



# BOARD OF PUBLIC UTILITIES

## ADDITIONAL MEETING DOCUMENTS

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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  | 08/16/2017  |
| AGENDA ITEM   | 4.G.1 Review of the Department of Public Utilities Quarterly Report       |
| DOCUMENT TITLE(S)   | Quarterly Report  |
| FROM  | Julie Williams-Hill   |
| NEW OR REVISED?<br><br>Is this a revision that is different from what was in the agenda packet or is it something entirely new? | New   |
| RECOMMENDED ACTION<br><br>If you have a new or revised recommended motion for the Board, enter it here.                         | <u>N/A</u>  |
| ADDITIONAL INFORMATION<br><br>Please VERY BRIEFLY explain the purpose of this information or document.                          | The Quarterly Report was not yet ready at the time of agenda publication. |

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LOS ALAMOS

Department of Public Utilities

Electric, Gas, Water, and Wastewater Services

QUARTERLY / QR 04  
PERFORMANCE / FY 17

1000 Central Avenue  
Suite 130  
Los Alamos, NM 87544



Jack Richardson and Katelyn Mahoney at the employee appreciation barbecue.



Pajarito Environmental Education Center organized the annual water festival for all 4th grade elementary students in April 2017. A big thank you is extended to PEEC for making the event so successful!

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# MANAGER STATEMENT



**Timothy A. Glasco**  
**Utilities Manager**

The 4th quarter of FY2017 was a busy one for the Department of Public Utilities (DPU). Our budget for FY2018 was approved by Council, with projected 8-percent increases in both water and sewage rates. These proposed increases will be considered by the Board of Public Utilities (BPU) and Council in early FY2018. In June, we completed our biennial customer satisfaction survey. Survey results will be presented to the BPU in the 1st quarter of 2018.

The contract with the International Association of Plumbers and Pipefitters Union, Local 412 for our gas, water, and sewer staff, was set to expire at the end of June. Negotiations with the union began in May and concluded with a successful agreement. The new contract was approved by the BPU and Council before the end of the fiscal year.

For the past two years, the Abiquiu hydroelectric plant was off-line due to leaks in the air vent shafts. In March 2017, new valves were installed on the vent shafts to allow them to be pressurized, which would in turn allow DPU to generate electricity. Unfortunately, one valve subsequently began to leak. In June, when flows were reduced to 180 cubic feet per second (cfs), repairs to the valve took place. By scheduling the work at this low-flow period, lost generation was minimized.

Work included dewatering the penstock and adjusting the automatic valve so it would eliminate the leakage. Afterwards, flows were increased to 300 cfs and are expected to remain there for the indefinite future.

Active on the international scene this quarter, DPU participated in a panel discussion in April with legislators from Chiba Province in Japan. Sponsored by LANL, the discussion topic was renewable energy and distributed energy projects. Additionally, the Council for International Relations in Santa Fe, through a partnership with the U. S. State Department, brought six international guests from Armenia to tour the Los Alamos Smart Grid project and other Los Alamos projects.

When the project to repair the El Vado hydroelectric plant was nearing completion in FY2016,

the water seal on the turbine generator was observed to leak at a rate that made operation of the plant infeasible. A dispute with the contractor, JR Merritt, arose over responsibility for the failure and the means of correcting it. After a year of negotiations, DPU and JR Merritt reached a resolution in April. Installation of a new seal was scheduled for early July.

A DPU employee satisfaction survey conducted in July 2016, revealed morale issues among some staff. Accordingly, an employee focus group was formed to examine the results and make recommendations to management for improvements.

I held meetings in the 4th quarter with each DPU division to discuss the focus group's recommendations. Implementation of appropriate suggestions will occur this fiscal year, and another survey will be performed in late FY2018.

On June 9th, DPU held an employee appreciation barbecue at Urban Park. This is an opportunity for the senior management to express gratitude to the hard-working staff who contribute to the community's comfort and safety, every hour of every day.

Nominations for the Safety Employee of the Quarter were accepted and reviewed by the DPU safety committee and senior management team for the last quarter of FY2017. Water Production Senior Operator Rick Herrera was overwhelmingly selected. In the nomination submitted by his supervisor, Superintendent Wayne Witten, it was noted that Rick consistently wears his personal protective equipment (PPE) even while working alone and after hours. He often works around high voltage rotating equipment, and always practices the safety culture vision. Congratulations to Rick Herrera on this well-deserved honor.



June 9th DPU Employee Appreciation barbecue at Urban park. (L-R: Larry Naranjo, Leo Ortiz, David Rodriguez, and Andres Manzanares.)



# DEPARTMENT OF PUBLIC UTILITIES

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.

**County-owned, DPU provides Los Alamos County with electric, natural gas, water and wastewater services.**

## 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.

## Strategic Objectives

Achieve & sustain measurable performance excellence

- 2025 receive a Malcolm Baldrige award for quality
- 2030 unaccounted for water down to 2%
- 2035 sewer overflow per mile of pipe will be less than half of the national average

Achieve excellence in customer satisfaction & loyalty

- Customer satisfaction mean rating of  $\geq 3.5$  on a 1 - 4 scale and a net promoter score (NPS)  $\geq$  the industry benchmark

Achieve excellence in employee satisfaction

- Employee satisfaction mean rating of  $\geq 4$  on a 1 - 5 scale

Achieve environmental sustainability

- Promote electrical energy efficiency through targeted energy conservation programs
- By 2020 provide class 1A effluent water in White Rock
- By 2030 reduce energy use by 3% for Los Alamos customers as measured by therms per capita per heating degree day through education efforts on improving energy efficiency
- By 2040 be a carbon neutral electric provider
- By 2050 reduce per capita per day potable water use by 12%

Achieve & maintain excellence in financial performance

- Utilize revenues to sustain a high level of service as evidenced by high customer service ratings
- Conduct cost of service studies for each utility at least every 5 years

Develop & strengthen partnerships with stakeholders

- Initiate communications annually with stakeholder to identify potential partnering opportunities that are mutually beneficial
- Initiate communications annually with stakeholder to strengthen existing partnerships

In 2012, the Board of Public Utilities adopted a safety culture vision:

- Safety is first
- Lead by example
- Establish and enforce a high standard of work performance
- Brief or tail-gate before every job
- Empower all employees to make work and safety suggestions

Safety Employee of Quarter 4

## Rick Herrera

The 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. The desire is to create a work place where safe working practices are integral in everything DPU does and not something the staff has to think about as a separate item during job planning and execution.



Rick Herrera is the Safety Employee of the 4th quarter.



# ELECTRIC DISTRIBUTION UPDATE

As the electric distribution department wraps up a successful year, we start again with the operation and maintenance of the electric distribution grid. In some ways our job is routine; the overhead crew continues to replace poles and cross-arms, and trim trees. One underground crew continues to replace segments of the distribution grid which have failed on two or more occasions.

The overhead and underground crews will continue on with these replacement projects until problem points are rooted out. The second underground crew focuses on capital projects where larger segments of the grid are replaced before they fail. All replacement projects are based on quarterly system patrols and year-end assessments, and prioritized by the department's asset management team.

This past year we had more than 200 pole and fiberglass cross-arm replacement contacts. The fiberglass cross-arms can easily be spotted since they are gray-colored. The department replaced numerous

underground powerline segments throughout White Rock and Los Alamos. Major capital replacement projects were constructed along San Ildefonso Road, adjacent to the airport. Additionally, electric distribution now assumes ownership of two miles of new underground power lines at Bandelier National Park.

## The Los Alamos Substation



DPU's electric linemen upgrade the overhead electric system.

Switchgear (LASS) project is well under way and progressing. 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 which is presently being constructed as well. LASS and LANL's new TA-3 substation are located near the main LANL guard entrance. While scheduled to be delivered during the first week of November 2017, the LASS substation won't be powered up until the summer of 2018. In the meantime, the department has constructed the substation pad and continues with the construction of the duct bank system.

Starting at the south side of East Jemez Road, the construction of the duct bank will continue to Trinity Drive on the north side of the bridge. Once the duct bank is completed, our crews will have a couple of miles of new underground cables to install and make up all connections. Integrating LASS into the grid will be seamless and no

power outages are anticipated.

The department met its System Average Interruption Duration Index (SAIDI) goal and finished the year at 35 minutes. This is well under the 60 minute target. The SAIDI is a nationally recognized measure of reliability and indicates the total outage time, on average, for the utilities' customers.

An Electric Distribution Utility System Update was presented to the Board of Public Utilities at the July 2017 meeting. The presentation is the state of the electric distribution grid and the department's strategy for operating and managing it to achieve the SAIDI target.

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**This past year we had more than 200 pole and fiberglass cross-arm replacement contacts.**

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I would like to thank my engineering and line operations staff, DPU staff and management team for their dedication and effort to help the electric distribution division complete another successful year. I would also like to express my gratitude to the other departments throughout the county; without their cooperation it would be difficult for my team to get most of our electric distribution projects under way.



