



LOS ALAMOS

County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Agenda - Final Board of Public Utilities

*Carrie Walker, Chair; Jeff Johnson, Vice-chair; Paul
Frederickson, Stephen McLin and Kathleen Taylor, Members
Tim Glasco, Ex Officio Member
Harry Burgess, Ex Officio Member
Pete Sheehey, Council Liaison*

Wednesday, June 19, 2019

5:30 PM

1000 Central Avenue
Council Chambers

REGULAR SESSION

Complete Board of Public Utilities agenda packets, past agendas, videos, legislation and minutes can be found online at losalamos.legistar.com. Learn more about the Board of Public Utilities at rebrand.ly/LACBPU.

PUBLIC COMMENTS:

Please submit written comments to the Board at bpu@lacnm.us. Oral public comment is accepted during the two periods identified on the agenda and after initial board discussion on a business item, prior to accepting a main motion on an item. Oral comments should be limited to four minutes per person. Requests to make comments exceeding four minutes should be submitted to the Board in writing prior to the meeting. Individuals representing or making a combined statement for a large group may be allowed additional time at the discretion of the Board. Those making comments are encouraged to submit them in writing either during or after the meeting to be included in the minutes as attachments. Otherwise, oral public comments will be summarized in the minutes to give a brief succinct account of the overall substance of the person's comments.

1. **CALL TO ORDER**

2. **PUBLIC COMMENT**

This section of the agenda is reserved for comments from the public on Consent Agenda items or items that are not otherwise included in this agenda.

3. **APPROVAL OF AGENDA**

4. **BOARD BUSINESS**

4.A. **Chair's Report**

4.B. **Board Member Reports**

4.C. **Utilities Manager's Report**

4.D. County Manager's Report**4.E. Council Liaison's Report****4.F. Environmental Sustainability Board Liaison's Report****4.G. General Board Business****4.G.1 [11699-19](#) Quarterly Conservation Program Update**

Presenters: James Alarid, Deputy Utilities Manager - Engineering

PG. 1-39

4.H. Approval of Board Expenses**4.I. Preview of Upcoming Agenda Items****4.I.1 [12048-19](#) Tickler File for the Next 3 Months**

Presenters: Board of Public Utilities

PG. 40-42

5. PUBLIC HEARING(S)**6. CONSENT AGENDA**

The following items are presented for Board approval under a single motion unless any item is withdrawn by a member for further Board consideration in the "Business" section of the agenda.

CONSENT MOTION -

I move that the Board of Public Utilities approve the items on the Consent Agenda as presented and that the motions in the staff reports be included in the minutes for the record.

OR

I move that the Board of Public Utilities approve the items on the Consent Agenda as amended and that the motions contained in the staff reports, be included in the minutes for the record.

6.A [12045-19](#) Approval of Board of Public Utilities Meeting Minutes

Presenters: Board of Public Utilities

PG. 43-48

- 6.B [12020-19](#) Approval of DOE/LAC Resource Pool Budget Adjustment for Fiscal Year 2019 Due to Cost of Purchased Power and Approval of Related County Budget Revision 2019-41

Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin

PG. 49-53

- 6.C [12021-19](#) Approval of DOE/LAC Resource Pool Budget for Fiscal Years 2020/2021

Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin

PG. 54-65

7. **BUSINESS**

- 7.A [12017-19](#) Approval of Appointment of New Utilities Manager

Presenters: Board of Public Utilities

PG. 66

- 7.B [11924-19](#) Financial Plan Update

Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin

PG. 67-95

8. **STATUS REPORTS**

- 8.A [12047-19](#) Status Reports

Presenters: Board of Public Utilities

PG. 96-106

9. **PUBLIC COMMENT**

This section of the agenda is reserved for comments from the public on any items.

10. **ADJOURNMENT**

If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact the County Human Resources Division at 662-8040 at least one week prior to the meeting or as soon as possible. Public documents, including the agenda and minutes can be provided in various accessible formats. Please contact the personnel in the Department of Public Utilities (505) 662-8132 if a summary or other type of accessible format is needed.



County of Los Alamos

Staff Report

June 19, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.: 4.G.1
Index (Council Goals): BCC - N/A
Presenters: James Alarid, Deputy Utilities Manager - Engineering
Legislative File: 11699-19

Title

Quarterly Conservation Program Update

Recommended Action

None

Staff Recommendation

None

Body

Pajarito Environmental Education Center (PEEC) 2018 annual report will be presented.

Alternatives

N/A

Fiscal and Staff Impact

None

Attachments

A - CY2018 Annual Report

**Los Alamos County Department of Public Utilities
Outreach Service Agreement AGR16-033**

**2018 Calendar Year Report
March 6, 2019**



Prepared by Elizabeth Watts, Education Programs Director
Pajarito Environmental Education Center
2600 Canyon Road, Los Alamos, NM 87544
(505) 662-0460
educator@peecnature.org

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Program Summary

In February 2016, Pajarito Environmental Education Center (“PEEC”) entered into a contractual agreement with the Los Alamos County Department of Public Utilities (“DPU”) to provide educational services to DPU customers about water and energy conservation in Los Alamos County.

This contract continues the work started under a previous contract between DPU and PEEC, carried out between 2012 and 2015.

The period covered by this report is calendar year 2018. During this time, PEEC engaged in outreach efforts through Los Alamos Public Schools (“LAPS”) and at public venues, including at the Los Alamos Nature Center, which is operated by PEEC.

This report contains a summary of outreach efforts and results, budget summaries for 2018, and overviews of each of the task orders, including a brief summary of work completed and plans for continuation of each project. A summary of lesson plans is provided. Finally, the report includes a list of teacher contacts, publicity materials and teacher evaluations.

Complete curricula, outfitted trunks, activities, exhibits, giveaways and other materials are stored at the Los Alamos Nature Center and may be viewed there. If you would like to observe a lesson, please contact the Education Program Director at educator@peecnature.org.

Cover photo: Los Alamos Fourth Grade students at the Fourth Annual Water Festival.

