is expected as early as March 2020.

## INITIATIVES FOR FUTURE ENERGY RESOURCES

THE FUTURE ENERGY RESOURCES COMMITTEE (AN AD HOC CITIZEN COMMITTEE) PREPARED A JULY 2015 REPORT TO RECOMMEND FUTURE ENERGY GENERATION RESOURCES FOR LOS ALAMOS COUNTY. THE BOARD OF PUBLIC UTILITIES ADOPTED MOST OF THE RECOMMENDATIONS IN JANUARY AND MARCH 2016. DPU'S PLAN TO IMPLEMENT THE BPU ADOPTED POLICIES ARE DESCRIBED HERE.

### **Electric Vehicle Charging Stations**

This effort is in support of the strategic policy to support the replacement of petroleum-fueled motor vehicles with all electric vehicles. In July 2018 (last year), staff presented to the BPU recommended locations and types of EV charging stations. Recently, New Mexico Environment Department announced the application period is now open through Jan. 9, 2020 for funding through the 2017 Volkswagon (VW) settlement. DPU is in the process of completing applications.

### **Carbon Free Power Project**

Through DPU's membership with the Utah Associated Municipal Power Systems (UAMPS), staff has

been following the development of the Carbon Free Power Project (CFPP) which is a projected 600 MW nuclear generating station to be built in Idaho using small modular reactor (SMR) technology.

On July 17 the BPU approved the Joint Use Module Plant (JUMP) resolution resulting in Los Alamos County acquiring an additional 3.186 MW above the base subscription of 8 MW.

This JUMP Allocation Resolution is for Los Alamos County to express their interest in their entitlement share of capacity and energy from the JUMP program after DOE has completed their research and development using the power output of the JUMP.

UAMPS and DOE expected to have the terms and conditions of the JUMP Power Sales Layoff agreement completed by October 2019, however DOE funding has been delayed by Congress which intern has delayed the JUMP agreement. After reviewing the final terms and conditions of the JUMP agreement the members interested in the JUMP program will have the option to rescind its election to increase their entitlement share in the CFPP.

The PMC exhausted the \$6 million cap in November 2019 which is 100% reimbursable if the project is terminated by UAMPS Project Management Committee (PMC).

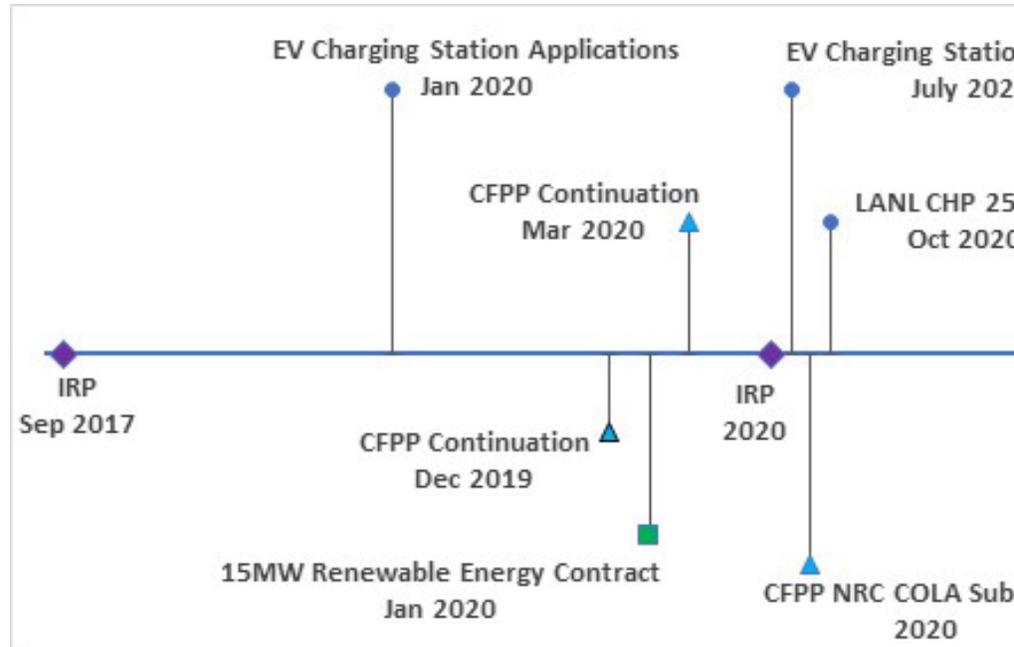
## TIMELINE

The timeline (right) shows the strategic plan with several important dates which play a significant role in the decision making process to achieve the goal to be a carbon neutral electric energy provider by 2040 while sustaining the electric demands of the community.

It starts with the development of an Integrated Resource Plan (IRP) in 2017, which provides the most economical options to achieve the goal based on the best information available at that time. There are three future contract dates which provide an opportunity to shape our future power supply. First the expiration of the San Juan Project

Participation Agreement and anticipated shut down of the San Juan Generating Station in 2022. Second, the County's expected exit from the coal-fired Laramie River Station, where the County signed a life of the plant (2042), power purchase agreement. Third, the expiration of the current Electric Coordination Agreement (ECA) between the County and DOE-NNSA LANL in 2025.

Through the current agreement resources are pooled together to serve the combined load of the County and Los Alamos National Laboratory. Today LANL accounts for approximately 80% of the total electrical demand. An extension of the ECA along with the negotiated terms and conditions will have a significant impact in DPU's decision to add new or replacement generation resources to the mix to ensure we don't have an over or under supply of energy post 2025.



At this time UAMPS PMC is recommending increasing the budget for the CFPP participants by \$976k, (Approx. \$52,500 for LAC, non-reimbursable), to keep the project moving forward from December 2019 through March 31, 2020 to accomplish the following:

- Contract negotiations for the Engineering Procurement and Construction Development Agreement,
- UAMPS Owners Engineer MPR review cost estimate and run the Economic Competitive Test,
- Identify key risk items to achieve price target and plan to de-risk, and
- Acquiring additional subscription.

