



BOARD OF PUBLIC UTILITIES

ADDITIONAL MEETING DOCUMENTS

Additional or revised information or documents are often passed out to the Board at the meetings.
Whenever possible, this informational cover page will accompany those documents.

MAKE 20 COPIES OF ANY DOCUMENTS, INCLUDING THIS COVER SHEET, AND RETURN TO JAIME KEPHART PRIOR TO THE MEETING.

MEETING DATE	02/15/2018
AGENDA ITEM	4.G.1 Review of Department of Public Utilities Quarterly Report
DOCUMENT TITLE(S)	FY2018 Q2 Quarterly Report
FROM	Julie Williams-Hill, Public Relations Manager
NEW OR REVISED? Is this a revision that is different from what was in the agenda packet or is it something entirely new?	New
RECOMMENDED ACTION If you have a new or revised recommended motion for the Board, enter it here.	<u>N/A</u>
ADDITIONAL INFORMATION Please VERY BRIEFLY explain the purpose of this information or document.	The Quarterly Report was not yet ready at the time of agenda publication.



QR 02/FY 18

Issued Feb. 2018

Quarterly Performance



Los Alamos Department of Public Utilities held an "all-hands" meeting for DPU employees on October 6, 2018 to review the strategic objectives for fiscal year 2018.



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Timothy A. Glasco
Utilities Manager

MANAGER STATEMENT

QR 2// 2018



The Board of Public Utilities (BPU) and the County Council discussed concerns related to the lack of sufficient funds to replace the aging wastewater treatment plant in White Rock. During those discussions, the idea of transferring money between utilities funds was examined. Even though the County ordinance forbids the use of money from one utility fund to subsidize another, DPU is in a unique situation in that the natural gas fund has an excess of approximately \$2.5 million dollars beyond the reserves required by the BPU financial reserves policy. These excess funds were due to the adoption of a pass-through cost of natural gas rate, which meant that the DPU did not need to maintain rate stabilization reserves

anymore. The BPU requested the Council to revise the ordinance to permit such a transfer to occur only with approval of both the BPU and Council. This was thought to provide enough protection that such transfers would not be abused in the future and would be made only under the most extraordinary of circumstances. The ordinance was passed by the Council in November, and took effect in December. With the transfer of these funds to the wastewater fund, DPU will be able to move forward with a replacement facility in White Rock without having to significantly raise rates.

At the meeting of the Project Management committee for the Carbon Free Power Project at the Utah Associated Municipal Power Systems (UAMPS) conference in December, the Power Sales Contract (PSC) and the Budget and Plan of Finance were adopted. These documents must now be approved by each memberships' governing bodies, amounting to at least 150 MW of subscription before they may take effect. Public meetings as well as joint meetings of the Council and the BPU are scheduled for the third quarter of FY2018 to discuss our possible continued participation in this project. Adoption of the PSC would obligate the County to stay in the project through completion of the licensing phase, which is the preparation of the Combined Operating and Licensing Application (COLA). This carries a financial commitment from as little as \$500,000 to as much as \$3,000,000, depending on future subscriptions and DOE cost sharing. Our decision must be made no later than April 2018.

The Department of Energy, Environmental Programs Office, presented a status of the chromium plume detected



in the regional aquifer to a subcommittee of the New Mexico legislature in November. Unfortunately, while the DOE stated that hexavalent chromium contamination was present at certain places in the same aquifer from which we draw our drinking water, the news media reported that our drinking water was contaminated. This resulted in a great deal of public concern and the need to issue a joint statement with the Department of Energy, Environmental Programs Office, correcting the false information. The news organization broadcast a new story stating that Los Alamos drinking water was not contaminated and safe to drink. We followed with public meetings in Los Alamos before a civic organization and the County Council and before the Northern New Mexico Citizens Advisory Board in Espanola.

At the end of the year's power generation run in December at the El Vado hydroelectric plant, our operators detected a large deficit of approximately 45 gallons of oil in the generating unit. Further investigation revealed leaks in several places around the newly installed turbine blades. The refurbishment contractor, JR Merritt, was notified as the unit was still under warranty from the recent work. As of this writing, the unit is still off line and representatives of JR Merritt and Voith, the turbine manufacturer, are scheduled to come on site and inspect the unit. In the worst case, the unit will have to be removed from the dam and sent off for further repairs.

In late November, an outage on one of the two electric feeder lines from the Los Alamos National Laboratory caused a ripple outage through our system. Ultimately, we lost the entire townsite for approximately two hours.

By the time power was restored, our System Average Interruption Duration Index, or SAIDI, went from 21 minutes to 2 hours and 5 minutes. After this very long outage, the electric distribution division went through a very comprehensive root cause analysis to hopefully prevent another recurrence of this type of failure. When the new Los Alamos Switchgear Substation comes on line in the summer of 2018, DPU will have additional redundancy. This will allow crews to reduce the number of customers affected and shorten the duration of the outage.

Nominations were collected from DPU divisions, and the selected Safety Employee of the Quarter for the 2nd quarter of FY18 is Water Production Division Electrician **Gary Trujillo**. Nominated by Water Production Superintendent Wayne Witten, Gary along with his partner Joel Martinez, work on electric power and controls equipment for the water production system, the wastewater treatment plants and wastewater collection system lift stations. This work involves a variety of equipment, voltages and locations. Much of the equipment is very old and was manufactured before many of our modern safety codes were in effect. Since this work is necessarily mostly performed while the power is on, a safe approach to each job is more important than ever. Gary has demonstrated an exemplary dedication to examination of each job for its unique safety requirements, consistent use of PPE and a general overall safety consciousness in everything he does. Mr. Witten noted that during the two-plus years Gary has worked for the DPU, he has not had any safety incidents or even any safety concerns noted with his work. Congratulations to Gary Trujillo on this well-deserved honor.

Previous page: Utilities Manager Tim Glasco presents Gas, Water and Sewer Shop Supervisor Jeff Romero with a Los Alamos County certificate of gratitude for 20 years of dedicated service.

This page: Every Christmas, DPU employees generously sponsor a family in need and donate Christmas presents. December 2017 was no different.



// BACKGROUND & PURPOSE //

**DEPARTMENT 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 5 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.

VALUES - We value our:

- **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.

// SAFETY EMPLOYEE OF 2ND QR FY18 //



GARY TRUJILLO, ELECTRICIAN
WATER PRODUCTION

Safety Employee of the Quarter program was developed by the Utilities Safety Committee to reward those who most clearly and effectively demonstrate DPU's Safety Culture Vision.

FOCUS, GOALS & OBJECTIVES

Operations and Performance: Provide safe and reliable utility services.

- Deliver safe water efficiently & reliably,
- Reduce unaccounted for water to less than half the national average by 2030,
- Deliver gas efficiently, safely & reliably,
- Collect & treat sewage efficiently, safely & reliably,
- Reduce sewer overflows per 100 miles of mainline pipe to less than half the national average by 2035,

- Produce & deliver electricity efficiently, safely, & reliably,
- Implement & maintain efficient, safe, secure & reliable business systems,
- Ensure utility controls, mapping systems & processes are accurate, safe & secure,
- Develop a culture of continuous improvement.

Financial Performance: Achieve & maintain excellence in financial performance.

- Utilize revenues to provide a high level of service, keeping rates competitive,
- Conduct cost of service studies for each utility every five years,
- Meet financial plan targets by 2025.

Customers and Community: Be a customer-service-oriented organization - communicative, efficient, & transparent.

- Ensure customer service processes & systems are efficient & user-friendly,
- Engage & inform stakeholders on operations that affect the community.

Workforce: Sustain a capable, satisfied, engaged,

ethical, safe workforce that is customer focused.

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

Environmental Sustainability: Achieve environmental sustainability.