Year at a Glance

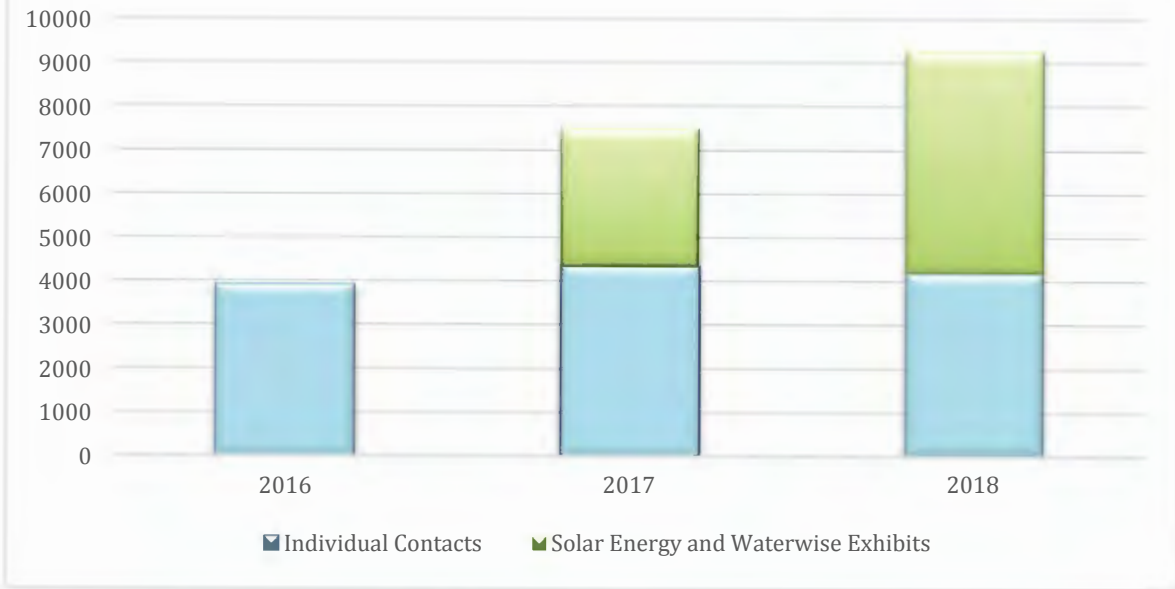
2018 Outreach Summary

- **4218 connections** made with community members about energy and water conservation through interpretive lessons, workshops and events
- **5093 visitors** learned about solar energy through the new interactive exhibit
- **2872 student contacts** allowed Los Alamos Public School students to engage with water and energy in hands-on lessons
- **1346 people** participated in water and energy conservation activities at the Los Alamos Nature Center, the Los Alamos Science Fest, and other community venues
- **286 4th graders** took part in interactive demos about water at the 4rd annual Los Alamos Water Festival
- **350 visitors** attended the Electric Vehicle show to learn and experience all types of electric vehicles

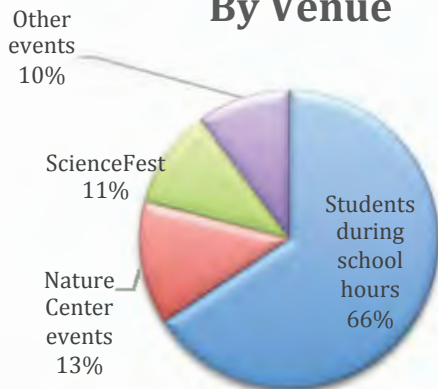


Above: Visitors learn about the many different types of electric vehicles at the 2018 Electric Vehicle Show that was held in conjunction with Los Alamos County ScienceFest. Photo by Thomas Graves

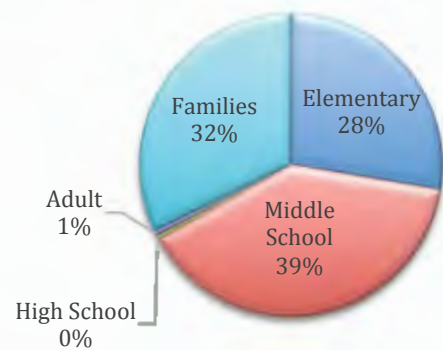
TOTAL PEOPLE REACHED, BY CONTRACT YEAR



2018 Outreach By Venue



2018 Outreach By Age



Los Alamos Middle School engineering students learn about passive solar heating by designing and building their own model houses and then measuring the temperature inside the model.



An 8th grader at LAMS performs an experiment to see how chemical energy can transform into heat.

Participant Feedback:

"After the water festival, students were much more aware of water conservation. The waste water handling was fascinating for the kids."

- 4th-grade teacher

Students asking great questions. How did the rocks get there? Is there any soil in the aquifer? Were there big rocks in the aquifer? How did the water get in there?

- 5th-grade teacher

Well done! Great to see this sort of sustainability event in Los Alamos. Overall, terrific!

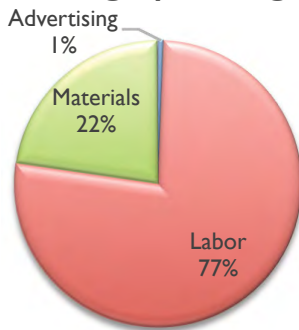
- Comment on Electric Vehicle Show

Budget Summary

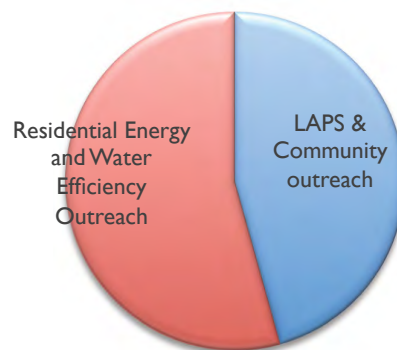
Budget Overview January – December 2018

Task Order	Visitor Contacts	Hours	Category	Budgeted	Spent
3 & 5: LAPS & Community	3842	393	Advertising	\$500	\$40.00
			Labor	\$24,000	\$16,526.04
			Materials	\$11,500	\$5,651.71
			Transportation	\$2,000	\$0.00
			Total	\$38,000	\$22,217.75
4 & 6: Residential E & W	5445	391.75	Advertising	\$1,200	\$216.70
			Labor	\$7,200	\$20,092.08
			Materials	\$3,600	\$3,934.65
			Transportation	\$0	\$54.50
			Total	\$12,000	\$24,297.93
All Task Orders	9287	784.75	Total	\$50,000	\$46,515.68

Spending by Category



Spending by Task Order



Invoice Summary January – December 2018

MONTH	PEOPLE	HOURS	COST
JANUARY	1100	94.25	\$6,303.36
FEBRUARY	685	90.5	\$7,447.99
MARCH	556	39.75	\$5,384.85
APRIL	1781	181.25	\$8,628.38
MAY	310	33.25	\$1,479.13
JUNE	535	54.25	\$3,050.10
JULY	1396	134.5	\$6,430.66
AUGUST	554	34	\$2,136.89
SEPTEMBER	549	32.5	\$1,501.80
OCTOBER	621	38.25	\$1,761.68
NOVEMBER	773	35	\$1,590.75
DECEMBER	451	17.25	\$823.99
TOTAL	9311*	784.75	\$46,539.58

* Includes visitors to the waterwise gardening and solar energy exhibits, calculated as a percentage of nature center visitors during 2018.

2018 Task Order Overviews

Los Alamos County Public Schools and Community Outreach

Task Order 5

Goal:

Educate Los Alamos students about energy and water and the importance of conservation through hands-on instruction in K-12 classrooms and at community events.

Scope:

Modify and implement classroom curricula that include hands-on in-class activities and field trips that meet New Mexico State curriculum and Common Core standards. The instruction should focus on energy and water especially as they relate to Los Alamos County; understanding energy conservation; and/or other topics deemed appropriate by agreement between PEEC and DPU staff. A PEEC representative will present the curricula, on invitation from the classroom teachers, in Los Alamos schools. Organize a water festival for 4th-grade students including water-themed activities and giveaways. Bring energy and water themed exhibits to community events.