**Rafael De La Torre  
Deputy Utility Manager  
Electric Distribution**





### **Duct Bank for the Los Alamos Switchgear Substation (LASS)**

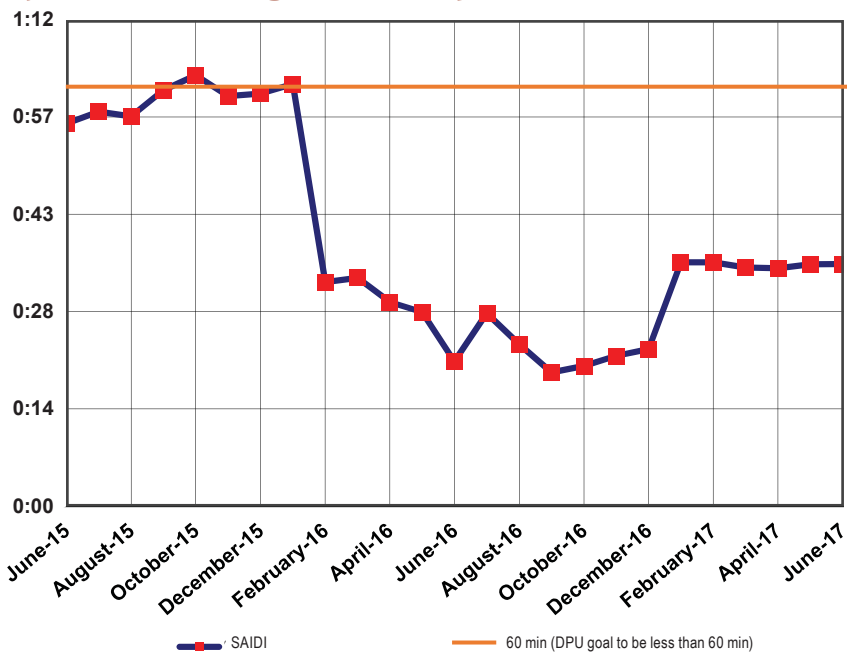
Crews work on the duct bank for the new Los Alamos Switchgear Substation (LASS). When completed, Los Alamos will have a second substation and eight new power lines with which to distribute power.



# ELECTRIC DISTRIBUTION UPDATE

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) had risen to an all-time high, exceeding 300 minutes as the annual average time that a DPU customer could expect to be without power. DPU set a goal in 2008 to reduce its SAIDI to below 60 minutes (including major events). The 4th quarter closed with the SAIDI remaining the same as the previous quarter at 35 minutes. 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>

## System Average Interruption Duration Index



## Distributed Generation Resources



### New Distributed Generation Resources

Residential customers added an additional 30.2 kW of distributed generation on to DPU's electric distribution grid during the 4th quarter.



### Total Distributed Generation Resources

As of the 4th quarter, distributed generation resources totaled 565.6 kW. Residential systems totaled 403.2 kW and commercial systems totaled 162.4 kW.



### Pending Distributed Generation Resources

Six residential customers are currently in the process of adding 35.9 kW systems on the electric distribution grid. This will bring the total distributed generation resources to 601.5 kW

# GAS, WATER, SEWER & WASTEWATER

The major restructuring of the DPU GIS data sets for GWS has begun. The contract with Stantec Consulting Services was finalized and the project kickoff meeting and initial data transfer has been completed. Close coordination with County GIS, Finance and PRISM project staff is ongoing to ensure that the final project deliverables are consistent with the needs of the PRISM system software as well as the needs of DPU for enhanced asset management.

## Gas, Water, Sewer (GWS)

New sewer video camera equipment was delivered and the crew is training on this new system. The first assignment for the new camera is to inspect major trunk lines in the bottom of the canyons which, due to inaccessibility, have not been inspected for many years. The contract for our proposed enhanced Back Flow Prevention – Cross Connection Control program was finalized and this program will begin in earnest in the 1st quarter of FY2018. All residential water meters in White Rock have been changed out to the new more accurate AMI compatible meter. Only six commercial meters, on order, are left to fully complete the White Rock area meter change out program.

## Water Production

The field work for installation new deep well replacement pump for Pajarito Well # 4 was started toward the end of this quarter. Use of a light weight crane was initially used with a transition to a heavy crane for the lower half of the pump drop pipe and drive shaft installation. Full start up and testing for this well pump should be completed in the 1st



DPU's gas, water and sewer crew receive instruction on how to operate the new sewer video camera.

quarter of FY2018. This well should be available for the full high water use season next year. Being a mechanical system, the Supervisory Control and Data Acquisition (SCADA) system for the non-potable system had another glitch this quarter. The air conditioner in the SCADA server room failed during the heat wave in June and caused the SCADA communications servers to malfunction. This caused an overflow of the Group 12 tank before staff

could get to the booster station to manually stop the pumps and this resulted in some runoff damage to the Perimeter Trail. Engineering is assisting in developing a low cost improvement, sanctioned by the U.S. Forest Service that will eliminate damage to this trail due to any future tank overflows.

## Wastewater Treatment

Wastewater Treatment Discussions at the Board of Public Utilities and County Council levels are being scheduled in an attempt to:

- 1) Develop the appropriate approach to the needed replacement of the White Rock WWTP;
- 2) Continued operation and maintenance of the wastewater system (collection and treatment); and
- 3) Funding to provide for a certain necessary level of sewer lift station and pipeline repair and replacement capital improvement projects. Depending on the outcome of those discussions, the White Rock WWTP project and other necessary wastewater system capital improvement projects will then be scheduled. The contract with a vendor to provide multi-year service to the WWTPs for SCADA system inspection, repair

and maintenance has been completed and the vendor has been notified to begin the initial year's work. The Los Alamos WWTP was hit with a discharge of some type of oil like substance that caused a significant upset in the biological process. The wastewater treatment crew fought hard, and was successful to avoid a discharge permit violation. It took about one month for the plant's biology to return to normal.

### **Meter Reading**

A vendor for the AMI (Automated Metering Infrastructure) has been selected and a contract is being negotiated. We lost recently one of our experienced meter readers. Consequently, while we look for a replacement, the regular GWS crew has been filling in on a full time basis to keep the meter reads current.

Ryan Gaffney, one of our meter readers, noticed significant quantities of lost water where the schools have fire pumping stations and took the initiative to advise GWS management, propose potential solutions and monitor water loss after improvements were implemented. This has enabled GWS to notify the schools of this water loss problem as well as provided a mechanism for DPU to monitor this water loss and improve our unaccounted for water performance.



**Jack Richardson**  
**Deputy Utility Manager**  
**GWS Division**



**New sewer video camera equipment will permit crews to inspect inaccessible sewer lines.**



# ENGINEERING UPDATE

Recruitment for college engineer interns took place in this quarter. We were lucky to hire four very bright and able students to assist with the heavy summer workload. The intern program continues to be successful. Working on a variety of projects the student interns have been productive on the electric distribution system, wastewater treatment facilities, hydroelectric plants, archive system, water system and a number of other miscellaneous tasks.

The New Mexico 502 road and utility reconstruction project, administered by the NM Department of Transportation (NMDOT), was bid in March of 2017. Only one bid was received which was \$4 million over budget. Due to the high bid, NMDOT re-bid the project on July 20, 2017 and proposals are due on August 18, 2017. If the project is awarded, construction will begin in spring 2018 with an anticipated completion date in the fall of 2019. The Department of Public Utilities has incorporated more than \$2 million of work in the project for gas, water, electric, sewer and fiber optic utility replacements.

Design and permitting of the new Otowi Well No. 2 water supply well was ongoing during the quarter. The well drilling is scheduled to begin in September 2017.

DPU Engineering staff is managing the engineering and environmental assessment work for the Camp May Waterline Project. This project will design a series of booster pumps and waterlines to provide water service on Pajarito Mountain. When constructed the project will deliver a reliable water source to the mountain. Design of the system is 80% complete and the environmental work



DPU hired four college interns this summer to assist with a variety of DPU projects. (L-R: Kristina Parrack, Marcos Ocanas, Michael Freeman, Ben Metzner)

is progressing. Funding for construction of the system will be from the County's economic development program and the ski hill operator.

A loan/grant was received from the Water Trust Board to construct a replacement waterline from the Los Alamos Reservoir to West Road along the reservoir access road. The new waterline will re-establish the ability to bring water from the reservoir into town for irrigation. The project is currently out for bid. Permitting of the project is pending approval from the U.S. Forest Service and U.S. Corps of Engineers. The declaration of the west Jemez salamander as an endangered species has added some complexity to the permitting process. The project will be constructed from October 2017 to May 2018.

The County received Phase I of a grant for \$120,000 for the Los Alamos Canyon Road Stabilization Project to complete the engineering and environmental assessment for the project. The project will stabilize the roadway adjacent to the stream, remove debris from the stream and re-establish the original path of the stream away from the road to protect the road and waterline from being washed out during floods. Approval to proceed with the design and environmental assessment is scheduled on the August 16, 2017 Utility Board agenda. Phase II of the grant for construction of the project, in the amount of \$1,630,000, will be granted upon successful completion of

the environmental assessment and associated authorizations to proceed with construction from the jurisdictional agencies.

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**Design and  
permitting of the  
new Otowi Well  
No. 2 water supply  
well was ongoing  
this quarter.**

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Repairs to the shaft seal and oil leaks were completed in late July at the El Vado Hydroelectric Plant. The newly refurbished turbine and generator were successfully commissioned and the plant is back online after nearly three years of being out of service.



**James Alarid  
Deputy Utility Manager  
Engineering Division**



## CAPITAL IMPROVEMENT



### **Pump House Re-stucco**

This past summer, the engineering division oversaw some much needed upgrades for several of the county's pump houses. Upgrades included re-stucco work, new roofs and windows replacements, etc.