It is Important to note, that the participants are still eligible for

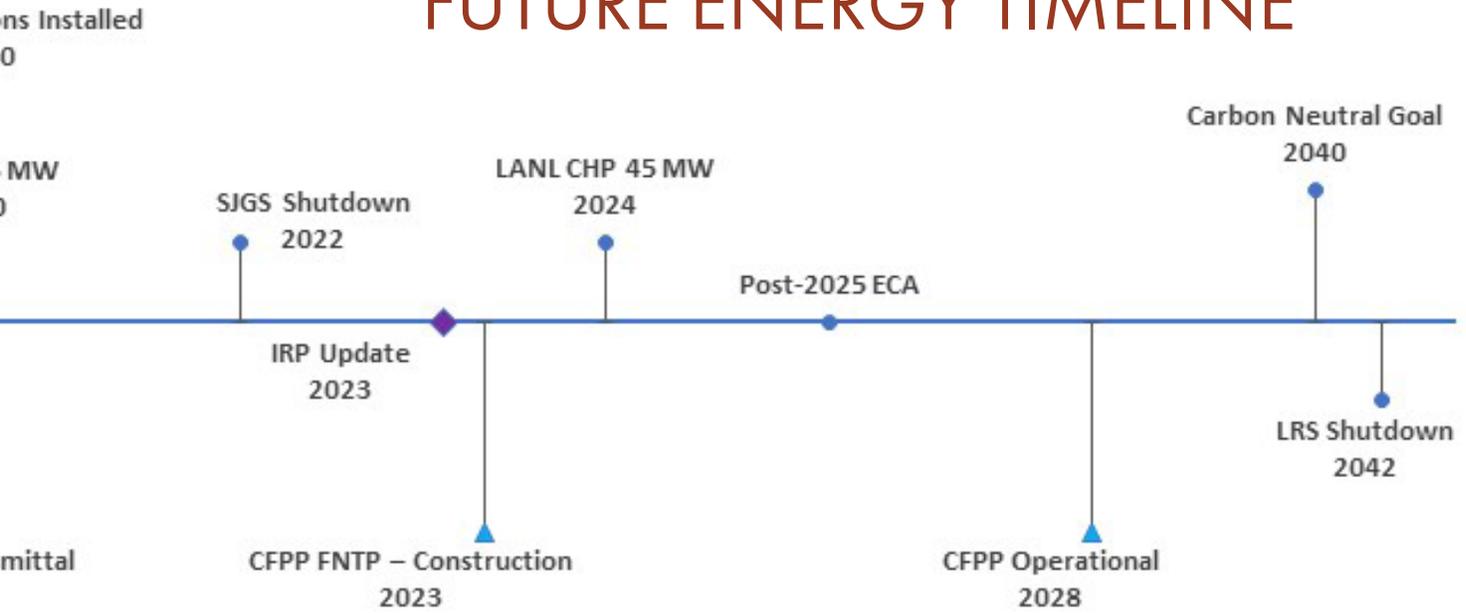
100% reimbursement of the \$6M if UAMPS terminates the project in the spring or summer of 2020.

Based on what we know today regarding generation resource adequacy in the western interconnect, LAC needs to have 100% of its load covered with owned generation assets or long term power purchase agreements in addition to being carbon free to meet our 2040 carbon neutral goal.

### Utility-Scale Solar Projects On DOE Sites

DOE-LANL has pursued one site approximately 50 acres which has been previously disturbed making it the preferred site for a solar PV array. The environmental review process has been completed. LANL's Utilities and Infrastructure division is awaiting for TRIAD

# FUTURE ENERGY TIMELINE



to make the final decision on whether to proceed with the project. It was reported that the earliest commitment would push the project into calendar year 2020. The Operating Committee for the ECA is currently in discussion on a post-2025 contract and will consider how this project will be treated in the Electric Coordination Agreement between DOE-NNSA and Los Alamos County. No new progress in the first quarter of FY2020.

### Automated Metering Infrastructure (AMI)

The BPU approved the AMI project in September 2018. The contract allows for an 18 month implementation period. Staff is currently working with the AMI contractor (Ferguson) and Tyler Munis to coordinate the interface between the AMI and DPU's billing system. Staff is working

closely with Tyler Munis to see if the upgrade to version 19 will have an impact on the data interface. If it is determined to wait until after the Munis upgrade, Ferguson will not mobilize until the first quarter of 2020.

In the meantime, Ferguson is working on finalizing the propagation study for Town site and White Rock. DPU Electric Distribution crews are currently setting the base stations per the propagation study results on Pajarito Mountain and in White Rock. Once White Rock is completed the crews will work on the Town-site repeaters. It is anticipated that Ferguson will begin work after the upgrade so they only need to mobilize one. Ferguson earliest project completion is 6 months after mobilization.



## Jack Richardson Deputy Utilities Manager



**Gas, Water and Sewer Division safely operates and maintains the gas and water distribution and sewer collection systems. Water Production Division safely pumps drinking water and transports potable and non-potable water. Wastewater Division safely treats wastewater at the Los Alamos and White Rock treatment plants.**



**FY  
20  
Q1**

## Gas, Water & Sewer

### Gas, Water, Sewer (GWS)

The staff continues to work with Purchasing staff to finalize a request for proposal (RFP) for the first ever supervisory control and data acquisition (SCADA) system for the wastewater collection system using cell phone technology. By next quarter this RFP should be on the streets. This RFP will also be used as the model for the first ever SCADA for the gas distribution system scheduled for FY 2021.

The sewer cleaning and video inspection crews have worked with the personnel at IT Pipes to implement new software upgrades. Additionally, the sewer crew has developed a procedure to maintain consistent file nomenclature and rapid video file downloads into the

geographic information systems (GIS). As a result, up-to-date files of sewer inspection videos are embedded in the GIS.

The GWS crews have completed all gas system leak detection inspections as well as the annual gas pressure regulating valve station inspection, testing & calibration. Further, staff replaced four old antiquated individual gas pressure regulating valves, inside selected PRV stations. By eliminating the oldest gas valves that are no longer supported by the manufacturer, the system has been modernized. The remaining replacement valves will be ordered over the winter. This effort will be finished in the spring of 2020 after the weather warms again.

The NM 502 project has continued

to keep a two-person crew busy almost fulltime this quarter doing pipeline locates and assisting with pipeline pot-holing and operation of system valves to avoid leakage and losses.

The county-wide backflow prevention assembly inspection original scope was completed this quarter. Based on conversation with the consultant doing the investigation, the scope was expanded to also include all major multi-family complexes (those greater than a four-plex).

Paul Gonzales was promoted to Senior Pipefitter and Justin Lujan was promoted to Pipefitter. Antonio Pena was promoted to Apprentice I. Steven Martinez was promoted from Temporary Laborer



to Limited Term Trainee. New hires were Erwin Lopez (Engineering Associate), Peter Madrid (Apprentice I), Jacob Leyba & Mark Martinez (Trainee). The new hires were to replace employees lost to other organizations.

#### Water Production

The water production crew weatherproofed all stations for the upcoming winter season. Design of the new Otowi Well 2 pump equipment and housing was advertised. Formal contract approval will occur next quarter. The natural gas engine driver for Pajarito Well No. 4 is now scheduled for installation in December 2019 / January 2020.

Rebuilt and re-installed was the motor for Pajarito Well 5 while the station was down for installation of the new motor control center (MCC). The new MCC for Pajarito Well 5 is on site and is scheduled to be installed December 2019 / January 2020. A design of the replacement chlorination building on State Road 4 near Tsankawi

began this quarter. This station will enable DPU to initiate active use of Otowi Well 1 (immediately) and Otowi Well 2 (when completed) both for the first time ever.

The new non-potable meters and SCADA were successfully implemented after overcoming some significant challenges over the past two years. All major non-potable users are now metered through new accurate meters and read remotely through the SCADA system. Automated reports are being used to develop both billing and permit required reporting.

#### Wastewater Treatment

Bohannen Huston began the value engineering portion of the final design for the replacement White Rock wastewater treatment plant. The temporary implementation of a de-chlorination system at the Los Alamos wastewater treatment facility enabled staff to eliminate the TRC permit violations on a consistent basis. To prevent freezing and damage to the de-chlorination equipment and

associated analyzer and monitoring equipment, the staff is working to install a heated enclosure.