Year-End Comments:

1) Accomplishments:

- We worked to align the energy and water programs with the Next Generation Science Standards (NGSS) that were adopted by New Mexico this year.
- We hosted the fourth annual 4th-grade water festival. The festival featured presenters from around the community, and received resoundingly positive feedback from participating teachers.
- We brought water-conservation-themed activities and exhibits to community events, including PEEC's Earth Day and Los Alamos Science Fest.

2) Plans for future work:

- We plan to complete our revision of all lessons to incorporate the new New Mexico STEM Ready science standards as well as social studies standards about resource management.
- We would like to expand the number of people capable of being instructors for this program.
- Teachers are excited about the 5th annual water festival, scheduled for April 12 and May 3, 2019.
- We plan to continue bringing energy and water-conservation activities to school science nights and community events.

Los Alamos/White Rock Residential Energy and Water Efficiency Outreach

Task Order 6

Goal:

Educate Los Alamos County residents and homeowners about energy and water conservation at home.

Scope:

Organize events, programs, and initiatives to demonstrate energy and water efficient solutions to Los Alamos residents and homeowners. Create signage to be displayed at the Los Alamos Nature Center highlighting energy and water conserving features such as photovoltaics, water harvesting and waterwise gardening.

Year-End Comments:

1) Accomplishments:

- One major accomplishment this year was the installation of a new solar energy exhibit outside the Los Alamos Nature Center.
- We updated the brochure for the waterwise garden exhibit.
- We organized and hosted an electric vehicle show to coincide with the Los Alamos Science Fest. This show featured electric vehicles of all types and information about Los Alamos County's electric grid and solar projects
- We organized a tour of the hydroelectric power plant in Abiquiu to help Los Alamos residents learn about electricity generation.

2) Plans for future work:

- Update the solar energy exhibit with real-time data from Los Alamos as well as an interactive portion on local monsoons.
- Plan another Electric Vehicle Show during ScienceFest but change the location of the cars so that more people attend.

Curriculum Overview

2018 Lesson Summaries

Complete lesson plans are stored at PEEC.
Contact educator@peecnature.org to see them.

Elementary

Grade/Topic	Academic Standards	Lesson Overview
3/Energy	Electricity & Magnetism	Students explore electricity and magnetism, and find out how electromagnetic generators are used to produce our electricity.
3/Water	Weather & Climate	Students learn how specific traits allow plants to survive in our arid climate, and design a garden with plants selected for our climate.
4/Energy	Energy conversion, fuels	Students observe how energy changes form, and role-play the energy transformations in a coal-fired power plant.
4/Water	Human-natural environment interaction	Students demonstrate human impacts on the water cycle through an active game.
5-6/Energy	Science can be used to protect resources	Students discover factors affecting passive solar energy by building and testing a model house.
5-6/Water	Locations of water on Earth	Students build a model aquifer and design and test solutions to extract the water.

Middle School

Grade/Topic	Academic Standards	Lesson Overview
7	Water & carbon cycles	Students do experiments and play games to explore the water and carbon cycles.
8	Energy sources and transformations	Students perform laboratory experiments to discover how energy changes form, and how energy transformations are used to produce electricity.

2018 Teacher Contact List

(some teachers organize lessons for others at their school)

Teacher	School	Email
Allison Washburn	Aspen	al.washburn@laschools.net
Amy Gilbert	Aspen	a.gilbert@laschools.net
Ronda Harmon	Aspen	r.harmon@laschools.net
Tammy Moore	Aspen	t.moore@laschools.net
Angela Lopez	Barranca	an.lopez@laschools.net
Annemarie Brown	Barranca	an.brown@laschools.net
Kareen Reyer	Barranca	k.reyer@laschools.net
Samantha Waidler	Barranca	s.waidler@laschools.net
David Parsons	Chamisa	d.parsons@laschools.net
Mitzi Mann	Chamisa	m.mann@laschools.net
Katie Tauxe	LAHS	k.tauxe@laschools.net
Angie Chipera	LAMS	a.chipera@laschools.net
Curtis Terrill	LAMS	c.terrill@laschools.net
Eva Abeyta	LAMS	e.abeyta@laschools.net
Lindsey Fullop	LAMS	l.fullop@laschools.net
Megan Rains	LAMS	m.rains@laschools.net
Sarah Blom	LAMS	s.blom@laschools.net
Brent Collum	LAMS	b.collum@laschools.net
Barbara Kerley	Mountain	b.kerley@laschools.net
Donna Schaefer	Mountain	d.schaefer@laschools.net
Kim Clayton	Mountain	k.clayton@laschools.net
Lorraine Whalen	Mountain	l.whalen@laschools.net
Lindsay Gibson	Mountain	l.gibson@laschools.net
Barbara Kress	Piñon	b.kress@laschools.net
Herb Siegel	Piñon	h.siegel@laschools.net
Kati Steinberg	Piñon	k.steinberg@laschools.net
Kristen Martines	Piñon	k.martines@laschools.net
Whitney Holland	Piñon	w.holland@laschools.net

Water Festival Information

Water Festival Summary

Date: April 6 & 13, 2018

Location: UNM-LA

Time: 9 AM – 2 PM

Description

We hosted Los Alamos 4th-grade students at our fourth annual Los Alamos Water Festival at UNM-LA. During the day, students participated in several mini-lessons about water presented by community experts, and then created a water-themed art project to help them summarize their learning.

Giveaways (all items with DPU logo)

- String backpacks for all students
- Totes and water-related books for all teachers
- Water-conservation-themed water bottles for all participants
- Color-changing pencil for all participants

Attendance

All 4th grade classes in the district took part, however there were no homeschool students that attended this year. Three homeschool students were registered for 4/13, but none of them showed up. In total 288 students, 13 teachers, 6 IAs and approximately 20 parents/chaperones attended this event.

Post-Event Comments

- Almost all of the presenters came back from previous years, and we had more presenters than we needed on both days.
- We tried to alternate when classes saw a hands-on presentation and a model.
- Teachers commented that their students were very engaged and that students were able to participate frequently during most presentations.
- PEEC volunteers were experienced from previous years and were therefore a huge help in logistics.
- UNM-LA was a wonderful location for the event. Alex was gracious with indoor options for when the weather was less than ideal.
- Teachers and presenters appreciated that lunch was provided.
- One of the teachers (Mitzi Mann) had a water cycle song. Having the group sing the song together was an effective way to get the kids focused at the beginning of the festival. Consider having all students learn this song for next year.