# FY17 CIP Projects

## Electric Production

Abiquiu - Upgrade Controls

Abiquiu & El Vado - Replace Batteries

## 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

Install New Los Alamos Substation (LASS)

Install New Feeders for Los Alamos Substation

## Natural Gas Distribution

Replace Steel Gas line - East Road

## Water Production

Replace NP Los Alamos Reservoir Pipeline (WTB)

Extend Potable Water Supply - Camp May (50% of \$4M)

Install Otowi Well No. 2

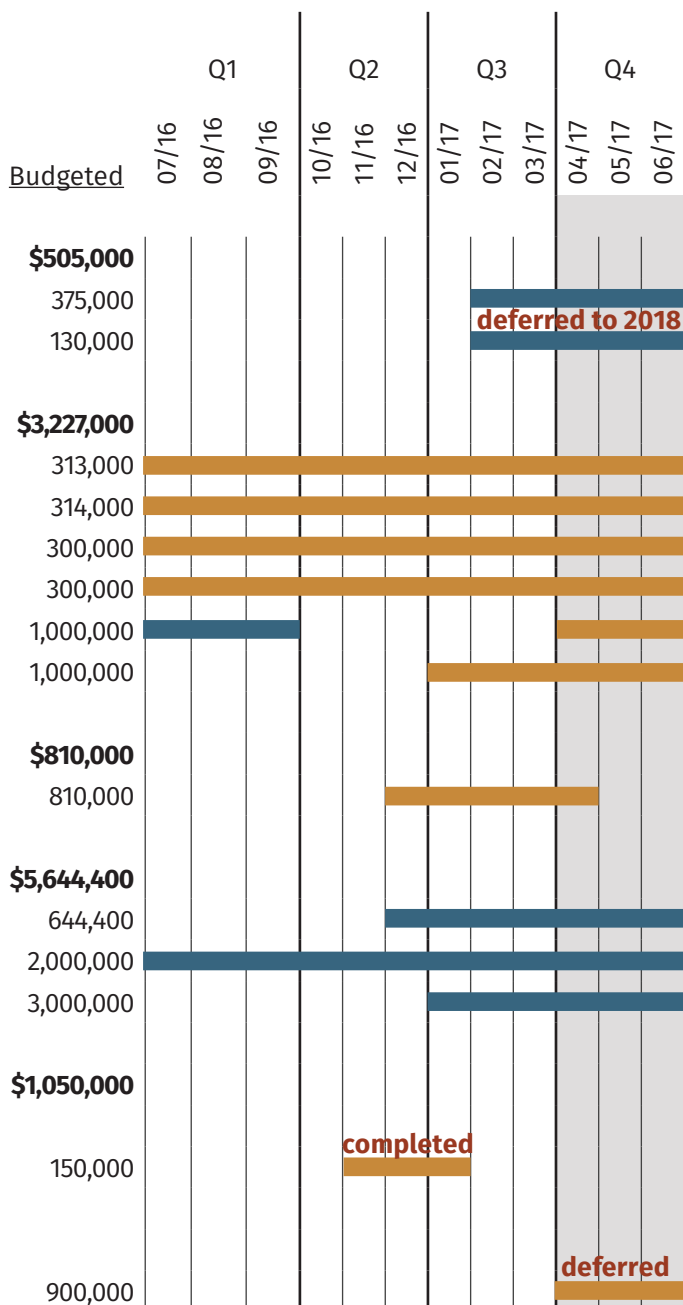
## Sewer Collection & Wastewater Totals

### Sewer Collection

Rehabilitate VCP Sewer Mains - La Joya, Mimbres, Kayenta

### Wastewater Treatment

Engineering for New WR Wastewater Treatment Plant



Planning & Design  
Actual Construction





### 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: Defer to 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: Contract awarded August 2017



### Electric Distribution Replace Overhead System

Replace poles, cross-arms, and pole hardware including transformers. 3-phase backbone and areas with the highest number of customers is the priority.

Budget WR: \$313,000  
Budget LA: \$314,000  
Schedule: Year round



### Electric Distribution Replace Underground Residential Distribution (URD)

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

Budget WR: \$300,000  
Budget LA: \$300,000  
Schedule: Year round



### Electric Distribution Install New Los Alamos Substation

Install a new Los Alamos Substation (LASS) as a new utility source at the western edge of Los Alamos to reduce thermal loading for TC1, TC2 and townsite distribution load feeders 13, 15, and 16.

Budget: \$1,000,000  
Schedule: Site work 100% complete. Switchgear to arrive October 2017.



### Electric Distribution Install LASS Feeders

Install two new source feeders from LANL substation to power the new LASS. Install eight outgoing load feeders to power four townsite feeders and three LANL feeders that power LAC loads.

Budget: \$1,000,000  
Schedule: South duct bank 80% complete. North duct bank to be completed by winter 2017.



**Water Production**  
**Replace Non-potable Waterline**

Replace the 7,000 ft of 10-inch non-potable waterline from the LA Reservoir to West Road damaged by flooding.

Budget: \$644,400 (90% grant/10% WTB Loan)  
Schedule: Bids will be received August 2017.



**Water Production**  
**Extend Potable Water Supply**

Extend the potable water supply to improve fire suppression and for current and future developments in the Camp May area. Costs shared under private-public partnership (50/50).

Budget: Total \$4,000,000  
Schedule: Design is 80% Complete.



**Water Production**  
**Design & Construct Water Well**

Design and construct Otowi Well No. 2, a high yield well to supplement the drinking water supply.

Budget: \$3,000,000  
Schedule: Well to be drilled September 2017.



**Gas Distribution**  
**Replace Steel Gas Line**

Replace 7,300 feet of 8-inch high-carbon steel gas main on East Road, with 8-inch high density polyethylene pipe. Project supports the DPU loop feed master plan.

Budget: \$810,00  
Schedule: Completed May 2017



**Wastewater Collection**  
**Rehabilitate VCP Sewer Mains**

Phase 2 - Rehabilitate VCP sewer mains on La Joya, Mimbres, and Kayenta as necessary to prevent root intrusion and malfunctions. Trenchless technology will be used.

Budget: \$150,000  
Schedule: Completed Jan. 2017



**Wastewater Treatment**  
**New Water Resource Recovery Facility**

Engineering services to replace the White Rock wastewater treatment facility with a new water resource recovery facility that produces high quality irrigation water for public spaces.

Budget: \$900,000  
Schedule: Deferred to 2020.

# ELECTRIC PRODUCTION UPDATE

## **El Vado Generator Rewind**

In July 2017 the contractor will begin the final repairs prior to adequate water being available for commissioning. The unit is expected to return to service in mid July.

## **Future Energy Resources**

The Future Energy Resources Committee was an ad hoc citizen committee appointed by the Board of Public Utilities (BPU) to develop recommendations for future energy generation resources for Los Alamos County. BPU adopted a majority of the recommendations in January and March 2016. Several updates on this page and the subsequent pages align with the direction provided to the DPU by the BPU to meet these adopted recommendations.

## **Integrated Resource Plan**

The first step in understanding the various recommendations of the Future Energy Resources Committee is for the DPU to develop a comprehensive decision support tool - an Integrated Resource Plan (IRP). DPU's contractor, Pace Global, developed an IRP this quarter to consider the viability of all the power generation resources available to the County based on a levelized cost of energy. The plan considers all of the risks and benefits associated with each option.

## **San Juan Generating Station (SJGS)**

On December 31, 2017, units 2 & 3 of the four unit power plant will be retired as four of the nine owners exit the plant. DPU staff and legal counsel have been working with all of the other owners of the SJGS to accomplish the closing of the ownership restructure within the time period provided in the Restructuring Agreement that was approved in July of 2015. DPU staff will work with the remaining owners on the interim decommissioning of units 2 & 3 so that units 1 and 4 can operate safely at least until the end of the participation agreement in June of 2022.

In March of 2017, PNM announced the preliminary results of its IRP as it related to the SJGS. Specifically, the IRP results show the SJGS is no longer an economical resource. PNM is planning to file the results with the Public Regulatory Commission (PRC) in July of 2017. Based on the PRC acceptance, in 2018 PNM may file for abandonment of the SJGS to cease operation in mid-2022. The preliminary results of the County's IRP came to the same conclusion for the SJGS.

## **Carbon Free Power Project (CFPP)**

One of several generation resource options available to Los Alamos County is to add a next-generation nuclear

facility to our power generation resource portfolio. The CFPP utilizes small modular nuclear reactor technology and is to be sited at the Idaho National Laboratory. Through its membership in the Utah Associated Municipal Power Systems (UAMPS) organization, DPU is part of the project management committee developing this project. Currently a power sales agreement and a budget for the next phase of the CFPP is being prepared by the project management committee. The committee's plan to approve the power sales agreement, in form only, as early as May 2017 was postponed to August 2017 to finalize the contract terms and conditions. Signing and adopting the power sales agreement will be held off until the federal government passes an extension of the Nuclear Production Tax Credit (NPTC) anticipated to be completed in the first quarter of 2018.

The next phase of the CFPP will include all of the work necessary to complete the Combined Operating License Application (COLA) for the Nuclear Regulatory Commission's review.

Preliminary results of the County's Integrated Resource Plan (IRP) show the CFPP using Small Modular Nuclear Reactor technology to be a viable option for meeting DPU's carbon neutral goal with only a

4 percent premium above the other alternatives.

The in-depth risk analysis portion of the IRP analyzed all of the risks and benefits associated with the generation resources selected. Specifically for the CFPP, the analysis looked at the impacts of delays associated with the Nuclear Regulatory Commission's request for additional information, terms and conditions, and economic factors that may make the project risky based on this first-of-a-kind technology. The analysis also looked at common delays related to the construction of a nuclear power plant. Using the findings, the County will then need to make a decision on whether or not the benefits outweigh the risks.