Tyler Randolph was promoted to wastewater treatment plant apprentice II.

#### Meter Reading

The advanced metering infrastructure (AMI) project continues to ramp up with planning meetings regarding implementation, staffing, training, material storage, etc.

For manual meter reads, a new 21st century technology smart phone meter reading system was purchased and implemented.

*Photo above: The NM 502 project has continued to keep a two-person crew busy almost fulltime this quarter doing pipeline locates and assisting with pipeline pot-holing and operation of system valves to avoid leakage and losses.*

James Alarid  
Deputy Utilities Manager



**Engineering Division supports all operations of the Department of Public Utilities with a professional staff of engineers, project managers, environmental specialists and SCADA technicians.**



**FY  
20  
Q1**

**Engineering**

The first quarter of fiscal year 2020 began with welcoming a new group of engineer interns. This year we hired five engineer interns representing New Mexico State University, the University of New Mexico and New Mexico Institute of Mining and Technology. Our intern program continues to be a rewarding mentorship program for upcoming engineers and mutually beneficial to the students and the Department of Public Utilities.

Our engineering staff has been busy managing a variety of projects consisting of both planned capital improvements and some large capital needs resulting from well equipment failures.

The utility portion of the NM 502 reconstruction project has gone

very well to date. The utility portion of the project is approximately 90% complete and almost all of the new utility infrastructure has been placed into service. The contractor has made good progress in the storm drain construction and retaining wall construction. The project should be complete as scheduled by the fall of 2020. The utility portion of the project is on schedule and under budget.

Our engineering staff has been working with a consultant to prepare a model of our gas distribution system and evaluate the performance of the system in its current state and under future conditions considering new development. The final report and training on use of the model will be completed in December 2019.

The Pajarito Well #4 Gas Engine Replacement project began in spring of 2019 and the engine and associated equipment have been under fabrication since. Work will begin on the installation in December 2019 and is expected to be complete by the end of January 2020. The Pajarito Well #5 Motor Control Replacement project is currently under construction and will be complete by the end of January 2020 as well. The work on these two wells has been planned and scheduled to be complete prior to the spring when water demand significantly increases.

Drilling and development of Otowi Well #2 was completed in May of 2019. The design to equip the well with a pump, electric gear



and build the well house will begin in January 2020. We anticipate construction of the well house and associated pumping equipment to be complete by summer 2021. As part of this same design effort, a replacement motor control center will be designed for Otowi Well #4. This equipment has been showing signs of failure and to maintain the reliable production of this crucial well we will bid and construct these improvements with the Otowi Well #2 project to take advantage of the economy of scale of contracting this similar work in the same vicinity.

Our staff has been experiencing the highest volume of building permits since rebuilding began after the Cerro Grande fire. In addition we have been working with many developers coordinating utility expansions to serve upcoming commercial and housing developments. Our staff has done a great job of meeting this increased workload.

The El Mirador subdivision in White Rock completed the installation

and testing of the water, sewer and gas utilities this quarter. There are some outstanding punchlist items needing correction and outstanding work on the electric system that remain before the public utilities can be formally accepted by action of the County Council. The first certificates of occupancy for new homes have recently been issued.

The DP Road Lift Station Replacement project began construction in November 2019. The project is expected to be complete by February 2020. This lift station will replace an existing one, but has been designed to convey sewage from a number of new developments along DP Road.

The Los Alamos Reservoir Road Stabilization project will stabilize the road and protect the existing utilities in the road from wash-outs. We were successful in receiving a FEMA mitigation grant that will fund 75% of the cost for these improvements and the remaining 25% will be matched by the County. For nearly two years we have been

working on Phase I of the project which is the design and environmental documents. The Finding of No Significant Impact (FONSI) was issued by the FEMA this quarter which signifies the formal environmental approval for the project. The next step is to secure funding of Phase II for construction. We anticipate that the amendment to our grant agreement authorizing the construction funds will be secured by the spring of 2020. Once the funding is secured the project will be bid for construction.

*Photo above: DPU hired five engineering students. Pictured with some of their mentors from left to right in the front row are: Ben Olbrich (mentor), Tyler Moberaten (intern), Stephen Marez (mentor). Back row: Rafael De La Torre (intern), Lucas Montoya (intern), and Mariano Montoya (intern). Not pictured is Kyle Vigil (intern).*

# FY20 CIP Projects

	Budgeted	QTR1			QTR2			QTR3			QTR4		
		07/19	08/19	09/19	10/19	11/19	12/19	01/20	02/20	03/20	04/20	05/20	06/20
<b>Electric Production</b>	<b>\$265,000</b>												
Update Energy & Water Conservation Plan	25,000												
Upgrade Electric SCADA (Modems, Switches & RTUS)	100,000												
Install 3-Ton Jib Crane at Abiquiu Hydroelectric Plant	140,000												
<b>Electric Distribution</b>	<b>\$3,855,880</b>												
Los Alamos- Replace URD* (cables, jboxes, pedestals)	100,000												
White Rock - Replace URD* (cables, jboxes, pedestals)	100,000												
Circ. 15 LA 3-Phase, Replace Overhead (poles, cross arms, transformers)	100,000												
Circ. 1 WR 3-Phase, Replace Overhead (poles, cross arms, transformers)	100,000												
Complete the Los Alamos Switchgear Substation	850,000												
Install Electric Vehicle Charging Stations (grant funding)	150,000												
Install Advanced Metering Infrastructure	2,455,880												
<b>Natural Gas Distribution</b>	<b>\$2,127,907</b>												
Update Energy & Water Conservation Plan	25,000												
Install Advanced Metering Infrastructure	2,102,907												
<b>Water Distribution</b>	<b>\$1,694,378</b>												
Install Advanced Metering Infrastructure	1,694,378												
<b>Water Production</b>	<b>\$6,535,051</b>												
Update Energy & Water Conservation Plan	25,000												
Construct & Install Otowi 2 Well House, Pump & Equipment	1,680,561												
Replace Chlorination Bldg & Pipeline on NM4 & E. Jemez Rd.	750,000												
Replace Non-potable Booster Station at Overlook Park (grant funding)	800,000												
Stabilize Los Alamos Reservoir Road (grant funding)	2,100,000												
Replace MCC for Pajarito Well 5	376,711												
Replace Engine for Pajarito Well 4	802,779												
<b>Wastewater Treatment</b>	<b>\$2,199,143</b>												
White Rock Replacement Wastewater Treatment Plant - Design	2,199,143												

\*URD - Underground Residential Distribution

Planning & Design   
 Actual Construction 

# FY20 Capital Projects

## Energy & Water Conservation

*(Funded through: Electric & Water Production, Gas Distribution)*

Scope: Hire a consultant to update DPU's 2015 Energy & Water Conservation plan.

Budget: EP \$25,000

GD \$25,000

WP \$25,000

Schedule: Spring 2020



## Electric SCADA

*(Funded through: Electric Production)*

Scope: Upgrade the modems, switches and RTUs of the electric SCADA system to maintain reliable operations.