Community Presenters

Organization	Contact Name	Email	Presentation Title
LANL	Michelle Bourret	bourret@lanl.gov	Groundwater
LANL	Sanna Sevanto	ssevanto@gmail.com	Plants, Water & Climate
DPU	Jennifer Baca Joshua Silva	Jennifer.baca@lacnm.us	Water Distribution/Wastewater Collections
DPU	Clay Moseley	tclaynm@gmail.com	Pump Power
Bandelier	Hanna Davis	Hanna_davis@nps.gov	Fire & Water
NM Environment Department	Megan Green	Megan.green@state.nm.us	Pollution and the Water Cycle
City of Santa Fe	Lisa Noriega	lmnoriega@santafenm.gov	Enviroscape Watershed/Non-point Source Model
NMSU	Rossana Sallenave	rsallena@nmsu.edu	Water Quality: How Do We Measure It?
PEEC	Denise Matthews	denise@peecnature.org	Surface Tension
PEEC	Siobhan Niklasson	educator@peecnature.org	Watercolor Prints
UNM-LA	Jane Clements	Janec181@unm.edu	Water Explorations

Water Festival 2018 Schedule

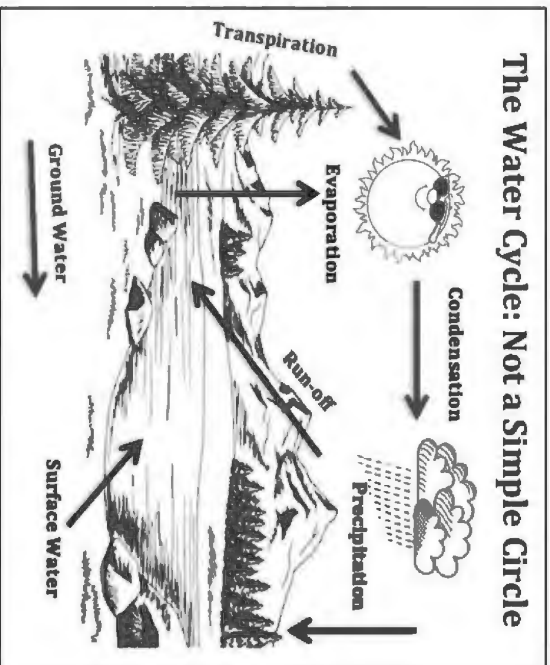
Date: Friday, April 6, 2018
 Location: UNM-LA

Schedule Overview

8:30 AM Presenter Set-up
 9:15 - 9:30 Buses arrive at Sullivan Field
 9:30 - 9:40 Introduction (Student Center)
 9:45 - 10:10 Lesson 1
 10:15 - 10:40 Lesson 2
 10:40 - 10:55 Snack/Recess Break on Mesa Field
 11:00 - 11:25 Lesson 3
 11:30 - 11:55 Lesson 4
 12:00 - 12:40 Lunch on Mesa Field
 12:45 - 1:15 Closing Project
 1:20 - 1:40 Closing Session (Student Center)
 1:40 - 1:45 Buses Depart from Sullivan Field
 1:45 - 2:15 Clean-up spaces

April 6th Lesson Schedule

Class	Lesson 1 9:45-10:10	Lesson 2 10:15-10:40	Lesson 3 11:00-11:25	Lesson 4 11:30-11:55	Art Project 12:45-1:15
Kress 1	230	517	606	Kiva	610
Kress 2	203	625	627	610	606
Siegel 1	Kiva	312	230	606	230
Siegel 2	610	627	203	230	517
Lee	606	610	220	517	625
Mann	220	Kiva	312	625	203
Thornton	627	220	625	203	627
Koski	312	203	517	627	220
Reyer	625	606	Kiva	220	312
Schmidt	517	230	610	312	



Water Festival 2018 Schedule

April 6th Presentations and Locations

Room Number	Title	Presenter
230	Groundwater	LANL Earth & Environmental Sci.
203	Plants, Water and Climate	LANL Earth & Environmental Sci.
606	Water Distribution/Wastewater Collections	Department of Public Utilities
Kiva (Outdoors)	Pump Power: Moving Water	Department of Public Utilities
610	Fire & Water	Bandelier Fire Department
220	Pollution and the Water Cycle	NM Environment Dept.
627	Enviroscape Watershed/Nonpoint Source Model	City of Santa Fe
312	Water Quality: How do we measure it?	New Mexico State University
625	Surface Tension	PEEC
517	Watercolor Prints	PEEC

Notes

- Today's theme is the Water Cycle: Not a Simple Circle
- Student takeaways:
 - Water moves through many complex processes on Earth
 - Most of the water on earth is not available for us to use/consume (it's stored in the ocean, frozen in glaciers, and found underground), so it's important to conserve what we do have!
- Each presenter will be assigned to one space and will stay there as classes rotate.
- Each class will attend 4 lessons, and each presenter will give 4 lessons.
- The project will be a circle book to help the students synthesize what they have learned and will be led by teachers and PEEC educators and volunteers.

Community Events Overview

2018 Public Event Summaries

Date	Title	Description	Attendees
4/21/18	Earth Day Festival	Visitors of all ages learn about water conservation through hands-on activities.	530
6/18/18	Nature Playtime: Garden Water Conservation	Families learn techniques for conserving water in their home gardens, including mulching soil and using water-conserving plant nannies.	33
7/14/18	Science Fest	Visitors of all ages did hands-on activities to see how people have conserved water on the Pajarito Plateau throughout history.	450
7/14/18	Electric Vehicle Show	Provided an opportunity for people to learn about electric vehicles through direct observation and discussion with electric vehicle owners.	350
9/21/18	Hydroelectric Dam Tour	Los Alamos residents toured the Abiquiu hydroelectric powerplant to learn about electricity generation.	24