If the Board and Council approve DPU participating in this next phase of the CFPP, it will not preclude the County from taking advantage of several future off-ramps in the project, if it is later determined that the project is no longer an economically viable option for this community.

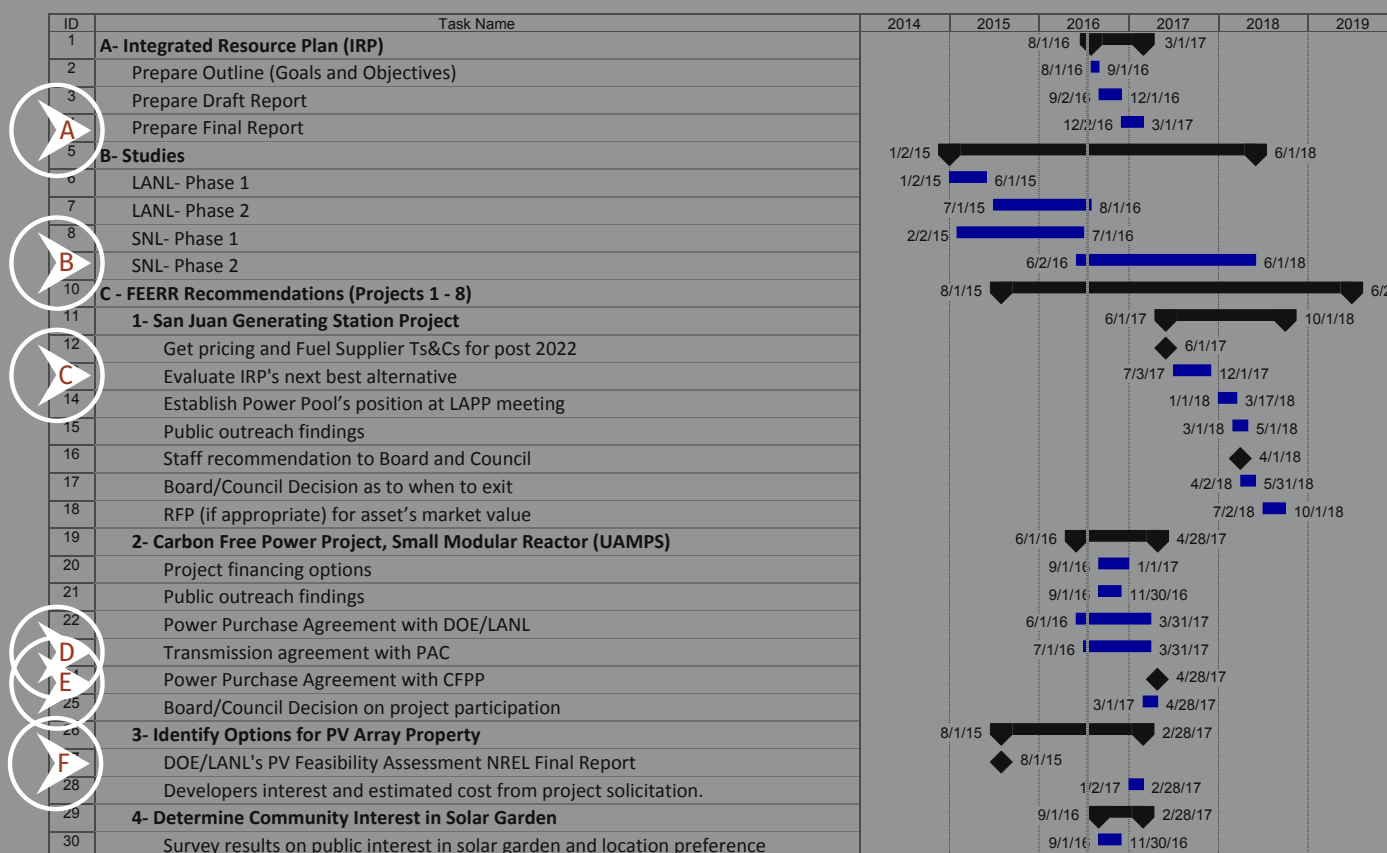
The next phase of the project is expected in the first quarter of 2018, at which time staff will make a recommendation to the Board and Council about continuing its participation in the CFPP.



**Steve Cummins**  
**Deputy Utility Manager**  
**Electric Production**



# FUTURE ENERGY RESOURCES



Note: While several of these projects will have durations up to 2040 this preliminary schedule only forecasts to 2019. This does not reflect major decisions that will alter the course for these projects past 2019.

The Future Energy Resources Committee prepared a July 2015 report to recommend future energy generation resources for the County. BPU adopted a majority of the recommendations in January and March 2016. DPU's plan to implement the BPU adopted policies are described in the schedule (above) and updates (below).

Alamos National Laboratory.

## B Studies

Studies by LANL and Sandia are completed. The studies looked at how much solar PV capacity could be installed with the current Battery Storage Systems (BSS) and what is the most economical method of operation for the BSS.

## C San Juan Generating Station

In March of 2017, PNM announced the preliminary results of its IRP as it related to the San Juan Generating Station (SJGS). Specifically, the IRP results show that the SJGS is no longer an economical resource. PNM is planning to file the results with the Public Regulatory Commission (PRC) in July of 2017. Based on the PRC acceptance, in 2018 PNM may file for abandonment of the SJGS to cease operation by mid-2022. The preliminary

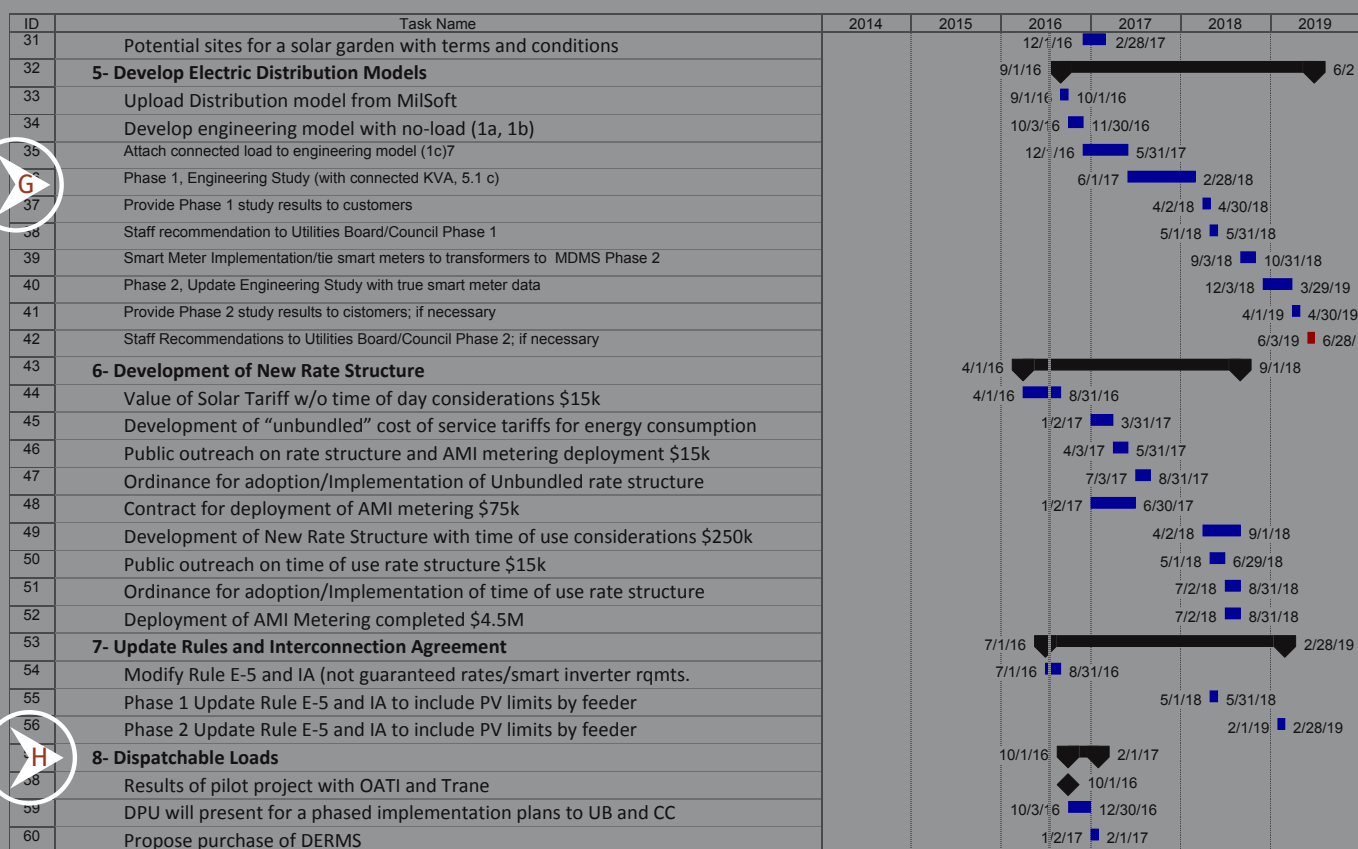
results of the DPU IRP came to the same conclusion for the County's ownership share of the SJGS.