- Be a carbon neutral electric provider by 2040,
- Promote energy efficiency through targeted conservation programs,

- Reduce per capita per day potable water use by 9% by 2030,
- Improve heating efficiency to reduce gas usage by 3% by 2030,
- Provide class 1A effluent water in White Rock by 2020.

Partnerships: Develop and strengthen partnerships with stakeholders.

- Communicate with stakeholders to identify potential mutually beneficial partnering opportunities,
- Communicate with stakeholders to strengthen existing partnerships.

PAST SAFETY EMPLOYEES OF THE QUARTER

fy17
QR1

Estevan Garcia
Gas, Water & Sewer



fy17
QR3

David Rodriguez
Gas, Water & Sewer



fy17
QR4

Rick Herrera
Water Production



fy18
QR1

Eric Sanchez
Electric Distribution



SAFETY CULTURE VISION

In 2012, the Board of Public Utilities adopted a safeTy culture vision.

Its goal is to promote how safety is managed in the workplace by creating a work environment which reflect the attitudes, beliefs, perceptions and values that employees share when it comes to safety.

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:

- **Safety is First**
- **Leading by Example**
- **Establishing and Enforcing a High Standard of Work Performance**
- **Briefing or Tailgating before every job**
- **Making Work and Safety Suggestions.**





Rafael De La Torre
Deputy Utilities Manager

Standard utility easements vary from 10 to 20 feet for the purpose of installing, operating, maintaining, repairing, replacing and servicing all utility appurtenances. This allowance doesn't account for potential threats outside of the easement. Accordingly, during their routine inspections crews are now assessing and addressing possible hazards outside the powerline right-of-way to prevent future power outages.

Speaking of power outages, on November 24, (Black Friday or as some staff like to refer to it, "black-out Friday") we lost power to the Los Alamos townsite for about two hours. An underground power line from Los Alamos National Laboratory that serves Los Alamos County failed. Even though the failed line was beyond the control and jurisdiction of the electric distribution crews, the outage duration and the broad scope of affected customers negatively impacted DPU's System Average Interruption Duration Index (SAIDI) to above two hours. For the last six years, DPU has successfully worked to lower our SAIDI from more than five hours to below 30 minutes. In an instant, we found ourselves once again above two hours.

ELECTRIC DISTRIBUTION

QR 2// 2018



The Electric Distribution division ramped up its tree trimming effort early this year in anticipation of the winter season. Although we have not had to battle wet snow weighing tree branches onto power lines, we are dealing with something just as challenging: Tall, dead trees that are outside of the powerline right-of-way and are at risk of falling on power lines.

In January such an incident occurred. A dead tree over 100 feet tall toppled onto the ski-hill powerline resulting in a power outage. The tree was well outside of the utility easement and was not detected during the crews' earlier inspection.

I have been quick to remind us all that we are always subject to one bad power outage that will adversely affect the SAIDI for the year. Having a single substation source for Los Alamos has its limitations, and is the primary reason behind the construction of the department's new Los Alamos Switchgear Substation (LASS). The LASS will add redundancy to the electric distribution system to reduce the scope and duration of power outages. It



will power approximately half of the Los Alamos townsite and provide the department flexibility in containing power outages when they do occur. Had the LASS been operational during the Black Friday outage, only half the town would have been affected and the power could have been restored within 30 minutes! The LASS is scheduled to be delivered this coming quarter. Our electric distribution crews look forward to installing, coordinating settings, and energizing the new LASS. Stay tuned for additional updates.

This past quarter we replaced and looped a power line segment that failed several times near the Smith's shopping center in White Rock. Additionally, we replaced the vast majority of the power system behind the Los Alamos Medical Center because of a recent power outage that affected only the hospital. This system was also looped.

The segments of power line that failed in both locations were "direct-buried," which means that the cable was buried underground without any kind of protective covering, sheathing or piping. This was the norm during the 1970s. New power lines are made with better conductors and shielding, and we install them inside a conduit system. These improvements ensure that if the power lines fails 50 years from now, the failed wire can be pulled out of the conduit system easily.

These and other power line replacements are prioritized based on the number of failures, critical facilities, and the

number of customers impacted. I would like to emphasize that preventive operation and maintenance activities comprise most of our daily work.

Results from the pole attachment and safety audit were completed just in time for the department to sign a new pole attachment agreement with one of the attaching telecom/cable utility companies. This audit information will be the basis for all new agreements with all attaching

telecom/cable utilities. Favorable to both parties, the new agreement guarantees that safety issues are prioritized and corrected for the benefit of our employees and customers.

As we move into the coming quarter, we will continue to progress with the LASS project and will start with an upgrade project to the White Rock substation to improve reliability into the future.

I have been quick to remind us all that we are always subject to one bad power outage that will adversely affect the SAIDI for the year.

Previous page and this page: The new Los Alamos Switchgear Substation (LASS) was inspected at the factory. Once delivered, electric distribution crews look forward to installing, coordinating settings, and energizing it.





The new Los Alamos Switchgear Substation was inspected at the factory.



// PERFORMANCE //

SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

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 that year to reduce its SAIDI to below 60 minutes (including major events). The SAIDI went from below 30 minutes at the end of the 1st quarter this year, spiking up to 129 minutes by the end of the 2nd quarter. As a point of reference, in 2012 the mean SAIDI was 143.1 minutes without major events and 372.2 minutes with major events for 195

utilities across the nation per an August 2015 report issued by the Lawrence Berkeley National Laboratory, ("Assessing Changes in the Reliability of the U.S. Electric Power System.")

<https://emp.lbl.gov/sites/all/files/lbnl-188741.pdf#page=44>.

**BY THE END OF
FY18's 2nd QUARTER
DPU'S SAIDI SPIKED UP
TO 129 MINUTES**



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 generations systems.

NEW DISTRIBUTED GENERATION

An additional 58kW of distributed generation were added by residential customers to DPU's electric distribution grid.

58kW

TOTAL DISTRIBUTED GENERATION

As of the 2nd quarter, distributed generation resources totaled 646 kW. Residential systems totaled 483 kW and commercial systems totaled 162 kW.

646kW

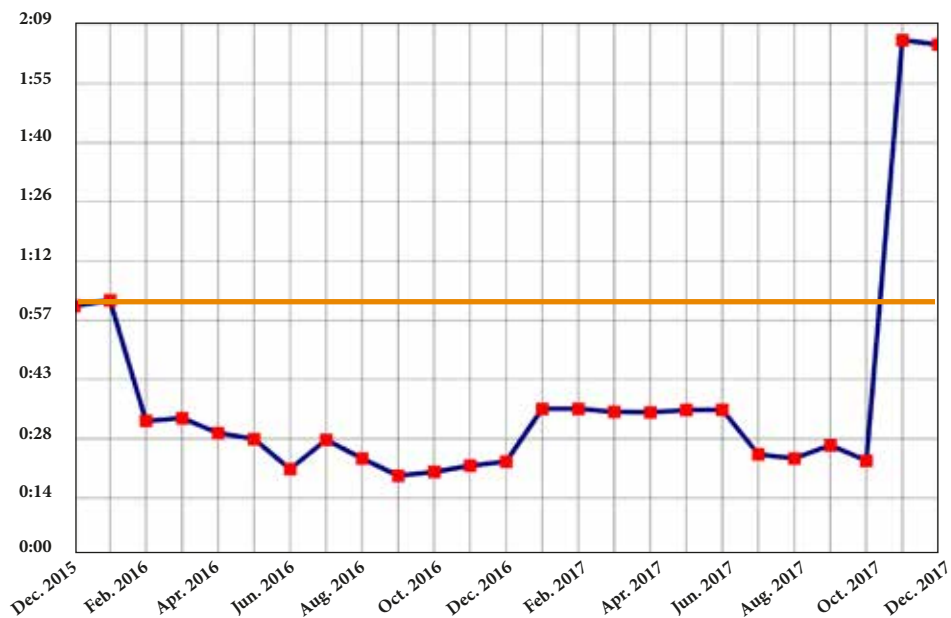
PENDING DISTRIBUTED GENERATION

Currently nine residential customers are in the process of adding 47kW of distributed generation to DPU's electric grid.