Budget: \$100,000

Schedule: Summer 2019 through

Spring 2020



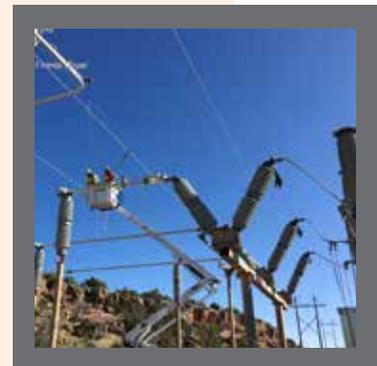
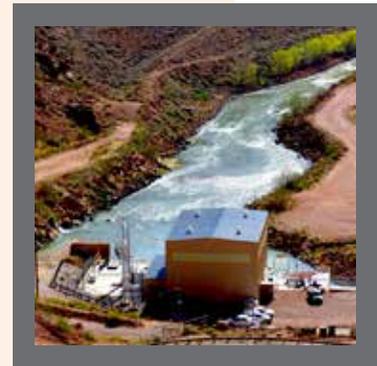
## 3-Ton Jib Crane at Abiquiu

*(Funded through: Electric Production)*

Scope: Install a 3-ton jib crane at the Abiquiu hydroelectric facility to raise and lower gates to the energy dissipating chambers.

Budget: \$140,000

Schedule: Spring 2020



## Underground Residential Distribution - Los Alamos

*(Funded through: Electric Distribution)*

Scope: Replace portions or segments of the prioritized underground residential distribution system in due to three or more failures. Replace old and obsolete live front transformers. Design new loop segments to provide redundancy to radial power lines to minimize number of customers impacted by outages.

Budget: \$100,000

Schedule: Year round

## Underground Residential Distribution - White Rock

*(Funded through: Electric Distribution)*

Scope: Replace portions or segments of the prioritized underground residential distribution system in due to three or more failures. Replace old and obsolete live front transformers. Design new loop segments to provide redundancy to radial power lines to minimize number of customers impacted by outages.

Budget: \$100,000

Schedule: Year round

## Overhead System - Circuit 15, 3-Phase

*(Funded through: Electric Distribution)*

Scope: Replace power poles, cross-arms and revamps (wire & transformer upgrades) of the overhead electric system on circuit 15 in Los Alamos. Priority is placed on the 3-phase backbone and areas affecting the highest number of customers.

Budget: \$100,000

Schedule: Year round

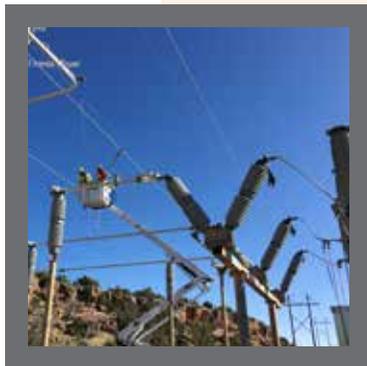
### Overhead System Circuit 1, 3-Phase

*(Funded through: Electric Distribution)*

Scope: Replace power poles, cross-arms and revamps (wire & transformer upgrades) of the overhead electric system on circuit 1 in White Rock. Priority is placed on the 3-phase backbone and areas affecting the highest number of customers.

Budget: \$100,000

Schedule: Year round



### Los Alamos Switchgear Substation (LASS)

*(Funded through: Electric Distribution)*

Scope: Install a neutral reactor. Procure and install new breakers for the LC1 and LC2 circuits of the new DPU switchgear substation installed near the Eco Station on E. Jemez Rd. Once completed, the LASS will provide a second source of electricity to the Los Alamos townsite.

Budget: \$850,000

Schedule: Deferred to FY 2021



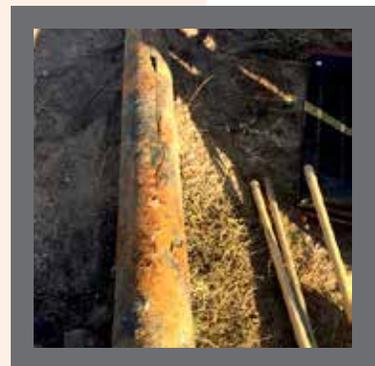
### Electrical Vehicle Charging Stations

*(Funded through: Electric Distribution and grant funding)*

Scope: Install six electric vehicle charges at four different county-owned sites: Municipal Bldg, Mesa Public Library, Nature Center and the White Rock Visitor Center. Chargers will include DC fast chargers and Level Two chargers.

Budget: \$150,000

Schedule: Summer 2020



### Advanced Metering Infrastructure

*(Funded through: Electric, Gas and Water Distribution)*

Scope: Install advanced metering infrastructure to be able to read customers' meters remotely. Install electric smart meters and communication modules to customers' gas and water meters and a data transmission network.

Budget: ED \$2,455,880

GD \$2,102,907

WD \$1,694,378

Schedule: Spring 2019 through fall 2020

### Otowi 2 Well House, Pump & Equipment

*(Funded through Water Production)*

Scope: Design and construct the well house for the new Otowi 2 well. Install electric gear, pump and equipment in the new well house.

Budget: \$1,900,000

Schedule: Design work - winter/spring 2020; Construction - winter/spring 2021.

### Chlorination Bldg and Pipeline on NM State Road 4

*(Funded through Water Production)*

Scope: Replace the water pipeline that crosses NM 4 prior to the NMDOT reconstruction of the NM 4/E. Jemez Rd intersection. Replace the chlorination building in the same area to accommodate a new chlorination system.

Budget: \$750,000

Schedule: Construction - spring 2020

### Non-Potable Water Booster Station at Overlook Park

*(Funded through: Water Production and grant funding)*

Scope: Replace the non-potable water booster station at Overlook Park. Construct a new building and install the electric and mechanical equipment.

Budget: \$800,000 (60% grant/40% loan)  
\$80,000 (county match)

Schedule: Construction - summer/fall 2020



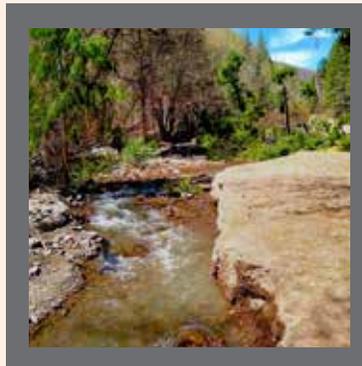
### Los Alamos Reservoir Road

*(Funded through: Water Production and grant funding)*

Scope: Stabilize the Los Alamos Reservoir road. Clear debris from the channel and reroute the channel back to its original path. Seventy-five percent of funding was award through the FEMA Hazard Mitigation Grant Program.