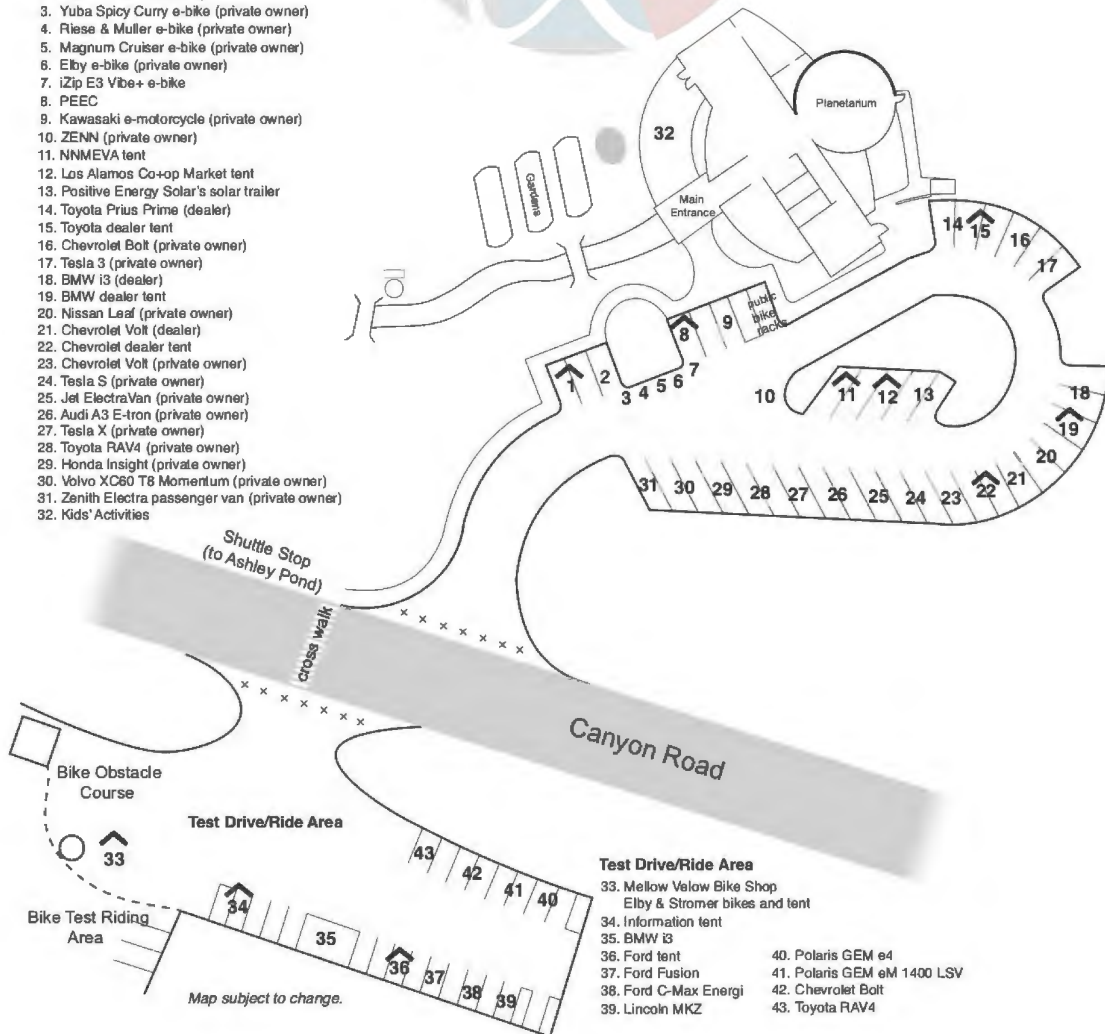


Electric vehicle show. Photo: Thomas Graves

2018 Electric Vehicle Show

Display Area

1. LAC Department of Public Utilities tent
2. LAC Ford C-max Energi
3. Yuba Spicy Curry e-bike (private owner)
4. Riase & Muller e-bike (private owner)
5. Magnum Cruiser e-bike (private owner)
6. Elby e-bike (private owner)
7. iZip E3 Vide+ e-bike
8. PEEC
9. Kawasaki e-motorcycle (private owner)
10. ZENN (private owner)
11. NNMEVA tent
12. Los Alamos Co-op Market tent
13. Positive Energy Solar's solar trailer
14. Toyota Prius Prime (dealer)
15. Toyota dealer tent
16. Chevrolet Bolt (private owner)
17. Tesla 3 (private owner)
18. BMW i3 (dealer)
19. BMW dealer tent
20. Nissan Leaf (private owner)
21. Chevrolet Volt (dealer)
22. Chevrolet dealer tent
23. Chevrolet Volt (private owner)
24. Tesla S (private owner)
25. Jet ElectraVan (private owner)
26. Audi A3 E-tron (private owner)
27. Tesla X (private owner)
28. Toyota RAV4 (private owner)
29. Honda Insight (private owner)
30. Volvo XC60 T8 Momentum (private owner)
31. Zenith Electra passenger van (private owner)
32. Kids' Activities



Test Drive/Ride Area

33. Mellow Velow Bike Shop
Elby & Stromer bikes and tent
34. Information tent
35. BMW i3
36. Ford tent
37. Ford Fusion
38. Ford C-Max Energi
39. Lincoln MKZ
40. Polaris GEM e4
41. Polaris GEM eM 1400 LSV
42. Chevrolet Bolt
43. Toyota RAV4

Tour of Abiquiu Hydroelectric Generator



EXHIBITS

Powering Our Planet

The sun provides energy for life on Earth.



How does life on Earth depend on the sun? Plants survive by turning sunlight into food through photosynthesis while also creating the oxygen we breathe. Animals survive by eating plants—or eating other animals that eat plants. Energy for our planet begins with the sun.

The sun drives Earth's weather patterns and shapes ecosystems. It changes our landscapes and determines how and where humans thrive across the planet.

Energy for Our Homes

From ancient cliff dwellings of the Pajarito Plateau to the nature center where you stand, humans design structures considering the sun's energy. Discover more about how we use solar power by touching the screen below.



LOS ALAMOS
Department of Public Utilities
Water, Gas, Heat, and Wastewater Services

The new solar energy exhibit has an informational panel about the sun and an interactive touch screen component for visitors to explore.

Throughout history, humans have taken advantage of the sun's power.



Modern Solar Power

Today, architects do the same things by designing houses with big windows facing south and may add an overhang to keep the hot summer sun from hitting them. However, we also have technology that captures the sun's energy and converts it to electricity. The panels on the nature center do just that.

Tap Here to learn more about current solar power!





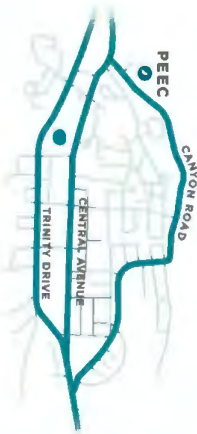
Water is a precious resource in our high-elevation desert. Given our challenging growing conditions, choosing plants adapted to our climate is the best way to grow a successful and water-wise garden. Native plants thrive without added care in local wild areas. They add color to your garden and are the preferred food sources of native pollinators. Once established, drought-tolerant plants survive on little water. While exploring our gardens, look for other water-saving measures including mulches and soil amendments, irrigated oasis zones, and drip irrigation.

LOS ALAMOS
 Department of Public Utilities
 Electric, Gas, Water, and Wastewater Services

Explore nature.



Los Alamos Nature Center is operated by the Pajarito Environmental Education Center for Los Alamos County
 2600 Canyon Road
 Los Alamos, New Mexico 87544
 505-662-0460, losalamosnature.org



PEEC
 Pajarito Environmental
 Education Center

PEEC is a non-profit organization founded in 2000 to connect people with nature. Los Alamos County hired PEEC in 2015 to operate the Los Alamos Nature Center. PEEC's Mission: Enriching people's lives by strengthening their connections with our canyons, mesas, mountains, and skies.