47kW



SYSTEM AVERAGE INTERRUPTION DURATION INDEX



DPU goal of less than 60 minutes.

DPU's SAIDI



Jack Richardson
Deputy Utilities Manager

GAS, WATER AND SEWER

QR 2// 2018



It will be interesting to analyze the impact of the extreme weather exhibited so far this year on both natural gas and water sales. While natural gas sales are expected to be down due to minimal precipitation and warmer weather, water sales (both potable and nonpotable) may be up in FY18. Customers are irrigating landscapes to make up for the lack of snow.

The major restructuring of the Department of Public Utilities' Geographic Information Systems (GIS) data sets for the Gas, Water and Sewer (GWS) division continued again this quarter. The new GIS data sets being developed are expected to improve asset management

and cartographic reporting capabilities for the five GWS divisions.

GWS hired a replacement for the open limited-term position this quarter, with congratulations to Antonio Pena. Antonio has quickly become a welcome and effective crew member.

Gas, Water, Sewer (GWS)

Despite repeated problems with new nonpotable water meters received from the supplier, GWS supervisory and field staff have completed the installation of new meters at all major nonpotable system user sites. Engineering staff, who oversee the Supervisor Control And Data Acquisition (SCADA) system, is finalizing the work necessary to launch full SCADA-enabled meter reading for all major nonpotable meters at the start of the upcoming irrigation season.

In-house staff completed the annual gas leak survey and the annual grease trap inspection program. Off the south edge of Barranca Mesa, halfway down the canyon drop below San Juan, a broken clay pipe caused a sewer overflow event. A significant effort just to access this pipeline break required heavy machinery and close quarters access across private property. After a major five-day effort, crews repaired the pipe.

One benefit to the warm weather has been that our water pipelines have not broken due to the annual cold snap as



often occurs this time of year.

Water Production

Actual drilling for the new deep well, Otowi Well # 2, started this quarter. Unfortunately, drilling hit a snag when the drill rig lost circulation of mud into a sub-surface basalt stratum with fissures. Drilling has stopped while the driller changes equipment to an air rotary type method.

Roof and other structural repairs have been completed at the Otowi Booster Station # 2. The unusual warm weather has resulted in the golf course personnel requesting irrigation water throughout this quarter. Water production staff is able to use the nonpotable water system to meet these requests, without losing water due to freeze protection drain offs. This is because of a capital improvement project completed in FY16 that placed the nonpotable pipeline that rises to the top of North Mesa underground.

Wastewater Treatment

The transfer of \$2.5 million from the natural gas fund to the wastewater fund for buying down existing debt of the Los Alamos wastewater treatment plant was approved by both the Board of Public Utilities and the County Council. The White Rock wastewater treatment plant replacement project is being budgeted for design in FY 2019 with construction to start in FY 2020. Recirculation pumps for

the White Rock wastewater treatment plant were received this quarter. The pumps should allow adequate service until the new plant is up and running some time in 2020. The anticipated budget for major capital improvement projects to the Los Alamos plant is deferred for three years while the White Rock replacement plant progresses. A separate budget strategy of applying annual operations and maintenance funds for necessary repairs and replacement of equipment at the Los Alamos facility is being substituted

in lieu of a single large CIP project to handle current deficiencies.

DPU received an email from a customer thanking our newest meter reader, Terry Martinez. Terry provided outstanding customer service in working with a customer to find a water meter verified leak.

Meter Reading

Negotiations for the advanced metering infrastructure (AMI) contract are continuing. The meter reading staff continue the daily rounds. DPU received an email from a customer thanking our newest meter reader, Terry Martinez. Terry provided outstanding customer service in working with a customer to find a water-meter-verified leak. He then provided information on how the customer could get the leak repaired. A big thank you to Terry and the entire meter reading crew for helping to be the face of the DPU with our customers.

Previous page: Staff from the gas, water and sewer division.

This page: Trickling filter at the White Rock wastewater treatment. Plant is scheduled to be replaced in 2020.





James Alarid
Deputy Utilities Manager

ENGINEERING DIVISION

QR 2// 2018



The Department of Public Utilities is drilling its first water supply well, whereas all the existing wells were transferred to the county from the Department of Energy as part of the water production system in 2000. Site work, including grading and drilling pad preparation, began in November 2017. Drilling began in January of 2018. Currently, work has come to a halt as the contractor is changing its drilling method from a rotary mud operation to a rotary air operation due to loss of drilling mud circulation. The change will result in a one month delay in the project.

An invitation to bid was advertised this quarter for construction of the pipeline to connect the new Otowi

Well #2 to the existing water transmission system. Ten bids were received and the project will be awarded in late February 2018. Construction is scheduled to begin in April 2018. One additional project remains to bring the new well online. A design-build contract will be executed to construct the new well house and equip the well with pumps and electric gear. The well will have a natural gas back-up generator which can operate during power outages and around the clock during peak demand to avoid electric peaking charges that can cost tens of thousands of dollars. This last project will occur after the well drilling is complete and the well is tested allowing the pumps and associated equipment to be sized accordingly.

Our department is managing the design and environmental approvals for the new Camp May waterline project. Design is ongoing for a new system to pump potable water from an existing water tank located along West Jemez Road up to the Pajarito Ski Lodge. Four new booster stations, a new water tank and 4.3 miles of waterline will convey water for fire protection, domestic water and snow making. Design will be finalized by May 2018. On March 1 an environmental scoping meeting will be held as part of the environmental review process required by the U.S. Forest Service.

Construction began in January on the replacement non-potable waterline from the Los Alamos Reservoir. Approximately 7,000 feet of 10-inch waterline will be installed in the dirt access road to replace the existing



waterline that was damaged beyond repair by repeated flooding since 2000. Work has progressed well due to mild winter weather. The pipeline will be complete as early as May 2018 if the weather continues to be mild.

After a public meeting on November 13, 2017 and approval by the Board of Public Utilities on January 17, 2018, the County Council adopted the updated revised Long-Range Water Supply Plan on January 30. The plan was updated to include revised growth projections, incorporate current water use trends, include the impacts of climate change, update contamination risks to the water supply, and evaluate the county's available water rights. Serving as a planning document, the revised plan will assist in development review, renewal of the LANL water service contract and meet regulatory requirements by the Office of the State Engineer.

... the County Council adopted the updated revised Long-Range Water Supply Plan on January 30.

A request for proposals was advertised for a contractor to upgrade the controls system at the Abiquiu Hydroelectric Plant. Three proposals were received and a contract was awarded on January 30, 2018. An onsite kick-off meeting will take place in February and work is scheduled to be completed May 11, 2018, in time for the spring run-off. The upgraded controls will provide some added efficiencies and provide improved reliability over the next 10 years.

A request for proposals was advertised for a contractor

to assist in meeting our cyber security requirements associated with the electric SCADA system. The contractor will assess and install monthly security software patches to 40 cyber assets which include 30 software applications. This work currently consumes our SCADA Technician full time.

Warranty repairs are being evaluated at the recently refurbished El Vado Hydroelectric Plant. The plant operated from July 2017 – November 2017. In mid-November the plant was shut down after experiencing oil loss in the hydraulic system. The contractor who performed the refurbishment will be onsite to evaluate the issue in late February. DPU is also having an independent review of the issues by a qualified professional. Based on the upcoming technical evaluations, DPU will determine the path forward to make the necessary repairs.

Previous page: The site for the new drinking water well - Otowi Well 2 - was prepped during the 2nd quarter.