## D Carbon Free Power Project Transmission Agreement

Currently the Utah Associated Municipal Power Systems (UAMPS) has three participants in the CFPP that will need transmission through the PacifiCorp system. DPU is working with UAMPS on a possible displacement agreement with Western Area Power Administration (WAPA). This would eliminate the need for transmission service on the PacifiCorp system making the CFPP a more viable option. Staff will schedule a meeting in the September/October time frame with UAMPS staff and WAPA to further discuss the options associated with transmission for the CFPP.

## A Integrated Resource Plan (IRP)

DPU presented the IRP findings to the BPU on June 21, 2017. A presentation was also given to the public on July 12th and the Council on July 18th. The final report will be issued on August 1st. DPU will use the IRP as a foundation for future power generation resource recommendations to the BPU and Council. Further, DPU will use the IRP to assist in future planning for the Electric Coordination Agreement with the Department of Energy and Los



Note: While several of these projects will have durations up to 2040 this preliminary schedule only forecasts to 2019. This does not reflect major decisions that will alter the course for these projects past 2019.

## E Carbon Free Power Project Purchase Power Agreement

The plan to approve the power sales agreement in form only is postponed to August 2017 to finalize the contract terms and conditions. Signing and adopting the power sales agreement will be held off until the federal government passes an extension of the Nuclear Production Tax Credit (NPTC) anticipated to be completed in the first quarter of the 2018 calendar year. The next phase of the CFPP will include all the work necessary to complete the Combined Operating License Application (COLA) for the Nuclear Regulatory Commission's review.

## F Options for Solar PV Property

DPU has been working with the Los Alamos Power Pool (LAPP) on possible sites to construct a utility scale

solar PV array. The sites identified in the NREL report are undergoing an environmental review process prior to selecting the preferred site for a solar PV project. A preliminary review found several cultural sites making portions of the property not suitable for solar PV. DPU's IRP recommended that the utility-scale solar array be suspended temporarily until several uncertainties are resolved.

## G Develop Engineering Model

Staff, with Milsoft support, continues to work on correcting model errors - confirming the connected load at the transformer level. With the current Los Alamos Switchgear Substation project, electric distribution staff is modeling the new configuration prior to modeling the feeder level for solar photovoltaic penetration limits.

## H Dispatchable Loads

DPU is working with OATI (a software provider for energy commerce and smart grids) on the potential saving by managing voltage profiles referred to as Conservation Voltage Reduction (CVR). As the White Rock substation only serves county customers, there is an ability to actively manage the voltage profile at the end of both feeders in White Rock resulting in energy savings. Per the Pacific Northwest National Laboratory, CVR can produce between 0.5% and 4% energy savings on circuits where implemented, with 80% to 90% of that occurring on the customer's side of the meter. Staff will finalize the economic analysis in October, 2017 with the plan to solicit a request for proposals in December and if approved implement by summer 2018.

# FINANCE & ADMINISTRATION

## Electric Operations

Retail KWh sales were below budget in the first three quarters of the fiscal year, but slightly over in the fourth quarter. For the year, retail sales were 6.37 percent less than budgeted. KWh sales to DOE were below budget each quarter, closing the year at 18.00 percent below the budgeted 556,653,000 kwh. Combined KWh sales for retail and DOE were 15.89 percent below budget after the fourth quarter, which has been a consistent trend throughout the year

We have restated all four quarters in the financial results section of the electric report. Operating expenses were previously overstated by the amount of the capital expenditures, resulting in operating revenues being understated. Net operating revenue in the fourth quarter was \$678,887, and for the fiscal year was \$2,880,133. This is \$321,099 lower than the budgeted operating revenues of \$3,201,232.

Capital expenditures for FY17 were budgeted at \$3,536,053, and budget adjustments and carryovers of \$4,215,704 bring total budget available to \$7,751,757. Capital expenditures for the year totaled \$3,419,152. \$2.5 million for the AMI project and \$1 million for feeder replacements are being carried over into FY18.

FY17 yielded a net loss of

(\$539,019) for electric distribution, a better result than the budgeted net loss of (\$983,644). Budget adjustments and carryovers during the fiscal year resulted in an adjusted budgeted net ED loss of (\$5,199,348). This budgeted loss was intended to be covered by proceeds from FY14 debt issuance for capital projects. The budget adjustments included \$2.5 million for the AMI meter project rollout, which has been deferred again until FY18.

## Gas Operations

Due to mild weather, retail gas sales in all quarters were lower than budget. For the full fiscal year, retail gas sales closed at 7,649,471 therms, 9.6% below the budgeted amount of 8,463,113 therms.

Net cash flow from operations was \$109,403 for the fourth quarter, bringing the fiscal year total to \$719,868. The cost of gas was 8.6 percent below the total budgeted for FY17, which reflects the lower than budgeted sales. Capital Expenditures for the fourth quarter were \$101,576, and \$1,254,382 for all of FY17.

For the full fiscal year, gas operations' budgeted operating cash flow was \$1,186,509, budgeted capital expenditures were \$810,000, and the budgeted transfer to the general fund was \$260,287, yielding budgeted net income of \$116,222. Additionally, \$1,043,383 in

encumbrances and budget adjustments were added to the FY17 expenditure budget, resulting in an adjusted budgeted net loss in the gas fund of (\$927,161). This budgeted loss was covered through existing fund balance.

## Water Operations

For the fourth quarter of FY2017, retail sales were 12.2 percent below budget and sales to DOE were 17.2 percent below budget. Total sales in thousands of gallons for both Retail and DOE were 13.5 percent below budget for the quarter ended June 30, 2017. For the fiscal year, retail sales were 2.5% below budget, sales to LANL were 25.4% below budget, and overall sales were 9.97% below budget. Sales projections were re-evaluated during the FY17 budget process and were reduced from 1.25 million gallons to 1.15 million gallons.

Net cash flow from water operations was \$200,426 for the quarter and \$1,047,844 for the full fiscal year. Water Production capital spending of \$1,732,789 and water distribution capital spending of \$1,230,250 resulted in a net loss in the water fund of (\$1,915,195).

For the full fiscal year, water operations' budgeted operating cash flow was (\$25,118), and budgeted capital expenditures were \$7,644,400. Additionally, the FY17 water budget includes



\$2,667,185 in encumbrances rolled forward from FY16 and other budget adjustments. Approximately \$2.6 million of budget authority is being rolled over to FY18 for the Ottowi #2 Replacement Well project, originally budgeted for completion in FY17. Negative cash flow was budgeted with the intent to absorb it from existing fund balance.

**Wastewater Operations** Cash flow from operations was \$304,327 for the three months ended June 30, 2017. Capital expenditures for the quarter of (\$55,187) yield a net cash flow of \$249,140. Year-to-date capital expenditures total \$859,914, with a net cash flow of \$215,568.

For the full fiscal year, wastewater operations' budgeted operating cash flow was \$747,495, budgeted capital expenditures were \$1,050,000. Factoring in \$1,397,855 in encumbrances rolled forward from FY16 and other budget adjustments results in an adjusted budgeted net loss of (\$1,700,360). This was covered through existing cash reserves for FY17.



**Robert Westervelt**  
**Deputy Utility Manager**  
**Finance & Administration**



### Functional Exercise Planning

DPU staff is working with Los Alamos County's Emergency Services Commander Beverley Simpson to develop a functional exercise of the Los Alamos Canyon Dam as is required by the State Office of the Engineer - Dam Safety Bureau. Additionally, the functional exercise will test the County's new Emergency Operations Plan, the Emergency Operations Center and the Joint Information Center. The exercise is planned for early August.



# NATURAL GAS RATE

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 fee (pass-through rate) per therm based on the San Juan Index.

$$(\text{Monthly Service Charge}) + (\text{Fixed Consumption Rate/therm}) + (\text{Variable Cost of Gas Rate/therm}) = \text{Total Charged.}$$

## Schedule

7A: Residential Customer  
7E: Commercial Customer  
7L: County Customer  
7N: School Customer