NATURE CENTER GUIDE
 RAISED BED GARDENS

PEEC
 Pajarito Environmental
 Education Center

Native/Wildflower Garden

Shrubs:

1. Curr' Leaf Mahogany (*Cercocarpus ledifolius*)
2. Golden Currant (*Ribes cereum*)
3. * Three Leaf Sumac (*Rhus trilobata*)

Grasses:

4. Inland Rice Grass (*Achnatherum hymenoides*)
5. Little Bluestem (*Schizachyrium scoparium*)

Perennials:

6. Arrowroot Sage (*Eriogonum jamesii*)
7. Bitterweed (*Rhynchosyris richardsonii*)
8. Blue Flax (*Linum lewisii*)
9. Butterflyweed (*Asclepias tuberosa*)
10. Cardinal Penstemon (*Penstemon cardinalis*)
11. Chocolate Flower (*Berlandiera lyrata*)
12. Dotted Gayfeather (*Liatris punctata*)
13. Firewheel (*Gallardia aristata*)
14. Hooker's Evening Primrose (*Oenothera elata*)
15. Indian Paint Brush (*Castilleja integrifolia*)
16. James's Penstemon (*Penstemon jamesii*)
17. Little Red Columbine (*Aquilegia triterinata*)
18. Mexican Hat (*Ratibida columnifera*)
19. Missouri Evening Primrose (*Oenothera macrocarpa*)
20. Nodding Onion (*Allium cernuum*)
21. Prairie Sagwort (*Artemisia frigida*)
22. Purple Geranium (*Geranium caespitosum*)
23. Perky Sue (*Tetaneuris* or *Hymenoxys argentea*)
24. Rocky Mountain Columbine (*Aquilegia caerulea*)
25. Santa Fe Phlox (*Phlox nana*)
26. Scarlet Bugler (*Penstemon barbatus*)
27. Showy Four O'Clock (*Mirabilis multiflora*)
28. Spreading Fleabane (*Eriogon divergens*)
29. Sun Drops (*Calypophus hartwegii*)
30. Vining Four O'Clock (*Mirabilis oxycarpoides*)
31. Winter Fat (*Krascheninnikovia lanata*)
32. Whipple's Penstemon (*Penstemon whippleanus*)

*Outside the raised bed, on the south side.

Water-wise Garden

Shrubs:

1. Burkwoods Broom (*Cytisus scoparius* 'Burkwoodii')
2. Creeping Sumac (*Rhus trilobata* 'Autumn Amber')
3. Giant Purple Sage (*Salvia pachyphylla*)
4. Hedge Cottonaster (*Cotoneaster lucidus* 'Peking')
5. Lavender Cotton (*Santolina chamaecyparissus*)

6. Strubby Cinquefoil (*Dasiphora fruticosa*)
7. Spanish Broom (*Cytisus purgans* 'Spanish Gold')

Perennials:

6. African Daisy (*Osteospermum 'Avalanche'*)
9. Ava's Hummingbird Mint (*Agastache 'Ava'*)
10. Baby Tears Stonecrop (*Sedum album chlorotum*)
11. Bearded Iris (*Iris germanica*)
12. Daylily (*Hemerocallis 'Frais Hais'*)
13. Daylily (*Hemerocallis 'F-cooled Me'*)
14. Golden Clematis (*Clematis tangutica*)
15. Ice Plant (*Delosperma floribundum 'Starburst'*)
16. Ice Plant (*Delosperma 'Fire Spinner'*)
17. Lavender (*Lavandula x intermedia 'Grosso'*)
18. Meadow Sage (*Salvia nemorosa 'May Night'*)
19. Mexican Feather Grass (*Nassella tenuissima*)
20. Mullein Southern Charm (*Verbascum phoeniceum*)
21. Red Hot Poker (*Kniphofia 'Stark's Early Hybrid'*)
22. Rocky Mountain Penstemon (*Penstemon strictus*)
23. Spreading Fleabane (*Eriogon divergens*)
24. White Creeping Phlox (*Phlox subulata*)

Pollinator Garden

Shrubs:

1. Blue Mist Spirea (*Caryopteris clandonensis*)
2. Butterfly Bush (*Buddleia davidii* 'Nanho Blue')
3. Fernbush (*Chamaebatia millefolium*)
4. Red Lake Currant (*Ribes rubrum* 'Red Lake')

Grasses:

5. Little Bluestem (*Schizachyrium scoparium*)

Perennials:

6. Deep Dam or Mint-Leaf Bergamont (*Monarda fistulosa* var. *menthifolia*)
7. Black-Eyed Susan (*Rudbeckia hirta*)
8. Blue Sage (*Salvia sylvestris* 'Caradonna')
9. Blue Hyssop (*Hyssopus officinalis*)
10. Coronado Hyssop (*Agastache aurantiaca*)
11. Creeping Oregon Grape (*Mahonia repens*)
12. Double Bubble Min (*Agastache cana*)
13. Firewheel (*Gallardia aristata*)
14. Hairy Golden Aster (*Heterotheca villosa*)
15. Mexican Hat (*Ratibida columnifera*)
16. Pineleaf Penstemon (*Penstemon pinifolius*)
17. Purple Coneflower (*Echinacea purpurea*)
18. Prairie Wine Cups (*Callitriche involucrata*)
19. Red Salvia (*Salvia greggii* 'Furnan's Red')
20. Sulfur Flower (*Eriogonum umbellatum 'Kannah Creek'*)
21. Threadleaf Coreopsis (*Coreopsis verticillata 'Zagreb'*)

Evaluations

Teacher/Parent Evaluation Summary

(original evaluations are stored at PEEC;
contact educator@peecnature.org to see them)

DATE	GRADE	HOW SATISFIED (1-5)	COMMENTS
2/1/18	8	5	Students enjoyed the labs and were engaged. They were able to apply what they learned and also gained lots of new information. Would love to know about life science lessons for 7th grade.
2/13/18	4	5	Energy-how it changes chemical, heat, movement, sound . Visual - age appropriate and interesting opportunities for student to move and collaborate and share.(To internalized information.) Lots of student discussions about changes in energy. Awesome 4th grade lesson!! I like how you pull potential (stored) energy and kinetic (motion) energy into the lesson.
2/20/18	3	5	I observed my class being engaged working together, and feeling empowered to solve problems and draw conclusions. They seemed comfortable and supported enough to try trial and error. Thank you so, so much for meeting their socio-emotional, academic and curiosity needs. Adjusting the centers to fit the set up of our classroom made the lesson flow and limited the potential disruptions. Thank you for getting a quick sense of what helps this group thrive.
2/20/18	4	5	Great opportunity for students to visualize how water is used. Will help them understand the need for conservation. All of the terms used in your diagram are excellent for student recall. Transpiration and infiltration are terms students need to know. They are not as familiar with them. Thank you for including them. Great student engagement. Awesome game.

2/22/18	3	4	Great questioning to increase engagement. Everyone felt validated and had a chance to participate. They liked going outside and learning more about our own backyard.
3/8/18	5	5	Students asking great questions. How did the rocks get there? Is there any soil in the aquifer? Where there big rocks in the aquifer? How did the gravel build up? How did the water get in there? Where is it from? Ideas of how to get the water out before you wet done giving instructions. I predict.....Girls who had been to EYH were excited to do this activity again. Siobhan did a great job of keeping the students engaged and calling up prior knowledge. Her own knowledge was evident when she was able to validate the students' work by telling them that industry uses machines similar to some of their ideas for extracting water or oil from the earth
3/15/18	5	5	Students really enjoyed this lesson. There was a lot of text to self discussion as they talked about cliff dwellings and the ones they had seen in person. Great opportunity to apply science lessons about earth tilt, sunlight and the seasons taught in the classroom and connections made to lessons learned on or PEEC Planetarium visit. Students loved the hands-on activity of building the solar house. The cooperative learning aspect was great as kids collaborated to design and build the best house.
2/12&13	3	5	Students work in groups to make their own discoveries on magnets. Students inquiry and hands-on exploration. Student's conversations discussing their ideas and thoughts. The kids love the PEEC lessons and hands-on activities.
2/12&13	3	5	Students making observations and classified types of leaves. Scientific drawings and making scientific reasoning/conclusions. Identified leaves outdoors. The students enjoy the visuals and applying their learning