Budget: \$1,575,000 (75% grant)  
\$262,500 (12.5% County)  
\$262,500 (12.5% DPU)

Schedule: Construction - fall 2020



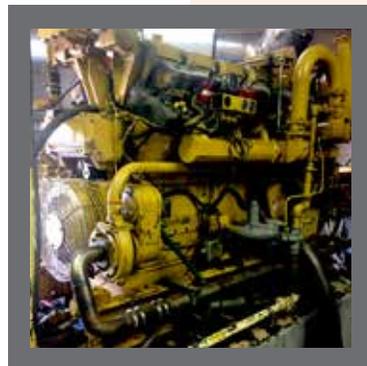
### Motor Control Center at Pajarito Well 5

*(Funded through: Water Production and grant funding)*

Scope: Replace the motor control center equipment at Pajarito Well 5 to meet current codes and maintain reliable service.

Budget: Total \$376,711

Schedule: Construction completed by February 2020



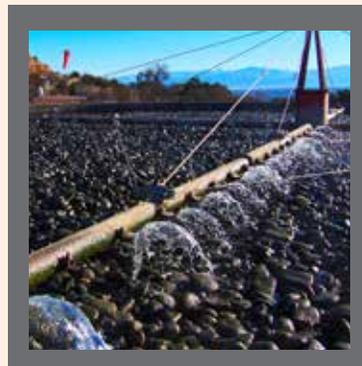
### Engine at Pajarito Well 4

*(Funded through: Water Production and grant funding)*

Scope: Replace the natural gas fueled engine at Pajarito Well 4 after it failed in 2018.

Budget: \$800,000

Schedule: Replace - completed by February 2020



### White Rock Wastewater Treatment Plant

*(Funded through: Wastewater Treatment)*

Scope: Design and construct a replacement White Rock Wastewater Treatment facility to be operational by FY2021.

Budget: \$2,119,143

Schedule: Design - spring/summer 2020.  
Construction - winter/summer 2022



# Sustainability

## Pajarito Environmental Education Center

Los Alamos Department of Public Utilities initially entered into a contract with the Pajarito Environmental Education Center (PEEC) back in 2012 to assist the DPU in the education of energy and energy conservation to the community in accordance with its Energy and Water Conservation plan. PEEC continues this effort today under a new contract that also includes water and water conservation.

Activities carried out by PEEC this past year have reached:

- 4218 connections made with community members about energy and water conservation through interpretive lessons, workshops and events.
- 5093 visitors learned about solar energy through the new interactive exhibit at the Los Alamos Nature Center.
- 2872 student contacts allowed Los Alamos Public School students to engage with water and energy in hands-on lessons in the classroom.
- 1346 people participated in water and energy conservation activities at the Los Alamos Nature Center,

the Los Alamos Science Fest, and other community venues.

- 286 Fourth grad students took part in interactive demonstrations about water at the fourth annual Los Alamos Water Festival.
- 350 visitors attended the electric vehicle show to learn and experience all types of electric vehicles.

This coming year PEEC will extend its outreach by also participating in the Trick-or-Treat Mainstreet Halloween event and enter a float in the Winter Fest Holiday Lights Parade.

## Water and Energy Conservation

For fiscal year 2020 DPU will update the Energy and Water Conservation Plan. DPU maintains a conservation plan for the following three reasons.

- As a public water supplier, the Office of the New Mexico State Engineer (OSE), Conservation Division requires a current water conservation plan be reviewed, approved and filed with their office. The OSE has published a guidance document titled “New Mexico’s Water Conservation Planning Guide for Public Water Suppliers”. The

guidance provides a template which must be adhered to for acceptance by the OSE. We will follow this template for both the water and energy components of the plan.

- As a requirement to receive the County’s allocation of hydroelectric power from Glenn Canyon Dam, the Western Area Power Administration (WAPA) mandates members of annual progress reports that summarize the year’s initiatives and progress in managing the electric demand and supply effectively and efficiently. This includes a conservation plan that establishes DPU’s demand management strategies, initiatives and measurements.
- The third component of the Water and Energy Conservation Plan is establishing conservation initiatives, policy, programs and measures that reflect the community’s demographics, planning efforts, residential and commercial sector and stakeholder interests. In 2015, DPU assembled an advisory group of community stakeholders which is typical in preparation of conservation plans to gather community



input and recommendations on developing the conservation program efforts.

The recommended next step is to begin recruitment of a stakeholder committee which will assemble in a series of work sessions moderated by DPU staff.

Work sessions will introduce the committee to the purpose and need of a water and energy conservation plan, presentation of the DPU sustainability goals as the guiding principles of the committee, provide regulatory and operational support, identify and evaluate the various conservation initiatives available in the industry and ultimately preparation of a series of report with the recommended initiatives and actions to be presented to the Utility Board for acceptance.

Final recommendations from the committee and approved by the Utility Board will be incorporated in the scope of work of a request for proposals for a consultant to

author the conservation plan. We propose the following participants in the stakeholder committee:

- Two Utility Board members
- County building official
- Los Alamos Public Schools
- Resident(s) from White Rock
- Resident(s) from Los Alamos
- Association of Realtors
- Commercial customer(s)
- Others

Tentative schedule:

- January 2020 - Recruit Committee
- February 2020 – April 2020 – Six Committee Meetings
- May 2020 – Present Committee Report to Utility Board
- Issue RFP two weeks after Utility Board Acceptance
- July Utility Board - Award to Consultant
- December 2020 Present Final Water and Energy Conservation Plan to Utility Board

*Photo above (courtesy of PEEC): The Department of Public Utilities hosted an electric vehicle show that was organized and executed by the Pajarito Environmental Education Center as part of their contract to coincide with the Los Alamos Science Fest.*

## Robert Westervelt Deputy Utilities Manager



Finance and Administration handles budgets and financial reporting, rates, customer service including the Customer Care Center, timekeeping and payroll, purchasing and accounts payable, billing collections and administration of metering and rate restructuring initiatives



FY  
20  
Q1

## Finance & Administration

### Electric Operations

In a continuation of what has been seen in the past several years, electric sales were below budget for the first quarter of FY20, both for retail customers and for sales to DOE. Retail sales were 5.83 percent below the budgeted 31,943,601 kWh and sales to DOE were 23.31 percent below the budgeted 166,130,295 kWh. Overall kWh sales for all customers were 20.49 percent below budget.

In electric distribution, the first quarter closed with net operating revenues of \$1,472,092, which is 43.8 percent of the total annual budget. This higher than projected operating revenue for the quarter is due partly to lower cost of power, which was budgeted at \$51.39 per MWH but came in at an average

of \$48.61 per MWH. In addition, the allocation of admin charges and overhead line maintenance charges were both lower than anticipated for the first quarter. Capital expenditures totaled \$41,199, which is only about 3 percent of the \$1.4 million budgeted for FY19.

The first quarter of FY19 yielded total net income of 1,430,892 for electric distribution. Net income of \$1,350,658 is budgeted for the year, which includes the profit transfer. As the department moves forward with planned maintenance activities and capital projects, we should see that early net revenue dissipated over the year to more closely match budget projections.

### Gas Operations

Gas sales in the first quarter were

6.19 percent higher than budgeted for the period, with total sales of 623,869 therms. This variance is within the range of normal seasonal variations. Net cash flow from operations was (\$382,821). It is normal to experience low or even negative net operating income in the warmer months of the year, as routine operating expenses remain relatively consistent throughout the year, while revenues are more seasonal in nature, increasing with colder weather in the fall and winter months.