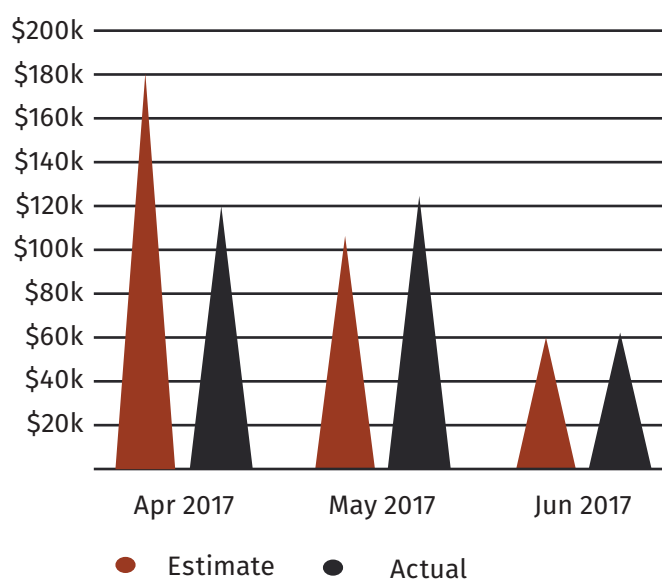
## Monthly Service Charge

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

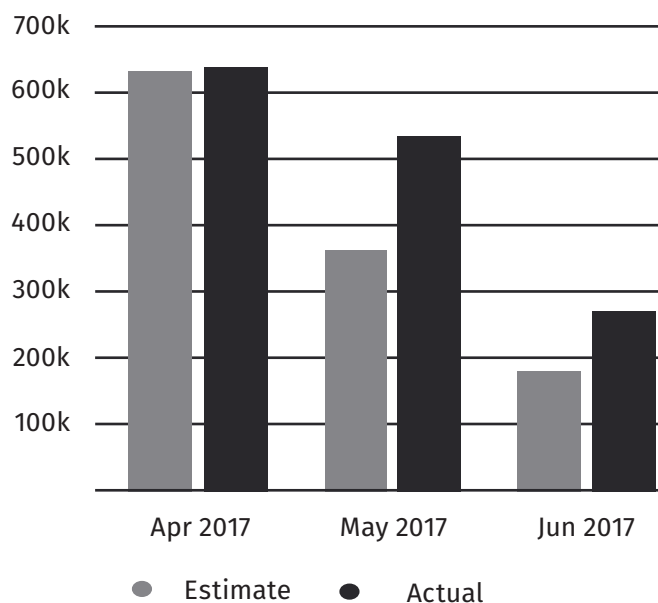
## Consumption Charge

| Month      | Schedule | Fixed Consumption Rate/therm | Variable Cost of Gas Rate            |  | Total Consumption charge/therm |
|------------|----------|------------------------------|--------------------------------------|--|--------------------------------|
|            |          |                              | Projected Variable Cost of Gas/therm | Adjustment to prior Month Estimate/therm |                                |
| April 2017 | 7A & 7E  | \$0.23                       | \$0.29                               | \$(0.07)                                 | \$0.45                         |
| April 2017 | 7L & 7N  | \$0.20                       | \$0.29                               | \$(0.07)                                 | \$0.42                         |
| May 2017   | 7A & 7E  | \$0.23                       | \$0.29                               | \$(0.23)                                 | \$0.29                         |
| May 2017   | 7L & 7N  | \$0.20                       | \$0.29                               | \$(0.23)                                 | \$0.26                         |
| June 2017  | 7A & 7E  | \$0.23                       | \$0.33                               | \$(0.37)                                 | \$0.19                         |
| June 2017  | 7L & 7N  | \$0.20                       | \$0.33                               | \$(0.37)                                 | \$0.16                         |

## Cost of Gas



## Total Therms





# OPERATIONS

The following pages provide a quarterly summary of the financial situation for each utility operation: electric, gas, water and wastewater.



Department of Public Utilities' employees enjoying the employee appreciation barbecue at Urban park. (L-R: Jerome Martinez, Paul Gonzales, and Dave Gomez.)

Congratulations to:

## Gaylyn Meyers

After 17 years working with Los Alamos County, Gaylyn Meyers decided to retire in July 2017. She was the project manager overseeing construction of the Los Alamos Wastewater Treatment facility and the non-potable water improvements on Arizona Avenue and at the golf course. Gaylyn was also responsible for spearheading DPU's Quality New Mexico path that began in 2008, and garnered two Road Runner recognitions for DPU. We wish her the best.



# ELECTRIC OPERATIONS

FY2017 Financial Status - Unaudited

|                   |                                     | <u>Q1</u>    | <u>Q2</u>    | <u>Q3</u>    | <u>Q4</u>    | <u>Total</u>  |
|-------------------|-------------------------------------|--------------|--------------|--------------|--------------|---------------|
| Unit Sales        | <u>Retail Electric (KWh)</u>        |              |              |              |              |               |
|                   | Total retail sales                  | 30,796,168   | 27,856,935   | 29,802,329   | 27,343,957   | 115,799,390   |
|                   | Budgeted sales                      | 33,393,870   | 29,683,440   | 33,393,870   | 27,209,820   | 123,681,000   |
|                   | Retail sales variance (KWh)         | (2,597,702)  | (1,826,505)  | (3,591,541)  | 134,137      | (7,881,610)   |
|                   | Sales to NNSA                       | 126,393,394  | 128,750,607  | 101,482,759  | 99,833,384   | 456,460,144   |
|                   | Budgeted sales to NNSA              | 153,727,000  | 153,385,000  | 128,940,000  | 120,601,000  | 556,653,000   |
|                   | NNSA sales variance (KWh)           | (27,333,606) | (24,634,393) | (27,457,241) | (20,767,616) | (100,192,856) |
|                   | Total actual KWh sales              | 157,189,562  | 156,607,542  | 131,285,088  | 127,177,341  | 572,259,534   |
|                   | Total budgeted sales                | 187,120,870  | 183,068,440  | 162,333,870  | 147,810,820  | 680,334,000   |
|                   | Total sales variance (KWh)          | (29,931,308) | (26,460,898) | (31,048,782) | (20,633,479) | (108,074,466) |
| Financial Results | Electric production revenues        | \$8,617,293  | \$7,758,396  | \$8,204,244  | \$8,227,370  | \$32,807,303  |
|                   | Electric production expenditures    | \$8,957,853  | \$7,772,883  | \$9,043,340  | \$7,020,733  | \$32,794,809  |
|                   | Electric distribution (ED) revenues | \$3,731,756  | \$3,413,983  | \$3,699,444  | 3,468,653    | \$14,313,836  |
|                   | ED other revenue                    | (\$6,924)    | \$27,093     | (\$27,678)   | (\$18,567)   | (\$26,076)    |
|                   | ED operating expenses               | \$3,255,814  | \$2,861,066  | \$2,519,548  | \$2,771,199  | \$11,407,627  |
|                   | Net ED operating revenues           | \$469,018    | \$580,010    | \$1,152,218  | \$678,887    | \$2,880,133   |
|                   | ED capital expenditures             | \$1,000,841  | \$403,512    | \$546,264    | \$1,468,535  | \$3,419,152   |
|                   | Net ED Income(Loss)                 | (\$531,823)  | \$176,498    | \$605,954    | (\$789,648)  | (\$539,019)   |
|                   |                                     |              |              |              |              |               |
| Budgeted          | Budgeted Operating Income(Loss)     |              |              |              |              | \$3,201,232   |
|                   | Budgeted Capital Expenditures       |              |              |              |              | \$3,536,053   |
|                   | 5% Revenue Transfer                 |              |              |              |              | \$648,823     |
|                   | Budgeted Net ED Income(Loss)        |              |              |              |              | (\$983,644)   |
|                   | Budget Adjustments*                 |              |              |              |              | \$4,215,704   |
|                   | Adj. Budgeted Net ED Income (Loss)  |              |              |              |              | (\$5,199,348) |

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



# NATURAL GAS OPERATIONS

FY2017 Financial Status - Unaudited

|                   |                                     | <u>Q1</u>   | <u>Q2</u>   | <u>Q3</u>   | <u>Q4</u> | <u>Total</u> |
|-------------------|-------------------------------------|-------------|-------------|-------------|-----------|--------------|
| Unit Sales        | Retail Sales - Therms (100,000 BTU) |             |             |             |           |              |
|                   | Total sales                         | 638,832     | 1,903,435   | 3,667,869   | 1,439,335 | 7,649,471    |
|                   | Budgeted sales                      | 761,680     | 2,200,409   | 3,893,032   | 1,607,991 | 8,463,113    |
|                   | Retail sales variance (therms)      | (122,848)   | (296,975)   | (225,163)   | (168,656) | (813,642)    |
| Financial Results | Gas distribution revenues           | \$585,868   | \$1,197,339 | \$1,977,695 | \$745,172 | \$4,506,074  |
|                   | Gas other revenues                  | (\$12,527)  | \$85,892    | \$55,379    | \$63,939  | \$192,683    |
|                   | Gas distribution operating expenses | \$575,861   | \$1,376,067 | \$1,327,253 | \$699,708 | \$3,978,889  |
|                   | Net Gas operating revenues          | (\$2,520)   | (\$92,836)  | \$705,821   | \$109,403 | \$719,868    |
|                   | Gas distrib. capital expenditures   | \$630,880   | \$ 311,754  | \$210,172   | \$101,576 | \$1,254,382  |
|                   | Net Gas Revenue                     | (\$633,400) | (\$404,590) | \$495,649   | \$7,827   | (\$534,514)  |
|                   |                                     |             |             |             |           |              |
| Budgeted          | Budgeted Operating Income(Loss)     |             |             |             |           | \$1,186,509  |
|                   | Budgeted Capital Expenditures       |             |             |             |           | \$810,000    |
|                   | 5% Revenue Transfer                 |             |             |             |           | \$260,287    |
|                   | Budgeted Net Gas Income(Loss)       |             |             |             |           | \$116,222    |
|                   | Budget Adjustments*                 |             |             |             |           | \$1,043,383  |
|                   | Adj. Budgeted Net Gas Income (Loss) |             |             |             |           | (\$927,161)  |