			in the outdoors.
4/16/18	4	5	After the water festival students were much more aware of water conservation! The waste water handling was fascinating for the kids. Mr. Mosely is a favorite, even if we didn't get to go outside!! He pulled in some history that they liked! Plus how water gets to Los Alamos--great! As always, thank you for your hard work (and the teacher lunches!).
4/17/18	4	5	They seemed very engaged. It was hard to get them to end and move on to the next session.
4/6/18	4	5	Lesson time vs. hands-on time was good. I have not been to the water festival before. Excellent job!
4/5/18	3	5	Students noticed that changing connection wires (+/-) made the compass change directions. Asking each other about the parts of a motor. Lots of "experimenting and showing each other. Great set of stations for rotating. Great follow-up explanation.
4/12/18	8	5	Students were engaged.
2/28/18	3	5	Students were working together to explore magnets and motors and discussing how that relates to electricity.
4/22/18	3	5	Great job on noticing and calling on all students, especially girls. Great adapting to outdoor finds like the ant hill.
4/18/18	3	5	Students were discussing adaptations plants use to live in our climate. Students were out observing in the real world.
4/13/18	4	5	Kids were excited about the activities and learning new information. One of my students even asked one of the presenters for her notes! A big THANK YOU to everyone who had a hand in making the Water Festival possible! :) Love the water color and all the different stations for surface tension! I prefer the new closing project as well. Much more engaging.

4/13/18	4	5	The students were very engaged! They moved smoothly from one station to the next. You adjusted very well to the bad weather!
4/13/18	4	5	My students were very engaged all day! Students participated in every lesson actively. Students hypothesized and verbalized their observations. Students were sad to not go to every station.
4/6/18	4	5	My students were using vocabulary that was taught before attending. Questions were very insightful from students
4/6/18	4	4	We will see more of the impact once we are back at school later this week.
4/6/18	4	4	Students were using learned vocabulary. Their engagement level was high. They were listening and making eye contact. Well organized! Always wonderful. Thanks so much. Beneficial to kids. Love the movement and free lunch.
4/6/18	4	5	This is an excellent program. Thank you!
4/6/18	4	4	Students seemed to gain a better understanding of water tables (based on their observations, questions, and discussion answers). They enjoyed the water experiments with the tablets but didn't seem to fully comprehend the results (acidic vs. basic, etc.). I would like to know the activities in advance so I can build necessary background information. Overall it was really fun! Thank you!
4/4/18	6	5	Students were excited about the space in between the rocks. They found it interesting trying to figure out how to get pollution out of the auqifer. Ms. Niklasson was amazing with the students and kept them very engaged. Loved the lesson!

Feedback from Electric Vehicle Show participants:

<https://www.surveymonkey.com/results/SM-HQBTH5YSL/>

What worked? What didn't work?

- It was nice to be located right next to the solar charged battery. As someone who was setting up a stand without an electronic vehicle, I felt a bit rushed to move my car while unloading. Overall the event was great!
- Organization was terrific, steady stream of interested residents, shade tent for bikes was much appreciated!
- The whole thing worked. Great turn out
- The placards were a great idea, and I liked how you had a dedicated test drive area. This was the best EV show I've been in, I don't have any opinions on what could be better!
- It was good when they set up the shade for the e-bikes, since the batteries are exposed directly to the sun. But then we were all a bit crowded. A little more space under the shade would be good.
- The overall setup worked well. Some important EVs, PHEVs were missing. I would be willing to help solicit new showings in a follow up event.
- I wish we had had the turnout of Earth Day, but we didn't. We did have interest in the e-bikes, though, and part of that may have been the differing models. People could really do a little comparison between the bikes.
- I wondered if we'd get many people with ScienceFest going on at the same time, but the car show had a lot of publicity and I thought we got very good attendance. I'm curious how well the test drives went. I didn't get a chance to get up there and even see what they had available. The ice cream booth was much appreciated. It was hot! It was great having the wide range of vehicles. I liked looking at everything, the bikes, motorcycles, and cars of all sizes and types, and talking with all the owners and comparing notes.
- Nice venue, plenty of space for people to get into cars, I wouldn't change anything.
- Everything seemed fine. Better than expected and very well organized.
- Well organized. I had a place to exhibit my vehicle.
- It would have been nice to have more dealer participation, especially tents. It was hot out there!
- It was a little hectic with having it the same time as ScienceFest, but I also think that is what made it work.
- Great variety of vehicles. More shade would have been nice.
- I think it was well organized and well publicized and the posters and handout materials were excellent.

Any other comments or suggestions for the organizers?

- It was a great show. Thanks for inviting us to vend.
- Well done! Great to see this sort of sustainability event in Los Alamos. Perhaps make it even more visible next year by moving it downtown (library or Justice Center parking lot?)... Overall, terrific!
- I thought it was really cool to be next to the tiny VW Bus guy, his car was a great way to explain to people how my Tesla works, since everything's out in the open in his bus. He was a really cool dude, too :) The Positive Energy solar trailer was only used by the ice cream freezer by the co-op. It would have been a neat message if someone had been able to plug their car into it too, even if the truck isn't outputting much electricity. Also it would have been cool to have cars plugged into the Nature Center's charging station. I got a ton of questions about where I could charge, and it would have been neat to point to somebody actively using it.
- An additional educational component would be good. May be there could be a couple of guided walk-throughs that point out representatives of the different technologies and highlight their features. About half of the people that showed up at my plug-in hybrid did not understand what it was.
- I thought there was a great selection of cars also. Good opportunity for people to see the variety of vehicles on the market.
- Nice job!
- There didn't seem to be much interest in test driving most of the cars in the distaff lot. Not sure why, though the reps mostly hid out somewhere...
- Thanks. I think its important to get the word out about electric vehicles.
- Keep doing this. It would be great if the dealerships would take it more seriously and really have a big showing. This is the future after all :)
- Good job to PEEC organizers and staff.