This page: Casing pipes are delivered in anticipation of the drilling activities scheduled to begin during the 3rd quarter.



FY18 CIP Projects

Electric Production

- Abiquiu - Upgrade Controls
- Abiquiu - Install 3-Ton Jib Crane
- Abiquiu & El Vado - Replace Batteries
- Replace UPS for Electric SCADA

Electric Distribution

- WR - Replace Overhead System (Poles & Cross-arms)
- LA - Replace Overhead System (Poles & Cross-arms)
- WR - Replace Underground Resid. Dist. Segments
- LA - Replace Underground Resid. Dist. Segments
- Replace Circuit Breakers at White Rock Substation
- Install New Feeders for Los Alamos Substation

Natural Gas Distribution

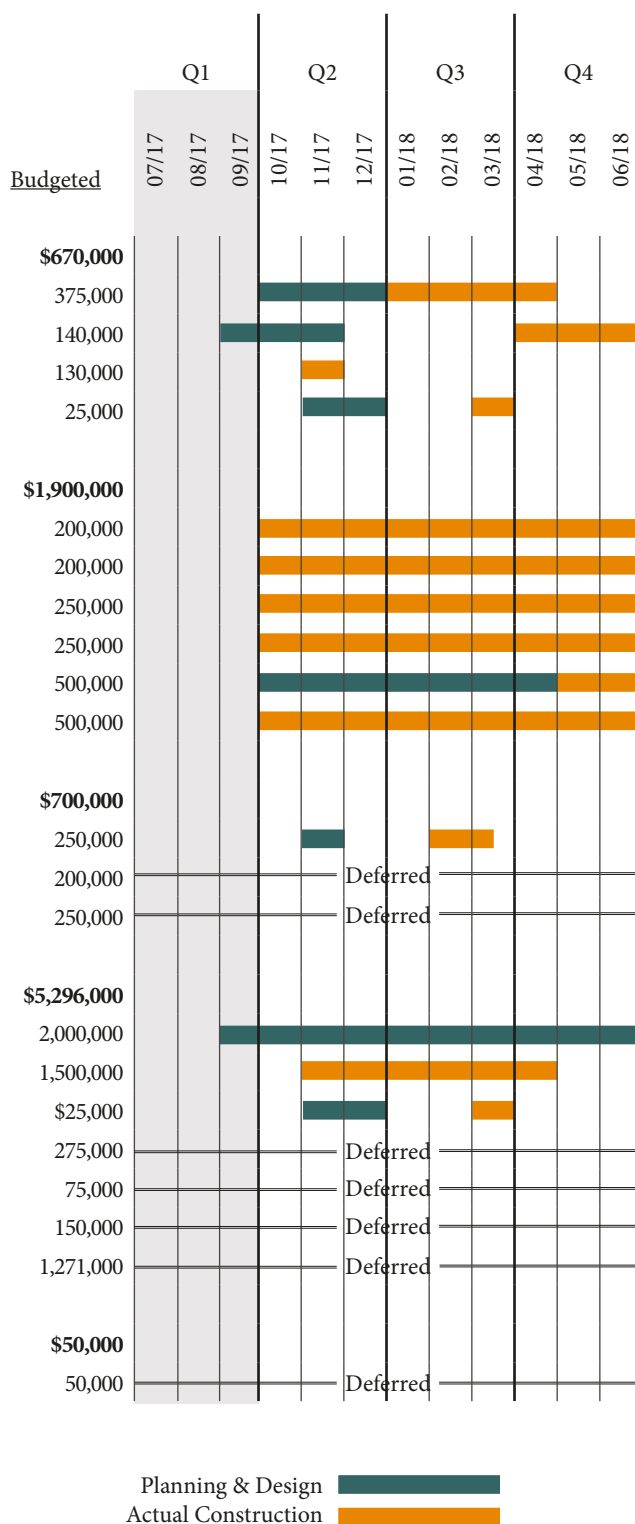
- Install Alternative PRV in Quemazon
- Improve Enclosures for PRV Stations
- Install Remote Terminal Units

Water Production

- Extend Potable Water to Camp May
- Install a New Drinking Water Well (Otowi Well #2)
- Replace UPS for Water SCADA
- Replace Motor Control Center
- Replace Remote Terminal Units
- Replace Automatic Valves
- Increase Non-Potable Water Storage

Sewer Collection & Wastewater Totals

- Rehabilitate Canyon Road Vitrified Clay Crossings





Electric Production Upgrade Abiquiu Controls

Install new software and hardware at the Abiquiu hydroelectric plant to integrate the controls of low-flow turbine and the two larger turbines into one process logic controller.

Budget: \$375,000
Schedule: Begin February 13, 2018.
Will be complete by May 11, 2018.



Electric Production Install 3-Ton Jib Crane

Install a new 3-ton jib crane on the north deck of the Abiquiu hydroelectric plant to raise and lower the gates to the energy dissipating chambers.

Budget: \$140,000
Schedule: March - May 2018



Electric Production Replace Batteries

Replace the battery systems that supply the plant control systems at the Abiquiu and El Vado hydroelectric facilities.

Budget: \$130,000
Schedule: Complete by November 1, 2017.



Electric and Water Production Replace Uninterruptible Power Supply (UPS) for SCADA

Replace the uninterruptible power supply (UPS) for the water and electric Supervisory Controls And Data Acquisition system (SCADA) located at Pajarito Cliffs.

Budget: \$50,000
Schedule: Request for bids will be issued in February 2018.



Electric Distribution Replace Prioritized Overhead System

Replace poles, cross-arms, and pole hardware including transformers. three-phase backbone and areas with the highest number of customers is the priority.

Budget WR: \$200,000
Budget LA: \$200,000
Schedule: Year round



Electric Distribution Replace Prioritized Underground Residential Distribution (URD)

Replace portions or segments of URD that have failed three or more times. Replace live-front transformers.

Budget WR: \$250,000
Budget LA: \$250,000
Schedule: Year round



Electric Distribution

Replace Circuit Breakers at White Rock Substation

Replace the circuit breakers at the White Rock Substation. Additionally, construct a detention area for potential transformer oil leaks (vegetable oil) while replacing breakers.

Budget: \$500,000

Schedule: Bids opened and under review. Construction scheduled for the Spring 2018.



Electric Distribution

Install Los Alamos Substation Feeders

Install 2 new source feeders from the Los Alamos National Laboratory substation into the new DPU Los Alamos Switchgear Substation (LASS). Install 8 outgoing feeders from the LASS to power four townsite feeders and three LANL feeders.

Budget: Total \$500,000

Schedule: Continuation from FY17. Currently being installed.



Gas Distribution

Install Alternative Pressure Regulating Valve in Quemazon

Install a new gas pressure regulating valve (PRV) to allow a back feed (loop feed) into the Quemazon distribution system to improve reliability.

Budget: \$250,000

Schedule: Complete by March 1, 2018.



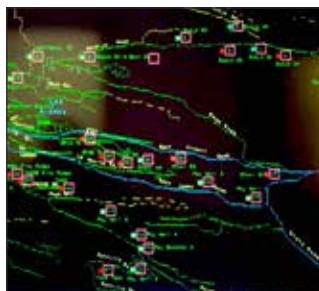
Gas Distribution

Improve Enclosures for Pressure Regulating Valve Stations

Replace enclosures and improve sites for existing gas pressure regulating valve stations.

Budget: \$200,000

Schedule: Deferred.



Gas Distribution

Install Remote Terminal Units

Install remote terminal units (RTUs) at various gas pressure regulating valves and other critical locations to interface with the Supervisory Control And Data Acquisition (SCADA) system.

Budget: \$250,000

Schedule: Deferred.