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

# WATER OPERATIONS

FY2017 Financial Status - Unaudited

|                   |                                       | Q1            | Q2          | Q3          | Q4          | Total         |
|-------------------|---------------------------------------|---------------|-------------|-------------|-------------|---------------|
| Unit Sales        | Water Sales in thousand gallons       |               |             |             |             |               |
|                   | Wholesale sales to LANL               | 82,848        | 74,394      | 60,284      | 62,119      | 279,645       |
|                   | Budgeted wholesale sales              | 105,000       | 105,000     | 90,000      | 75,000      | 375,000       |
|                   | Retail sales                          | 280,816       | 169,308     | 114,920     | 190,611     | 755,656       |
|                   | Budgeted retail sales                 | 286,750       | 170,500     | 100,750     | 217,000     | 775,000       |
|                   | Total sales                           | 363,664       | 243,702     | 175,204     | 252,730     | 1,035,301     |
|                   | Total budgeted sales                  | 391,750       | 275,500     | 190,750     | 292,000     | 1,150,000     |
|                   | Sales variance, in thousand gallons   | (28,086)      | (31,798)    | (15,546)    | (39,270)    | (114,699)     |
| Financial Results | Wholesale Revenues                    | \$329,849     | \$332,452   | \$720,593   | \$333,780   | \$1,716,674   |
|                   | Retail revenues                       | \$1,469,711   | \$1,037,703 | \$659,900   | \$1,198,025 | \$4,365,340   |
|                   | Other revenues                        | \$5,275       | \$14,129    | \$441       | \$4,237     | \$24,081      |
|                   | Total water revenues                  | \$1,804,835   | \$1,384,284 | \$1,380,934 | \$1,536,042 | \$6,106,095   |
|                   | Water prod. operating expenses        | \$881,435     | \$683,621   | \$829,132   | \$842,640   | \$3,236,828   |
|                   | Water dist. operating expenses        | \$432,426     | \$438,548   | \$457,473   | \$492,976   | \$1,821,423   |
|                   | Total water operating expenses        | \$1,313,861   | \$1,122,169 | \$1,286,605 | \$1,335,616 | \$5,058,251   |
|                   | Net water operating revenues          | \$490,974     | \$262,115   | \$94,329    | \$200,426   | \$1,047,844   |
|                   | Water production capital              | \$803,046     | \$366,884   | \$399,012   | \$163,847   | \$1,732,789   |
|                   | Water distribution capital            | \$1,179,458   | \$39,345    | \$11,330    | \$117       | \$1,230,250   |
|                   | Total capital expenditures            | \$1,982,504   | \$406,229   | \$410,342   | \$163,964   | \$2,963,039   |
|                   | Net water revenues                    | (\$1,491,530) | (\$144,114) | (\$316,013) | \$36,462    | (\$1,915,195) |
|                   |                                       |               |             |             |             |               |
| Budgeted          | Budgeted Operating Income(Loss)       |               |             |             |             | (\$25,118)    |
|                   | Budgeted Capital Expenditures         |               |             |             |             | \$7,644,400   |
|                   | Budgeted Grant/Loan/GF Transfers      |               |             |             |             | \$4,644,400   |
|                   | Budgeted Net Water Income(Loss)       |               |             |             |             | (\$3,025,118) |
|                   | Budget Adjustments*                   |               |             |             |             | \$2,667,185   |
|                   | Adj. Budgeted Net Water Income (Loss) |               |             |             |             | (\$5,692,303) |

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

# WASTEWATER OPERATIONS

FY2017 Financial Status - Unaudited

|                          |  | <u>Q1</u>   | <u>Q2</u>   | <u>Q3</u>   | <u>Q4</u>   | <u>Total</u>  |
|--------------------------|--|-------------|-------------|-------------|-------------|---------------|
| <b>Unit Sales</b>        | Sewer Treated in thousand gallons          |             |             |             |             |               |
|                          | Total treated                              | 99,335      | 105,033     | 110,116     | 112,414     | 426,898       |
|                          | Budget treated                             | 117,000     | 112,500     | 108,000     | 112,500     | 450,000       |
|                          | Variance (thousands of gallons)            | (17,665)    | (7,467)     | 2,116       | (86)        | (23,102)      |
| <b>Financial Results</b> | Sewer revenues                             | \$1,251,240 | \$1,235,649 | \$1,232,466 | \$1,278,342 | \$4,997,697   |
|                          | Sewer misc. revenues                       | (\$5,506)   | \$5,014     | \$4,799     | (\$2,847)   | \$1,460       |
|                          | Sewer operating expenses                   | \$941,377   | \$995,269   | \$1,015,861 | \$971,168   | \$3,923,675   |
|                          | Net Sewer operating revenues               | \$304,357   | \$245,394   | \$221,404   | \$304,327   | \$1,075,482   |
|                          | Sewer capital expenditures                 | \$638,517   | \$150,620   | \$15,590    | \$55,187    | \$859,914     |
|                          | Net Sewer Revenue                          | (\$334,160) | \$94,774    | \$205,814   | \$249,140   | \$215,568     |
| <b>Budgeted</b>          | Budgeted Operating Income(Loss)            |             |             |             |             | \$747,495     |
|                          | Budgeted Capital Expenditures              |             |             |             |             | \$1,050,000   |
|                          | Budgeted Net Wastewater Income(Loss)       |             |             |             |             | (\$302,505)   |
|                          | Budget Adjustments*                        |             |             |             |             | \$1,397,855   |
|                          | Adj. Budgeted Net Wastewater Income (Loss) |             |             |             |             | (\$1,700,360) |

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



# CONSUMPTION

The following pages provide a quarterly summary of the consumption status by customer class for each utility operation: electric, gas, water and wastewater.



Los Alamos County Councilor Rick Reiss surprises the Customer Care Center staff with a carrot cake.

# International Guests from Armenia

Through the U.S. State Department and the Santa Fe Council for International Relations five Armenian guests interested in renewable energy projects in the U.S. came to Los Alamos in April. Utilities Manager Tim Glasco explained the smart grid demonstration project with Japan's New Energy and Industrial Technology Development Organization.



# ELECTRIC CONSUMPTION

FY2017 Financial Status - Unaudited

|                            |                           | Q1          | Q2          | Q3          | Q4          | Total        |
|----------------------------|---------------------------|-------------|-------------|-------------|-------------|--------------|
| Electric Revenues          | Residential               | \$1,785,332 | \$1,642,922 | \$1,949,609 | \$1,563,705 | \$6,941,568  |
|                            | Private Area Lights       | \$3,380     | \$3,247     | \$3,206     | \$3,641     | \$13,474     |
|                            | Commercial                | \$1,286,078 | \$1,079,897 | \$1,074,060 | \$1,113,678 | \$4,553,713  |
|                            | Municipal                 | \$314,252   | \$345,070   | \$350,552   | \$410,597   | \$1,420,470  |
|                            | Water Production          | \$149,523   | \$104,633   | \$117,346   | \$159,764   | \$531,265    |
|                            | Educational               | \$119,843   | \$139,723   | \$146,139   | \$130,191   | \$535,896    |
|                            | Pole Rentals              | \$22,262    | \$0         | \$0         | \$0         | \$22,262     |
|                            | Misc/Backcharges          | \$51,086    | \$98,492    | \$58,532    | \$87,077    | \$295,188    |
|                            | TOTAL                     | \$3,731,756 | \$3,413,983 | \$3,699,444 | 3,468,653   | \$14,313,836 |
| Electric Sales (KWh)       | Residential               | 13,370,145  | 12,337,409  | 14,993,818  | 11,493,178  | 52,194,550   |
|                            | Private Area Lights       | 9,354       | 9,354       | 9,354       | 9,354       | 37,416       |
|                            | Commercial                | 10,937,932  | 8,926,839   | 8,926,736   | 9,216,508   | 38,008,014   |
|                            | Municipal                 | 2,335,319   | 3,080,301   | 2,626,315   | 2,629,658   | 10,671,593   |
|                            | Water Production          | 3,203,389   | 2,302,276   | 1,948,071   | 2,925,306   | 10,379,042   |
|                            | Educational               | 940,030     | 1,200,756   | 1,298,035   | 1,069,953   | 4,508,774    |
|                            | TOTAL                     | 30,796,168  | 27,856,935  | 29,802,329  | 27,343,957  | 115,799,390  |
| Billed Locations (Average) | Residential               | 8,171       | 7,785       | 7,896       | 7,932       | 7,946        |
|                            | Commercial                | 666         | 633         | 669         | 669         | 659          |
|                            | Municipal                 | 179         | 174         | 173         | 177         | 176          |
|                            | Educational               | 50          | 46          | 51          | 50          | 49           |
|                            | TOTAL                     | 9,066       | 8,638       | 8,789       | 8,827       | 8,830        |
| Revenue /KWh (Average)     | Residential               | \$0.1335    | \$0.1332    | \$0.1300    | \$0.1361    | \$0.1330     |
|                            | Private Area Lights       | \$0.3613    | \$0.3471    | \$0.3427    | \$0.3893    | \$0.3601     |
|                            | Commercial                | \$0.1176    | \$0.1210    | \$0.1203    | \$0.1208    | \$0.1198     |
|                            | Municipal                 | \$0.1346    | \$0.1120    | \$0.1335    | \$0.1561    | \$0.1331     |
|                            | Water Production          | \$0.0467    | \$0.0454    | \$0.0602    | \$0.0546    | \$0.0512     |
|                            | Educational               | \$0.1275    | \$0.1164    | \$0.1126    | \$0.1217    | \$0.1189     |
|                            | AVERAGE                   | \$0.1188    | \$0.1190    | \$0.1222    | \$0.1237    | \$0.1209     |
| Loss Calculation           | Power Recv'd, KWh         | 31,183,267  | 30,131,432  | 29,678,243  | 27,685,218  | 118,678,160  |
|                            | PV Power Recv'd, KWh      | 96,743      | 362,222     | 472,695     | 430,157     | 1,361,817    |
|                            | Qtrly Losses <Gains>, KWh | 483,841     | 2,636,719   | 115,055     | 1,004,973   | 4,240,587    |
|                            | % Qtrly Losses <Gains>    | 1.55%       | 8.65%       | 0.38%       | 3.57%       | 3.53%        |
|                            | YTD CUMM LOSSES <Gains>   | 1.55%       | 5.05%       | 3.52%       | 3.53%       | 3.53%        |