The cost of gas remained low in the first quarter due to continuing the low market price of gas. The total for the quarter was equivalent to 7 percent of the full FY20 budget for the cost of gas, which is typical for the first quarter of the fiscal year.



For the full fiscal year, gas operations' budgeted operating cash flow is \$2,020,468, and the budgeted transfer to the general fund is \$279,133. There were minimal capital expenditures budgeted in FY20 in the Gas fund totaling \$25,000. The gas fund has total budgeted net income of \$1,716,335.

#### **Water Operations**

Retail water sales at 589,878 kgal were considerably higher than budget estimates of 275,814 for the quarter. We are evaluating to assess if this is a billing anomaly or simply seasonal variation. Wholesale sales to LANL of 103,690 kgal were 1.39 percent less than budgeted. With the more typical weather we have seen this fiscal year, it is reasonable to assume that customers, both retail and LANL, are returning to more normal seasonal consumption patterns, which are higher due to irrigation in the warmer summer months and tend to taper off to primarily domestic use in the fall and winter months. Total sales in thousands of gallons for both Retail and DOE were 82.06

percent higher than budgeted for the quarter due to the abnormally high retail sales which again, staff is looking into.

Net cash flow from water operations were \$647,844 for the quarter. Capital projects totaling \$1,655,000 were budgeted in the water fund for the year, but only \$3,629 has been expended to date, yielding total water net revenues of \$644,215 for the quarter. Water production's budget includes certain projects that are to be funded from other sources, which will only be expended if those funding sources are realized. There are \$775k in revenue funded projects budgeted, but only minimal costs on those projects have been realized as of the end of the first quarter.

For the full fiscal year, water operations' budgeted operating cash flow is \$1,165,483, and budgeted capital expenditures are \$775,000, net of external funding, resulting in budgeted net revenue of \$390,483.

#### **Wastewater Operations**

Cash flow from operations was \$749,832 for the three months ended September 30, 2018. Capital expenditures of \$95,215 yield net sewer revenue of \$654,617 year to date.

For the full fiscal year, wastewater operations' budgeted operating cash flow is \$1,032,569. There were no capital projects budgeted for the year.

NOTE: Budgetary carryovers and adjustments from FY19 have not yet been uploaded into the financial system, and thus are not reflected in this report. Any impact of those adjustments would affect the "Adj. Budgeted Net Income (loss)" line of each division's financial report, but the impact on cash position would be carried over as well, so should not significantly affect the utilities net cash position. These carryover amounts should be available for reporting in the second quarter.

*Photo above: The new Mirador development in White Rock.*



# Natural Gas Rates

## Pass-Through Cost of Gas

Since 2013 the Department of Public Utilities has included a “pass-through” cost of natural gas in its rate. In addition to a monthly service fee, the gas consumption charge comprises a fixed cost recovery fee per therm and a variable cost of gas per therm (pass-through cost). The fixed cost recovery fee includes set distribution maintenance and operation expenses. DPU’s actual cost to purchase the natural gas commodity is passed directly to the customer in the variable cost of gas per therm charge. This price is calculated each month based on the San Juan Index and then adjusted based on the actual cost from the prior month. Customers benefit from this approach as the DPU does not need to maintain a substantial rate stabilization fund to absorb the volatile, fluctuating gas prices. Each month DPU posts the new variable cost of gas rate on the website at: [Rebrand.ly/DPUGasRateSchedule](http://Rebrand.ly/DPUGasRateSchedule)

## The Total Gas Charge Comprises Three Components

(1. Monthly Service Charge) + [(2. Fixed Cost Recovery Fee + 3. Variable Cost of Gas) x Total Therms] = Total Charged

## Schedule of Customers

7A: Residential    7E: Commercial    7L: County    7N: Schools

### 1 Monthly Service Charge

Schedule	Meter Rated	Charge
ALL	≤ 250 CFH	\$ 9.50
ALL	> 250 CFH	\$28.50

### 2 Fixed Cost Recovery Fee/Therm

Schedule	Fee/Therm
7A & 7E	\$0.23
7L & 7N	\$0.20

### 3 Variable Cost of Gas (Pass-Through Rate)/Therm

Month	Schedule	Projected Variable Cost of Gas	Adjustment to Prior Month Estimate	Total Variable Cost of Gas/Therm
Sep 2019	ALL	\$0.21	\$0.00	\$0.21
Aug 2019	ALL	\$0.23	\$0.03	\$0.26
Jul 2019	ALL	\$0.24	\$0.11	\$0.35



# \$35.90

Example for a Residential Family (7A) that used 60 therms in September 2019.  
 Monthly Fee + [(Fixed Cost + Variable Cost) x Therms] = Total Charged  
 $\$9.50 + [(\$0.23 + \$0.21) \times 60] = \$35.90$



# \$138.50

Example of a Commercial Customer (7E) that used 250 therms in September 2019.  
 Monthly Fee + [(Fixed Cost + Variable Cost) x Therms] = Total Charged  
 $\$28.50 + [(\$0.23 + \$0.21) \times 250] = \$138.50$

**DPU Rates Compared to Neighboring Communities**

When comparing the variable cost of gas or the pass-through rate with the rates of New Mexico Gas Company, DPU's rates are usually lower. Savings that DPU receives through its membership in the New Mexico Municipal Energy Acquisition Authority (NMMEAA) are passed directly to customers. NMMEAA was created by local governments and retains the Royal Bank of Canada as its financial advisor.

Variable Cost of Gas/Therm		
FY 2019	DPU	NMGC*
Sep 2019	\$0.21	\$0.26
Aug 2019	\$0.26	\$0.26
Jul 2019	\$0.35	\$0.25

\*New Mexico Gas Company  
Source: [https://www.nmgco.com/en/cost\\_of\\_gas](https://www.nmgco.com/en/cost_of_gas)

**Actual Cost and Delivery of Natural Gas to Los Alamos**

Graphs to the right, depict the DPU's total costs and quantity of natural gas delivered to meet Los Alamos County's demand. Each chart includes the monthly estimate in 2019, and monthly 2019 and 2018 actuals for the quarter.