Water Production

Extend Potable Water Supply to Camp May

Extend the potable water supply to improve fire suppression and provide water for existing and future developments in the area. Costs will be shared under a private-public partnership between the County and the recreational facility operator.

Budget: \$4,000,000 (\$2M Co. general fund/remainder 3rd Party)

Schedule: Design and environmental assessment ongoing. NEPA scoping meeting scheduled March 1, 2018.



Water Production
Install a New Drinking Water Well

Design, drill and develop a new drinking water well in Los Alamos Canyon - Otowi Well #2. Design and construct the well house, electric gear and pipeline. Well is scheduled to be online by fall of 2018.

Budget: \$1,500,000
 Schedule: Drilling is ongoing.
 Complete by May 2018.



Water Production
Replace Motor Control Center

Replace the Motor Control Center at Pajarito Well #5.

Budget: \$275,000
 Schedule: Deferred to FY2019.



Water Production
Replace Remote Terminal Units

Replace three water production radio transmitter units (RTUs) associated with various wells, boosters and water tanks. New RTUs will be phased in each year through the water system to maintain reliable communications.

Budget: \$75,000
 Schedule: Deferred.



Water Production
Replace Automatic Valves

Replace automatic valves 9, 10, and 11, used to transfer water efficiently from one section of the potable water system to other sections.

Budget: \$150,000
 Schedule: Deferred to FY2019.



Water Production
Increase Non-Potable Water Storage

Design multiple booster stations, design a second water tank adjacent to the existing Group 12 tank, and add a new tank adjacent to the Bayo Booster Station to capture water during peak periods which is now discharged to the environment.

Budget: \$495,000 Design; \$776,000 Tank Construction
 Schedule: Deferred - Water Trust Board funding not available.



Wastewater Collection
Rehabilitate Canyon Road Vitrified Clay Crossings

Replace and rehabilitate sections of damaged vitrified clay pipe on Canyon Road.

Budget: \$50,000
 Schedule: Deferred.



Steve Cummins
Deputy Utilities Manager

POWER SUPPLY

QR 2// 2018



In 2016, the Board of Public Utilities adopted a strategic policy for electrical energy resources. Two months later the BPU adopted a strategic policy for distributed energy resources (DER) and a corresponding rate structure. Members of the BPU directed the Utilities Manager to develop an implementation plan and schedule for the adopted Future Energy Resources recommendations and present to the Board no later than June 2017. This request was delayed to October 2017 to allow the Department of Public Utilities to complete an Integrated Resource Plan and then incorporate the findings into the BPU-requested implementation plan.

The October implementation plan, developed with the best information available, was presented to the BPU and recommended focusing on the following:

- Modeling the Los Alamos County electric distribution grid;
- Unbundling the electric rate to fairly charge all customer classes;
- Continue exploration of adding a next-generation nuclear electric generation facility to the county's energy portfolio;
- Continue exploration of adding utility-scale solar with energy storage to the county's energy portfolio; and
- Investigate adding a community solar garden as an option for citizens in the community.

This past quarter, the Department of Public Utilities Power Supply division canceled its membership in the South West Reserve Sharing Group (SRSG). DPU will instead meet its requirements with the North American Electric Reliability Corporation (NERC) through an agreement with the Public Service Company of New Mexico (PNM).

DPU joined the SRSG (a group of energy providers and Utilities) to share contingency resources to meet NERC requirements to hold generation capacity in reserve to cover unexpected losses of generation or transmission constraints. Participation in SRSG meant that DPU could reduce its contingency reserve requirements, which made economic sense in the 1990s when the DPU invested in a small ownership percentage of the San Juan Generating



Station (a coal-fired facility in Farmington, NM).

However, after units 2 and 3 of the San Juan Generating Station shut down in December of 2017, it was no longer economically viable for DPU to be a member of SRSG. DPU can meet this requirement for less money through an agreement with PNM.

In December, key members of the DPU staff flew to Utah to continue discussions with other members the Utah

Associated Municipal Power Systems (UAMPS) on the next phase of the Carbon Free Power Project (a next-generation nuclear generation facility). This next phase will require approval by the members' governing authorities in early April on a power sales contract, a project budget, and plan of finance. DPU plans to hold a public meeting with Los Alamos citizens prior to the decision by our Board of Public Utilities and the County Council. Should the BPU and Council decide to participate in the next phase of the project, there will still be future opportunities for the County to exit the project.

... DPU staff flew to Utah to continue discussions with other members of the Utah Associated Municipal Power Systems (UAMPS) on the next phase of the Carbon Free Power Project (a next-generation nuclear generation facility).

This past quarter, the El Vado hydroelectric facility was taken off-line for an oil leak. Warranty issues related to the generator rewind project, specifically leaking around the seals, is preventing the unit from being brought online. Currently the DPU Engineering division is working with the contractor on the warranty issues to resolve the matter.

The Power Supply division had some personnel adjustments this past quarter. Gerald Martinez, Power Systems Supervisor, retired after 14 years of service on October 6. Shortly thereafter, our own Jordan Garcia, Senior Financial Analyst, was promoted to Gerald's position. With this promotion, Jordan will continue to perform several of his old job duties with those of the Power System Supervisor position. On December 26, the Power Supply division hired Ben Olbrich from outside

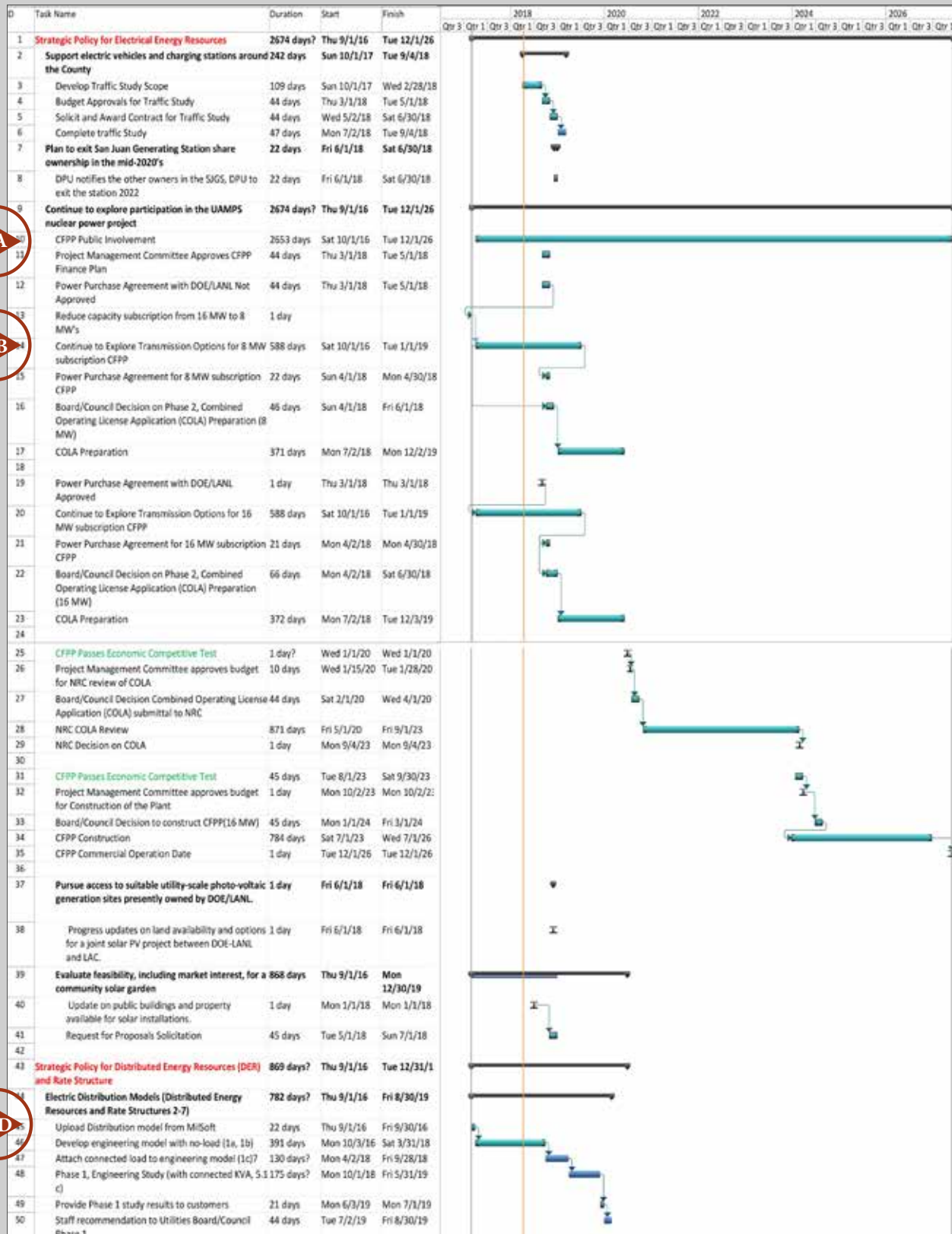
the department as an Engineering Associate to fill the vacated position. This reorganization of job duties within Power Supply will allow Ben time for additional duties related to utility-scale solar projects for the County and to investigate options for a community solar garden. He will also investigate the appropriate business model for the community solar garden and reach out to the business community to determine additional interest.