# NATURAL GAS CONSUMPTION

FY2017 Financial Status - Unaudited

|                                   |                              | <b>Q1</b>        | <b>Q2</b>          | <b>Q3</b>        | <b>Q4</b>        | <b>Total</b>       |
|-----------------------------------|------------------------------|------------------|--------------------|------------------|------------------|--------------------|
| <b>Gas Revenues</b>               | Residential                  | \$440,053        | \$967,680          | \$1,553,244      | \$588,760        | \$3,549,737        |
|                                   | Commercial                   | \$99,597         | \$130,521          | \$262,762        | \$100,268        | \$593,148          |
|                                   | TA-3 Sales                   | -                | \$0                | \$0              | \$0              | \$0                |
|                                   | Municipal                    | \$23,527         | \$47,581           | \$69,327         | \$25,142         | \$165,577          |
|                                   | Water Production             | \$14,028         | \$9                | \$445            | \$172            | \$14,654           |
|                                   | Educational                  | \$5,773          | \$46,141           | \$85,891         | \$25,365         | \$163,170          |
|                                   | Misc/Backcharges             | \$2,890          | \$5,406            | \$6,026          | \$5,465          | \$19,787           |
|                                   | <b>TOTAL</b>                 | <b>\$585,868</b> | <b>\$1,197,339</b> | <b>1,977,695</b> | <b>745,172</b>   | <b>\$4,506,074</b> |
| <b>Gas Sales (Therms)</b>         | Residential                  | 405,241          | 1,450,354          | 2,815,254        | 1,051,604        | 5,722,453          |
|                                   | Commercial                   | 143,781          | 268,757            | 512,641          | 244,413          | 1,169,593          |
|                                   | TA-3 Sales                   | -                | -                  | -                | -                | -                  |
|                                   | Municipal                    | 26,879           | 92,165             | 147,787          | 71,230           | 338,061            |
|                                   | Water Production             | 54,670           | 30                 | 1,420            | 710              | 56,830             |
|                                   | Educational                  | 8,262            | 92,128             | 190,767          | 71,375           | 362,532            |
|                                   | <b>TOTAL</b>                 | <b>638,832</b>   | <b>1,903,435</b>   | <b>3,667,869</b> | <b>1,439,333</b> | <b>7,649,469</b>   |
| <b>Billed Locations (Average)</b> | Residential                  | 7,087            | 7,084              | 7,153            | 7,126            | 7,113              |
|                                   | Commercial                   | 375              | 354                | 370              | 372              | 368                |
|                                   | Municipal                    | 43               | 42                 | 48               | 48               | 45                 |
|                                   | Educational                  | 29               | 23                 | 29               | 28               | 27                 |
|                                   | <b>TOTAL</b>                 | <b>7,534</b>     | <b>7,504</b>       | <b>7,600</b>     | <b>7,574</b>     | <b>7,553</b>       |
| <b>Revenue / Therm (Average)</b>  | Residential                  | \$1.0859         | \$0.6672           | \$0.5517         | \$0.5599         | \$0.7162           |
|                                   | Commercial                   | \$0.6927         | \$0.4856           | \$0.5126         | \$0.4102         | \$0.5253           |
|                                   | TA-3                         | -                | -                  | -                | \$0.0000         | -                  |
|                                   | Municipal                    | \$0.8753         | \$0.5163           | \$0.4691         | \$0.3530         | \$0.5534           |
|                                   | Water Production             | \$0.2566         | \$0.3003           | \$0.3132         | \$0.2423         | \$0.2781           |
|                                   | Educational                  | \$0.6987         | \$0.5008           | \$0.4502         | \$0.3554         | \$0.5013           |
|                                   | <b>AVERAGE</b>               | <b>\$0.9126</b>  | <b>\$0.6262</b>    | <b>\$0.5376</b>  | <b>\$0.5139</b>  | <b>\$0.5865</b>    |
| <b>Loss Calculation</b>           | Gas Recv'd, therms           | 577,960          | 1,484,280          | 3,715,030        | 1,757,310        | 7,534,580          |
|                                   | Qtrly Losses <Gains>, therms | (60,872)         | (419,155)          | 47,161           | 317,977          | (114,889)          |
|                                   | % Qtrly Losses <Gains>       | (10.53%)         | (28.24%)           | 1.27%            | 18.09%           | (1.52%)            |
|                                   | YTD CUMM LOSSES <Gains>      | (10.53%)         | (23.28%)           | (7.49%)          | (1.52%)          | (1.52%)            |

# WATER CONSUMPTION

FY2017 Financial Status - Unaudited

|                               |                           | <u>Q1</u>   | <u>Q2</u>   | <u>Q3</u> | <u>Q4</u>   | <u>Total</u> |
|-------------------------------|---------------------------|-------------|-------------|-----------|-------------|--------------|
| Water Revenues                | Residential               | \$1,168,774 | \$815,382   | \$518,046 | \$966,174   | \$3,468,376  |
|                               | Commercial                | \$143,584   | \$108,048   | \$87,059  | \$122,622   | \$461,313    |
|                               | Municipal                 | \$100,139   | \$75,470    | \$26,618  | \$52,143    | \$254,371    |
|                               | Educational               | \$51,908    | \$25,520    | \$14,149  | \$44,950    | \$136,527    |
|                               | Misc/Backcharges          | \$5,306     | \$13,284    | \$14,028  | \$12,136    | \$44,753     |
|                               | TOTAL                     | \$1,469,711 | \$1,037,703 | \$659,900 | \$1,198,025 | \$4,365,340  |
| Water Sales<br>(KGal)         | Residential               | 218,093     | 133,075     | 86,882    | 160,351     | 598,401      |
|                               | Commercial                | 29,819      | 18,328      | 13,159    | 21,588      | 82,894       |
|                               | Municipal                 | 22,243      | 14,084      | 13,491    | 580         | 50,397       |
|                               | Educational               | 10,661      | 3,822       | 1,388     | 8,093       | 23,964       |
|                               | TOTAL                     | 280,816     | 169,308     | 114,920   | 190,612     | 755,656      |
| Billed Locations<br>(Average) | Residential               | 6,620       | 6,624       | 6,845     | 6,657       | 6,686        |
|                               | Commercial                | 293         | 282         | 298       | 290         | 291          |
|                               | Municipal                 | 89          | 89          | 92        | 90          | 90           |
|                               | Educational               | 28          | 26          | 29        | 28          | 28           |
|                               | TOTAL                     | 7,030       | 7,021       | 7,264     | 7,065       | 7,095        |
| Revenue/KGal<br>(Average)     | Residential               | \$5.3591    | \$6.1272    | \$5.9626  | \$6.0254    | \$5.7961     |
|                               | Commercial                | \$4.8152    | \$5.8952    | \$6.6158  | \$5.6801    | \$5.5651     |
|                               | Municipal                 | \$4.5021    | \$5.3587    | \$1.9731  | \$89.9467   | \$5.0473     |
|                               | Educational               | \$4.8691    | \$6.6778    | \$10.1906 | \$5.5542    | \$5.6972     |
|                               | AVERAGE                   | \$5.2148    | \$6.0506    | \$5.6202  | \$6.2215    | \$5.7177     |
| Loss<br>Calculation           | Water Recv'd, KGal        | 294,415     | 181,951     | 139,557   | 276,861     | 892,784      |
|                               | Qtrly Losses <Gains> KGal | 13,599      | 12,643      | 24,637    | 86,249      | 137,128      |
|                               | % Qtrly Losses <Gains>    | 4.62%       | 6.95%       | 17.65%    | 31.15%      | 15.36%       |
|                               | YTD CUMM LOSSES <Gains>   | 4.62%       | 5.51%       | 8.26%     | 15.36%      | 15.36%       |

# WASTEWATER TREATED

FY2017 Financial Status - Unaudited

|                       |                      | Q1          | Q2          | Q3          | Q4          | Total       |
|-----------------------|----------------------|-------------|-------------|-------------|-------------|-------------|
| Sewer Revenues        | All Retail           | \$1,242,436 | \$1,224,282 | \$1,223,726 | \$1,259,799 | \$4,950,244 |
|                       | Municipal/Effluent*  | \$8,804     | \$11,367    | \$4,576     | \$21,424    | \$46,171    |
|                       | Misc/Backcharges     | \$0         | \$0         | \$4,163     | (\$3,753)   | \$410       |
|                       | TOTAL                | \$1,251,240 | \$1,235,649 | \$1,232,466 | \$1,277,470 | \$4,996,825 |
| Sewage Treated (KGal) | Los Alamos           | 73,513      | 75,516      | 80,720      | 81,656      | 311,406     |
|                       | White Rock           | 25,822      | 29,517      | 29,396      | 30,758      | 115,493     |
|                       | TOTAL TREATED        | 99,335      | 105,033     | 110,116     | 112,414     | 426,899     |
|                       | REVENUE/KGal Treated | \$12.60     | \$11.76     | \$11.15     | \$11.40     | \$11.70     |

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





Isaac Montoya, Estevan Gonzales, and Jonathan Garcia at the employee appreciation barbecue.



fjordan Garcia, David Rodriguez, Esequiel Garcia, Andres Manzanares, and Larry Naranjo at the employee appreciation barbeque.



# LOS ALAMOS

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Electric, Gas, Water, and Wastewater Services

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