- Estimate 2019
- Actual 2019
- Actual 2018

**Cost**

San Juan Index/MMBTU

	2019	2018
Sep	\$1.73	\$2.15
Aug	\$1.87	\$2.40
Jul	\$1.85	\$2.13

Total Cost of Gas for Q1

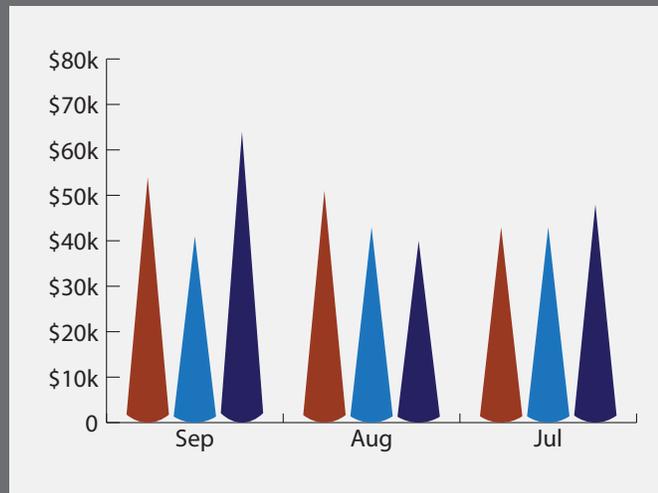
	2019	2018
Sep	\$41,114	\$63,508
Aug	\$42,656	\$40,014
Jul	\$42,851	\$47,602
Total	\$126,621	\$151,124

**Usage**

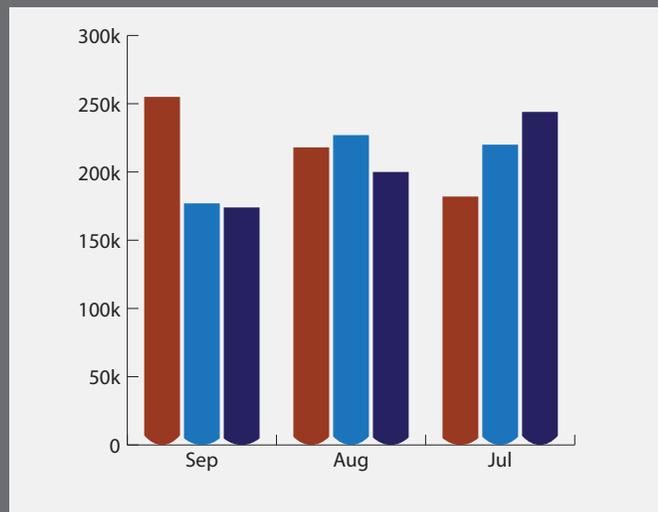
Total Therms Delivered for Q1

	2019	2018
Sep	176,512	174,011
Aug	227,285	200,414
Jul	220,055	243,901
Total	623,852	618,326

**DPU's Cost of Natural Gas**



**Therms Delivered to Los Alamos**





# Electric Operations

Financial Status - Unaudited // FY2020

		QTR1	QTR2	QTR3	QTR4	Total
Unit Sales	<b>Retail Electric (kWh)</b>					
	Total Retail Sales	30,080,919				30,080,919
	Budgeted Sales	31,943,601				31,943,601
	Retail Sales Variance	(1,862,682)				(1,862,682)
	Sales To NNSA	127,399,826				127,399,826
	Budgeted Sales To NNSA	166,130,295				166,130,295
	NNSA Sales Variance	(38,730,469)				(38,730,469)
	Other Wholesale Sales	2,250,449				2,250,449
	Budgeted Other Wholesale Sales	2,718,000				2,718,000
	Wholesale Sales Variance	(467,551)				(467,551)
	Total Actual Sales	157,480,745				157,480,745
Total Budgeted Sales	198,073,896				198,073,896	
Total Sales Variance	(40,593,151)				(40,593,151)	
Financial Results	Electric Dist. Revenues	4,548,266				4,548,266
	Total Electric Production Expenditures	7,030,584				7,030,584
	Total Electric Production Revenues	5,285,937				5,285,937
	Net Cost Of Power To Electric Dist.	1,744,647				1,744,647
	Other Electric Dist. Operating Expenses	1,331,261				1,331,216
	Total Electric Dist. Operating Expenses	3,075,863				3,075,863
	Net Electric Dist. Operating Revenue	1,472,402				1,472,402
	Electric Dist. Capital Expenses	41,199				41,199
Net Electric Dist. Total Revenue	1,431,203				1,431,203	
Budgeted	Budgeted Operating Income(Loss)					\$3,361,393
	Budgeted Capital Expenditures					(\$1,400,000)
	5% Revenue Transfer					(\$610,735)
	Budgeted Net Income(Loss)					\$1,350,658
	Budget Adjustments*					0
Adj. Budgeted Net Income (Loss)					\$1,350,658	

\* Includes carryforward project amounts, encumbrance rollovers and board/council approved budget adjustments.

# Natural Gas Operations

Financial Status - Unaudited // FY2020

	QTR1	QTR2	QTR3	QTR4	Total
<b>Unit Sales</b>	<b>Retail Sales - Therms (100,000 BTU)</b>				
	Total Sales	623,853			623,853
	Budgeted Sales	587,490			587,490
	Retail Sales Variance	36,363			36,363
<b>Financial Results</b>	Gas Distribution Revenues	\$566,388			\$566,388
	Gas Other Revenues	\$39,037			\$39,037
	Gas Distribution Operating Expenses	\$988,245			\$988,245
	Net Gas Operating Revenues	(\$382,821)			(\$382,821)
	Gas Distrib. Capital Expenditures	\$7,100			\$7,100
	Net Gas Revenue	(\$389,921)			(\$389,921)
<b>Budgeted</b>	Budgeted Operating Income(Loss)				\$2,020,468
	Budgeted Capital Expenditures				(\$25,000)
	5% Revenue Transfer				(\$279,133)
	Budgeted Net Gas Income(Loss)				\$1,716,335
	Budget Adjustments*				\$0
Adj. Budgeted Net Gas Income (Loss)				\$1,716,335	

\*Includes carryforward project amounts, encumbrance rollovers and board/council approved budget adjustments.



# Water Operations

Financial Status - Unaudited // FY2020

	QTR1	QTR2	QTR3	QTR4	Total	
<b>Unit Sales</b>	<b>Water Sales In Thousand Gallons</b>					
	Wholesale Sales To LANL	84,319				84,319
	Budgeted Wholesale Sales	105,149				105,149
	Retail Sales	589,878				589,878
	Budgeted Retail Sales	275,814				275,814
	Total Sales	674,197				674,197
	Total Budgeted Sales	380,963				380,963
	Sales Variance, In Thousand Gallons	293,234				293,234
<b>Financial Results</b>	Wholesale Revenues	\$1,810,810				\$1,810,810
	Retail Revenues	\$1,930,430				\$1,930,430
	Other Revenues	(\$32,712)				(\$32,712)
	Total Water Revenues	\$3,708,528				\$3,708,528
	Water Prod. Operating Expenses	\$762,214				\$762,214
	Water Dist. Operating Expenses	\$2,281,168				\$2,281,168
	Total Water Operating Expenses	\$3,043,382				\$3,043,382
	Net Water Operating Revenues	\$665,146				\$665,146
	Water Production Capital	\$79				\$79
	Water Distribution Capital	\$3,550				\$3,550
Total Capital Expenditures	\$3,629				\$3,629	
Net Water Revenues	\$661,517				\$661,517	
<b>Budgeted</b>	Budgeted Operating Income(Loss)					\$1,165,483
	Budgeted Capital Expenditures					(\$1,655,000)
	Budgeted Grant/Loan/GF Transfers					\$880,000
	Budgeted Net Water Income(Loss)					\$390,483
	Budget Adjustments*					\$0
Adj. Budgeted Net Water Income (Loss)					\$390,483	

\*Includes carryforward project amounts, encumbrance rollovers and board/council approved budget adjustments.