(Previous page) Installation of the wicket gates and turbine install in fiscal year 2016 at the El Vado hydroelectric facility. The plant was taken off line in the 2nd quarter for warranty issues related to an oil leak.

(This page) Deputy Utilities Manager Steve Cummins presents Gerald Martinez, Power Systems Supervisor, a plaque upon his retirement from Los Alamos County.



FUTURE ENERGY RESOURCES





Robert Westervelt
Deputy Utilities Manager

FINANCE AND ADMINISTRATION

QR 2// 2018



Electric Operations

In a continuation of what was seen in FY16 and FY17, electric sales were below budget for the first two quarters of FY18, both for retail customers and for sales to DOE. Retail sales were 9.24 percent below the budgeted 63,258,554 kWh and sales to DOE were 12.85 percent below the budgeted 305,441,000 kWh. Overall kWh sales for retail customers and DOE were 12.23 percent below budget.

In the electric sub fund, the second quarter closed with year to date net operating income of \$2,169,122, which is 64.62% percent of the total annual operating budget. This

higher than projected operating revenue for the quarter is due primarily to low cost of power. Capital expenditures totaled \$766,543, which is about 34 percent of the \$2.2 million budgeted for FY18.

The first two quarters of FY18 yielded net revenue of \$1,402,579 for electric distribution. Net revenue of \$472,426 is budgeted for the year, which includes the five percent revenue transfer to the County's general fund, budgeted at \$651,065. Budget carryovers and adjustments, most notably \$5 million for the advanced metering infrastructure project, yields a net adjusted budgetary loss of \$4,237,197. This budgeted loss is reflecting the scheduled continuation of work on projects which were funded through the 2014 bond issue.

Gas Operations

Gas sales in the first two quarters were 14.2 percent below budgeted sales volume for that period, with total sales of 2,539,586 therms. This variance is partially due to warmer weather in September when consumption normally ramps up, and continues through December. In addition, gas used for water pumping is significantly lower than expected, as Pajarito Well #4, which operates on natural gas, was off line for much of July and all of August when we normally schedule highest utilization of this well. Net cash flow from operations was negative (\$61,982), a reasonable figure as DPU works to balance revenues with expenditures while disposition of excess gas reserves is discussed.

The cost of gas remained low in the first quarter due to the continuing low market price of gas. The total cost of gas



purchases for the quarter was 35 percent of the amount budgeted for the year, which is low for the first half of the fiscal year. Again, this was due to the low cost of gas and the lower than normal consumption as discussed in the previous paragraph. Capital Expenditures for the two quarters were \$18,423. There is \$810,000 budgeted for capital projects in the gas utility, but for the most part those projects have not yet been initiated.

For the full fiscal year, gas operations' budgeted operating cash flow is \$842,636, budgeted capital expenditures are \$810,000, and the budgeted transfer to the general fund is \$262,075. Budget adjustments of \$67,317 factor in to yield a budgeted net loss of (\$296,756). This budgeted loss will be covered through existing fund balance.

Water Operations

Due to consistent rainfall and mild temperatures retail sales were 5.95 percent below budget and sales to the Department of Energy (DOE) were 27.1 percent below budget for the first two quarters of FY2018. Total sales in thousands of gallons for both retail and DOE were 12.6 percent below budget for the two quarters.

Net cash flow from water operations was \$1,466,289 for the first half of the fiscal year. Capital spending to date of \$214,124 yields total water net revenues of \$1,252,165 year to date. No new capital projects were budgeted under Water Distribution for FY18. 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 \$2.02M in revenue funded projects budgeted, but no costs on those projects have yet been realized as of the end of the first two quarters.

For the full fiscal year, water operations' budgeted operating cash flow is \$739,679, and budgeted capital expenditures—including carryforward project

amounts and encumbrance rollovers—are \$11,093,120. The capital budget includes receipt of \$3,271,000 in County reimbursements and grants/loans, resulting in a budgeted net loss of (\$7,082,441). Negative cash flow was budgeted to be funded from existing fund balance.

Gas sales in the first two quarters were 14.2 percent below budgeted sales volume for that period, with total sales of 2,539,586 therms. This variance is partially due to warmer weather in September

Wastewater Operations

Cash flow from operations was \$810,763 for the six months ended December 31, 2017. Capital expenditures for the first two quarters totaled \$1,049, yielding a net cash flow of 809,714 for the period.

For the full fiscal year, wastewater operations' budgeted operating cash flow is \$510,684. We only have one small capital project of \$50,000 budgeted for FY18, but carryovers of \$294,422 yield an adjusted budgeted net revenue of \$166,262.

Previous page: Customer Care Representatives in the Halloween spirit, dress as zoo animals for the annual employee luncheon - October 31, 2017.

This page: Alicia Garcia, Joann Armijo and Sonya Ortiz discuss changes in the billing software once the PRISM project to implement a new enterprise resource planning software goes live in fiscal year 2019.



NATURAL GAS RATES

EXPLANATION

Natural Gas Rate includes Pass-Through Cost

Since 2013 the Department of Public Utilities has included in its rate a "pass-through" cost of natural gas. 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: https://www.losalamosnm.us/government/departments/utilities/rates___fees/

$$(\text{Monthly service charge}) + (\text{Fixed cost recovery fee/therm}) + (\text{Variable cost of gas rate/therm}) = \text{Total charged}$$

Schedule of Customers

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

Monthly Service Charge

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

Fixed Cost Recovery Fee/therm

Schedule	Fixed Cost Recovery Fee/therm
7A & 7E	\$0.23
7L & 7N	\$0.20

Variable Cost of Gas/therm

Month	Schedule	Projected Variable Cost of Gas/therm	Adjustment to Prior Month Estimate/therm	Total Variable Cost of Gas per therm
December 2017	7A, 7E, 7L & 7N	\$0.27	(\$0.03)	\$0.24
November 2017	7A, 7E, 7L & 7N	\$0.26	\$ -	\$0.26
October 2017	7A, 7E, 7L & 7N	\$0.26	(\$0.03)	\$0.23

WHAT IT MEANS

DPU Rates Compared to
Neighboring Communities

When comparing the variable cost of gas or the pass-through rate, DPU can pass savings that it receives from the New Mexico Municipal Energy Acquisition Authority (NMMEAA) directly to its customers immediately. NMMEAA was created by local governments and retains the RBC as its financial advisor.

Variable Cost of Gas/therm

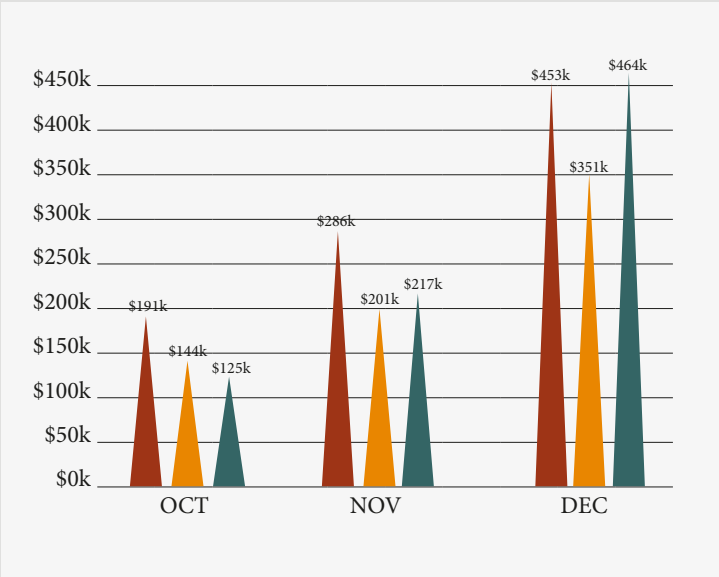
	DPU	NMGC*
Oct 2017	\$0.23	\$0.38
Nov 2017	\$0.26	\$0.36
Dec 2017	\$0.24	\$0.35

*Source: https://www.nmgco.com/Current_Natural_Gas_Rates.aspx

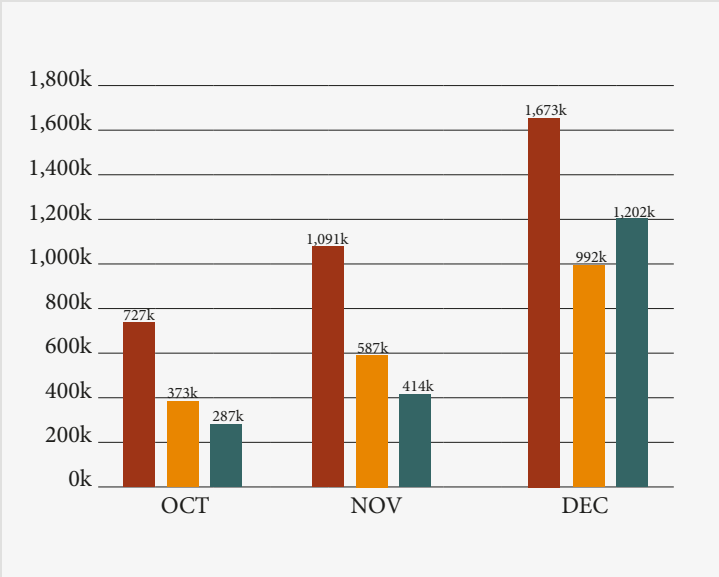
The following graphs depict the DPU's total costs and quantity of natural gas delivered to meet Los Alamos County's demand. Each chart includes the 2017 estimate, and 2017 and 2016 actuals.

- Estimate
- Actual 2017
- Actual 2016

DPU's Cost of Natural Gas



Therms Delivered to Los Alamos



Colder months generally drive the demand for natural gas to increase for heating by residential and commercial customers. DPU expects to see higher demand in the 3rd quarter.

Electric Operations

Financial Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Unit Sales	Retail Electric (KWh)					
	Total retail sales	29,905,787	27,506,495			57,412,282
	Budgeted sales	33,041,542	30,217,012			63,258,554
	Retail sales variance (KWh)	(3,135,755)	(2,710,517)			(5,846,272)
	Sales to NNSA	133,483,147	132,704,861			266,188,008
	Budgeted sales to NNSA	151,616,000	153,825,000			305,441,000
	NNSA sales variance (KWh)	(18,132,853)	(21,120,139)			(39,252,992)
	Total actual KWh sales	163,388,934	160,211,356			323,600,290
	Total budgeted sales	184,657,542	184,042,012			368,699,554
	Total sales variance (KWh)	(21,268,608)	(23,830,656)			(45,099,264)
Financial Results	Electric production (EP) revenues	\$8,972,459	\$10,960,622			\$19,933,081
	EP expenditures	\$9,107,381	\$8,113,986			\$17,221,367
	Electric distribution (ED) revenues	3,628,785	\$3,463,633			\$7,092,418
	ED other revenue	6,407	(\$88,999)			(\$82,592)
	ED operating expenses	\$2,547,943	\$5,004,475			\$7,552,418
	Net ED operating revenues	\$1,087,249	(\$1,629,841)			(\$542,592)
	Net ED + EP Operating Income	\$952,327	\$1,216,795			\$2,169,122
	ED capital expenditures	\$445,947	\$320,596			\$766,543
	Net ED + EP Income(Loss)	\$506,380	\$896,199			\$1,402,579
Budgeted	Budgeted Operating Income(Loss)					\$3,356,862
	Budgeted Capital Expenditures					(\$2,233,371)
	5% Revenue Transfer					(\$651,065)
	Budgeted Net ED Income(Loss)					\$472,426
	Budget Adjustments*					(\$4,709,623)
	Adj. Budgeted Net ED Income (Loss)					(\$4,237,197)

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

Natural Gas Operations

Financial Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Unit Sales	Retail Sales - Therms (100,000 BTU)					
	Total sales	586,938	1,952,648			2,539,586
	Budgeted sales	760,975	2,198,372			2,959,347
	Retail sales variance (therms)	(174,037)	(245,724)			(419,761)
Financial Results	Gas distribution revenues	\$534,001	\$1,248,683			\$1,782,684
	Gas other revenues	\$48,023	(\$11,087)			\$36,936
	Gas distribution operating expenses	\$614,123	\$1,267,479			\$1,881,602
	Net Gas operating revenues	(\$32,099)	(29,883)			(\$61,982)
	Gas distrib. capital expenditures	\$2,166	16,257			\$18,423
	Net Gas Revenue	(\$34,265)	(46,140)			(\$80,405)
Budgeted	Budgeted Operating Income(Loss)					\$842,636
	Budgeted Capital Expenditures					(\$810,000)
	5% Revenue Transfer					(\$262,075)
	Budgeted Net Gas Income(Loss)					(\$229,439)
	Budget Adjustments*					(\$67,317)
	Adj. Budgeted Net Gas Income (Loss)					(\$269,756)

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

Water Operations

Financial Status - Unaudited // FY2018

	Q1	Q2	Q3	Q4	Total
Unit Sales	Water Sales in thousand gallons				
	Wholesale sales to LANL	77,130	75,939		153,069
	Budgeted wholesale sales	105,000	105,000		210,000
	Retail sales	278,240	152,659		430,899
	Budgeted retail sales	289,650	168,530		458,180
	Total sales	355,370	228,598		583,968
	Total budgeted sales	394,650	273,530		668,180
	Sales variance, in thousand gallons	(39,280)	(44,932)		(84,212)
Financial Results	Wholesale Revenues	\$496,966	\$410,715		\$907,681
	Retail revenues	\$1,618,570	\$1,040,207		\$2,658,777
	Other revenues	\$1,172	(\$27,096)		(\$25,924)
	Total water revenues	\$2,116,708	\$1,423,826		\$3,540,534
	Water prod. operating expenses	\$964,925	\$661,499		\$1,626,424
	Water dist. operating expenses	\$419,624	\$28,197		\$447,821
	Total water operating expenses	\$1,384,549	\$689,696		\$2,074,245
	Net water operating revenues	\$732,159	\$734,130		\$1,466,289
	Water production capital	(\$17,107)	\$223,729		\$206,622
	Water distribution capital	\$1,087	\$6,415		\$7,502
	Total capital expenditures	(\$16,020)	\$230,144		\$214,124
	Net water revenues	\$748,179	\$503,986		\$1,252,165
Budgeted	Budgeted Operating Income(Loss)				739,679
	Budgeted Capital Expenditures				(7,296,000)
	Budgeted Grant/Loan/GF Transfers				3,271,000
	Budgeted Net Water Income(Loss)				(3,285,321)
	Budget Adjustments*				(3,797,120)
	Adj. Budgeted Net Water Income (Loss)				(7,082,441)