# Wastewater Operations

Financial Status - Unaudited // FY2020

	QTR1	QTR2	QTR3	QTR4	Total
<b>Unit Sales</b>	<b>Sewer Treated In Thousand Gallons</b>				
	Total Treated	113,414			113,414
	Budget Treated	114,658			114,658
	Variance (Thousands Of Gallons)	(1,244)			(1,244)
<b>Financial Results</b>	Sewer Revenues	\$1,560,235			\$1,560,235
	Sewer Misc. Revenues	\$49,237			\$49,237
	Sewer Operating Expenses	\$859,641			\$859,641
	Net Sewer Operating Revenues	\$749,832			\$749,832
	Sewer Capital Expenditures	\$95,215			\$95,215
	Net Sewer Revenue	\$654,617			\$654,617
<b>Budgeted</b>	Budgeted Operating Income(Loss)				\$1,032,569
	Budgeted Capital Expenditures				\$0
	Budgeted Net Wastewater Income(Loss)				\$1,032,569
	Budget Adjustments*				\$0
	Adj. Budgeted Net Wastewater Income (Loss)				\$1,032,569

\* Includes carryforward project amounts, encumbrance rollovers and board/council approved budget adjustments.



# Electric Consumption

Financial Status - Unaudited // FY2020

		QTR1	QTR2	QTR3	QTR4	Total
Electric Revenues	Residential	\$1,723,960				\$1,723,960
	Private Area Lights	\$3,317				\$3,317
	Commercial	\$1,261,018				\$1,261,018
	Municipal	\$424,322				\$424,322
	Water Production	\$106,884				\$106,884
	Educational	\$117,155				\$117,155
	Pole Rentals	\$0				\$0
	Misc/Backcharges	\$7,042				\$7,042
	TOTAL	\$3,643,698				\$3,643,698
Electric Sales (kWh)	Residential	13,401,795				13,401,795
	Private Area Lights	9,354				9,354
	Commercial	10,566,002				10,566,002
	Municipal	2,776,901				2,776,901
	Water Production	2,250,449				2,250,449
	Educational	1,076,418				1,076,418
		TOTAL	30,080,919			
Billed Locations (Average)	Residential	7,598				7,598
	Commercial	635				635
	Municipal	162				162
	Educational	57				57
		TOTAL	8,452			
Revenue/kWh (Average)	Residential	\$0.1286				\$0.1286
	Private Area Lights	\$0.3546				\$0.3546
	Commercial	\$0.1193				\$0.1193
	Municipal	\$0.1528				\$0.1528
	Water Production	\$0.0475				\$0.0475
	Educational	\$0.1088				\$0.1088
		AVERAGE	\$0.1209			
Loss Calculation	Power Recv'd, kWh	31,074,574				31,074,574
	PV Power Recv'd, kWh	244,376				244,376
	Qtrly Losses <Gains>, kWh	1,238,031				1,238,031
	% Qtrly Losses <Gains>	3.95%				3.95%
	YTD CUMM LOSSES <Gains>	3.95%				3.95%

# Natural Gas Consumption

Financial Status - Unaudited // FY2020

		QTR1	QTR2	QTR3	QTR4	Total
<b>Gas Revenues</b>	Residential	\$386,505				\$386,505
	Commercial	\$125,597				\$125,597
	TA-3 Sales	\$0				\$0
	Municipal	\$16,210				\$16,210
	Water Production	\$11				\$11
	Educational	\$10,639				\$10,639
	Misc/Backcharges	\$27,426				\$27,426
	TOTAL	\$566,388				\$566,388
<b>Gas Sales (Therms)</b>	Residential	398,822				398,822
	Commercial	176,558				176,558
	TA-3 Sales	0				0
	Municipal	28,627				28,627
	Water Production	46				46
	Educational	19,800				19,800
	TOTAL	623,853				623,853
	<b>Billed Locations (Average)</b>	Residential	6,812			
Commercial		364				364
Municipal		45				45
Educational		22				22
TOTAL		7,244				7,244
<b>Revenue / Therm (Average)</b>	Residential	\$0.9691				\$0.9691
	Commercial	\$0.7114				\$0.7114
	TA-3	\$0.0000				\$0.0000
	Municipal	\$0.5662				\$0.5662
	Water Production	\$0.2477				\$0.2477
	Educational	\$0.5373				\$0.5373
	AVERAGE	\$0.8639				\$0.8639
<b>Loss Calculation</b>	Gas Recv'd, Therms	618,990				618,990
	Qtrly Losses <Gains>, Therms	(4,863)				(4,863)
	% Qtrly Losses <Gains>	(0.79%)				(0.79%)
	YTD CUMM LOSSES <Gains>	(0.79%)				(0.79%)



# Water Consumption

Financial Status - Unaudited // FY2020

		QTR1	QTR2	QTR3	QTR4	Total
<b>Water Revenues</b>	Residential	\$1,464,465				\$1,464,465
	Commercial	\$185,982				\$185,982
	Municipal	\$124,987				\$124,987
	Educational	\$102,064				\$102,064
	Misc/Backcharges	\$52,933				\$52,933
	TOTAL	\$1,930,430				\$1,930,430
<b>Water Sales (KGal)</b>	Residential	450,495				450,495
	Commercial	60,845				60,845
	Municipal	43,933				43,933
	Educational	34,607				34,607
	TOTAL	589,878				589,878
<b>Billed Locations (Average)</b>	Residential	6,360				6,360
	Commercial	273				273
	Municipal	88				88
	Educational	24				24
	TOTAL	6,744				6,744
<b>Revenue/KGal (Average)</b>	Residential	\$3.2508				\$3.2508
	Commercial	\$3.0567				\$3.0567
	Municipal	\$2.8450				\$2.8450
	Educational	\$2.9493				\$2.9493
	AVERAGE	\$3.1829				\$3.1829
<b>Loss Calculation</b>	Water Recv'd, KGal	355,541				355,541
	Qtrly Losses <Gains> KGal	(234,337)				(234,337)
	% Qtrly Losses <Gains>	(65.91%)				(65.91%)
	YTD CUMM LOSSES <Gains>	(65.91%)				(65.91%)

# Wastewater Treated

Financial Status - Unaudited // FY2020

		QTR1	QTR2	QTR3	QTR4	Total
<b>Sewer Revenues</b>	All Retail	\$1,437,385				\$1,437,385
	Municipal/Effluent*	\$122,850				\$122,850
	Misc/Backcharges	\$0				\$0
	<b>TOTAL</b>	<b>\$1,560,235</b>				<b>\$1,560,235</b>
<b>Sewage Treated (KGal)</b>	Los Alamos	87,354				87,354
	White Rock	26,060				26,060
	<b>TOTAL TREATED</b>	<b>113,414</b>				<b>113,414</b>
	REVENUE/KGal Treated	\$13.76				\$13.76

\* Effluent revenue is reported on the financial statements under Water Production

FISCAL YEAR

20

 **LOS ALAMOS**   
Department of Public Utilities

Municipal Building  
1000 Central Avenue, Suite 130  
Los Alamos, NM 87544  
[www.ladpu.com/dpu](http://www.ladpu.com/dpu)