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

Wastewater Operations

Financial Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Unit Sales	Sewer Treated in thousand gallons					
	Total treated	114,426	109,561			223,987
	Budget treated	106,377	107,370			213,747
	Variance (thousands of gallons)	8,049	2,191			10,240
Financial Results	Sewer revenues	\$1,289,512	\$1,362,369			\$2,651,881
	Sewer misc. revenues	(\$17,684)	\$47			(\$17,637)
	Sewer operating expenses	\$1,293,993	\$529,488			\$1,823,481
	Net Sewer operating revenues	(\$22,165)	\$832,928			\$810,763
	Sewer capital expenditures	\$728	\$321			\$1,049
	Net Sewer Revenue	(\$22,893)	\$832,607			\$809,714
Budgeted	Budgeted Operating Income(Loss)					510,684
	Budgeted Capital Expenditures					(50,000)
	Budgeted Net Wastewater Income(Loss)					460,684
	Budget Adjustments*					(294,422)
	Adj. Budgeted Net Wastewater Income (Loss)					166,262

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

Electric Consumption

Consumption Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Electric Revenues	Residential	1,729,165	\$1,685,079			3,414,244
	Private Area Lights	3,266	\$552			3,818
	Commercial	1,232,772	\$1,107,771			2,340,543
	Municipal	421,353	\$396,426			817,779
	Water Production	122,688	\$98,801			221,489
	Educational	109,777	\$128,903			238,680
	Pole Rentals	-	\$22,262			22,262
	Misc/Backcharges	9,763	\$23,839			33,602
	TOTAL	\$3,628,785	\$3,463,633			\$7,092,418
Electric Sales (KWh)	Residential	13,007,232	12,624,971			25,632,203
	Private Area Lights	9,354	9,354			18,708
	Commercial	10,403,716	9,273,659			19,677,375
	Municipal	2,680,546	2,629,099			5,309,645
	Water Production	2,891,247	1,876,338			4,767,585
	Educational	913,693	1,093,073			2,006,766
	TOTAL	29,905,787	27,506,494			57,412,282
Billed Locations (Average)	Residential	7,783	7,889			7,836
	Commercial	644	671			658
	Municipal	165	174			170
	Educational	47	44			46
	TOTAL	8,639	8,778			8,709
Revenue/KWh (Average)	Residential	\$0.1329	\$0.1335			\$0.1332
	Private Area Lights	\$0.3492	\$0.0590			\$0.2041
	Commercial	\$0.1185	\$0.1195			\$0.1189
	Municipal	\$0.1572	\$0.1508			\$0.1540
	Water Production	\$0.0424	\$0.0527			\$0.0465
	Educational	\$0.1201	\$0.1179			\$0.1189
	AVERAGE	\$0.1210	\$0.1242			\$0.1226
Loss Calculation	Power Recv'd, KWh	30,655,382	28,779,812			59,435,194
	PV Power Recv'd, KWh	213,780	154,585			368,365
	QRly Losses <Gains>, KWh	963,375	1,427,903			2,391,277
	% QRly Losses <Gains>	3.12%	4.93%			4.00%
	YTD CUMM LOSSES <Gains>	3.12%	4.00%			4.00%

Natural Gas Consumption

Consumption Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Gas Revenues	Residential	408,260	\$932,822			1,341,082
	Commercial	95,840	\$152,485			248,325
	TA-3 Sales	-	-			-
	Municipal	19,747	\$61,807			81,554
	Water Production	6,776	\$6,821			13,597
	Educational	(8,881)	\$39,736			30,855
	Misc/Backcharges	12,259	\$55,012			67,271
	TOTAL	\$534,001	1,248,683			\$1,782,684
Gas Sales (Therms)	Residential	375,893	1,473,998			1,849,891
	Commercial	146,654	283,862			430,516
	TA-3 Sales	-	-			-
	Municipal	29,835	86,665			116,500
	Water Production	24,420	26,430			50,850
	Educational	10,136	81,693			91,829
	TOTAL	586,938	1,952,648			2,539,586
Billed Locations (Average)	Residential	7,073	7,146			7,110
	Commercial	366	374			370
	Municipal	47	46			47
	Educational	26	26			26
	TOTAL	7,512	7,592			7,552
Revenue /Therm (Average)	Residential	\$1.0861	\$0.6329			\$0.8595
	Commercial	\$0.6535	\$0.5372			\$0.5953
	TA-3	-	-			-
	Municipal	\$0.6619	\$0.7132			\$0.6875
	Water Production	\$0.2775	\$0.2581			\$0.2678
	Educational	(\$0.8762)	\$0.4864			(\$0.1949)
	AVERAGE	\$0.8889	\$0.6113			\$0.7501
Loss Calculation	Gas Recv'd, therms	578,800	1,660,060			2,238,860
	QRly Losses <Gains>, therms	(8,138)	(292,588)			(300,726)
	% QRly Losses <Gains>	-1.41%	-17.63%			-13.43%
	YTD CUMM LOSSES <Gains>	-1.41%	-13.43%			-13.43%

Water Consumption

Consumption Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Water Revenues	Residential	1,299,500	\$817,199			2,116,699
	Commercial	144,249	\$113,553			257,802
	Municipal	100,656	\$51,870			152,526
	Educational	66,680	\$26,335			93,015
	Misc/Backcharges	7,484	\$31,250			38,734
	TOTAL	\$1,618,570	1,040,207			\$2,658,777
Water Sales (KGal)	Residential	219,355	121,819			341,174
	Commercial	26,426	17,883			44,309
	Municipal	19,580	9,037			28,617
	Educational	12,879	3,920			16,799
	TOTAL	278,240	152,659			430,899
Billed Locations (Average)	Residential	6,607	6,679			6,643
	Commercial	282	292			287
	Municipal	90	91			91
	Educational	27	27			27
	TOTAL	7,006	7,089			7,048
Revenue/KGal (Average)	Residential	\$5.9242	\$6.7083			\$6.2042
	Commercial	\$5.4586	\$6.3498			\$5.8183
	Municipal	\$5.1408	\$5.7397			\$5.3299
	Educational	\$5.1773	\$6.7181			\$5.5369
	AVERAGE	\$5.7903	\$6.6092			\$6.0804
Loss Calculation	Water Recv'd, KGal	314,956	152,672			467,628
	QRly Losses <Gains> KGal	36,716	13			36,729
	% QRly Losses <Gains>	11.66%	0.01%			7.85%
	YTD CUMM LOSSES <Gains>	11.66%	7.85%			7.85%

Wastewater Treated

Treated Status - Unaudited // FY2018

		Q1	Q2	Q3	Q4	Total
Sewer Revenues	All Retail	1,256,612	\$1,347,691			2,604,303
	Municipal/Effluent*	32,735	\$14,678			47,413
	Misc/Backcharges	166	\$0			166
	TOTAL	\$1,289,512	\$1,362,369			\$2,651,881
Sewage Treated (KGal)	Los Alamos	80,712	82,561			163,273
	White Rock	33,714	27,000			60,714
	TOTAL TREATED	114,426	109,561			223,987
	REVENUE/KGal Treated	\$11.27	\$12.43			\$11.84

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