County of Los Alamos

Staff Report

June 19, 2019

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.: 4.I.1
Index (Council Goals): BCC - N/A
Presenters: Board of Public Utilities
Legislative File: 12048-19

Title

Tickler File for the Next 3 Months

Attachments

A - Tickler File for the Next 3 Months



LOS ALAMOS

County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Tickler

**Criteria: Agenda Begin Date: 7/1/2019, Agenda End Date: 9/30/2019, Matter Bodies:
Board of Public Utiliti**

File Number	Title
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Agenda Date: 07/17/2019

11705-19	Briefing/Report (Dept, BCC) - No action requested Quarterly Update on Utility System - Electric System Department Name: DPU Drop Dead Date:	04G General Board Business Length of Presentation: Apx. 30 Min. Sponsors: Steve Cummins, Deputy Utilities Manager - Power Supply
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11894-19	Briefing/Report (Dept, BCC) - No action requested Planning for Upcoming Board of Public Utilities Annual Boards & Commissions Presentation to Council on September 17th, 2019 Department Name: DPU Drop Dead Date:	04G General Board Business Length of Presentation: Apx. 20 Min. Sponsors: Jeff Johnson
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11895-19	Briefing/Report (Dept,BCC) - Action Requested Annual Review and Affirmation of the Board of Public Utilities Policies and Procedures Manual Department Name: DPU Drop Dead Date:	04G General Board Business Length of Presentation: Apx. 20 Min. Sponsors: Board of Public Utilities
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AGR0619-19	General Services Agreement Approval of Services Agreement No. AGR19-47 with [vendor] in the amount of \$[amount], plus Applicable Gross Receipts Tax, for the Purpose of Design of the White Rock Waste Water Treatment Plant Department Name: DPU Drop Dead Date:	06 Consent Length of Presentation: N/A Sponsors: James Alarid, Deputy Utilities Manager - Engineering
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AGR0621-19	General Services Agreement Approval of Services Agreement No. AGR__-____ with [vendor] in the amount of \$[amount], plus Applicable Gross Receipts Tax, for the Purpose of 2019 Water Tank Coating & Cathodic Protection Inspection Department Name: DPU Drop Dead Date:	06 Consent Length of Presentation: N/A Sponsors: Jack Richardson, Deputy Utilities Manager - GWS Services
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RE0410-19	Resolution Approval of Incorporated County of Los Alamos Resolution No. XX-XX. A Resolution Removing Uncollectible Utility Accounts from the Incorporated County of Los Alamos' Accounts Receivable List for Fiscal Year 2014	06 Consent
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File Number	Title	
	<p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>Length of Presentation: N/A</p> <p>Sponsors: Bob Westervelt, Deputy Utilities Manager - Finance/Admin</p>
11474-18	<p>Briefing/Report (Dept,BCC) - Action Requested</p> <p>Approval of Construction of 1 MW of Solar Next to the Existing PV Array</p> <p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>07 Business</p> <p>Length of Presentation: Apx. 20 min.</p> <p>Sponsors: Steve Cummins, Deputy Utilities Manager - Power Supply</p>
Agenda Date: 08/21/2019		
11761-19	<p>Calendar</p> <p>Reminder for Upcoming Boards & Commissions Luncheon</p> <p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>04A Chairs Report</p> <p>Length of Presentation: Apx. 5 Min</p> <p>Sponsors: Board of Public Utilities</p>
12049-19	<p>Budget Item</p> <p>Approval of Budget Carryovers from FY2019 to FY2020</p> <p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>06 Consent</p> <p>Length of Presentation: N/A</p> <p>Sponsors: Bob Westervelt, Deputy Utilities Manager - Finance/Admin</p>
Agenda Date: 09/18/2019		
11701-19	<p>Report</p> <p>Quarterly Conservation Program Update</p> <p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>04G General Board Business</p> <p>Length of Presentation: Apx. 10 Min</p> <p>Sponsors: James Alarid, Deputy Utilities Manager - Engineering</p>
12050-19	<p>Briefing/Report (Dept,BCC) - Action Requested</p> <p>Approval of Department of Public Utilities Mission, Vision and Values, Strategic Goals and Objectives</p> <p>Department Name: DPU</p> <p>Drop Dead Date:</p>	<p>04G General Board Business</p> <p>Length of Presentation: Apx. 20 Min.</p> <p>Sponsors: Board of Public Utilities</p>



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 6.A
Index (Council Goals): BCC - N/A
Presenters: Board of Public Utilities
Legislative File: 12045-19

Title

Approval of Board of Public Utilities Meeting Minutes

Recommended Action

I move that the Board of Public Utilities approve the meeting minutes of May 15th, 2019 as presented.

Body

REQUESTED REVISIONS TO THE DRAFT MINUTES

Draft minutes are sent to members after each meeting for their review. Members may then send changes to be incorporated prior to final approval of the minutes at the next regular meeting.

The following changes were incorporated into the minutes presented for approval:

1. Kathleen Taylor - Item 1 - "Ms. Walker reported to staff outside the meeting that as authorized by..."

Attachments

A - Draft BPU Regular Session Minutes - May 15th, 2019



LOS ALAMOS

**County of Los Alamos
Minutes
Board of Public Utilities**

1000 Central Avenue
Los Alamos, NM 87544

*Carrie Walker, Chair; Jeff Johnson, Vice-chair; Paul Frederickson, Stephen McLin and
Kathleen Taylor, Members
Tim Glasco, Ex Officio Member
Harry Burgess, Ex Officio Member
Pete Sheehy, Council Liaison*

Wednesday, May 15, 2019

5:30 PM

1000 Central Avenue
Council Chambers

REGULAR SESSION

1. CALL TO ORDER

The regular meeting of the Incorporated County of Los Alamos Board of Public Utilities was held on Wednesday, May 15th, 2019 at 5:30 p.m. at 1000 Central Ave., Council Chambers. Board Vice Chair Jeff Johnson called the meeting to order at 5:30 p.m.

Present 5 - Board Member Johnson, Board Member Frederickson, Board Member McLin, Board Member Taylor and Board Member Glasco

Absent 2 - Board Member Walker and Board Member Burgess

Deputy County Manager Mr. Steve Lynne attended for Mr. Burgess.

Ms. Walker reported to staff outside the meeting that as authorized by §10-15-1 (H)(2) of the New Mexico Open Meetings Act, NMSA 1978, the Board of Public Utilities met in closed session on April 25th and May 6th, 2019 to discuss information pertaining to limited personnel matters - Utilities Manager hiring process. She reported that the matters discussed were limited only to those specified in the meeting notice.

2. PUBLIC COMMENT

Mr. Johnson opened the floor for public comment on items on the Consent Agenda and for those not otherwise included on the agenda. There were no comments.

3. APPROVAL OF AGENDA

Ms. Taylor moved that the agenda be approved as presented. The motion passed by the following vote:

Yes: 4 - Board Member Johnson, Board Member Frederickson, Board Member McLin and Board Member Taylor

Absent: 1 - Board Member Walker

4. BOARD BUSINESS

4.A. Chair's Report

Mr. Johnson reported on the following items:

1) Mr. Johnson reminded the other members that interviews for the Utilities Manager position are happening on Wednesday and Thursday of next week.

4.B. Board Member Reports

Board members had nothing to report.

4.C. Utilities Manager's Report

Mr. Glasco provided a written report, which is included in the minutes as an attachment.

Ms. Taylor asked Mr. Glasco to elaborate on the content of the Department's letter to the Environmental Protection Agency in response to their administrative order regarding elevated concentrations of chlorine at the Los Alamos Wastewater Treatment Plant.

4.D. County Manager's Report

Mr. Lynne had nothing to report.

4.E. Council Liaison's Report

Mr. Sheehey reported on the following items:

1) The subcommittee to choose candidates to replace Mr. Frederickson met Monday after interviewing eight candidates. Ms. Walker was absent, but Mr. Glasco, Councilor Maggiore and Councilor Sheehey were present. The subcommittee down selected to five candidates, who will be sent forward to Council on May 28th for interviews. Mr. Sheehey felt that there were eight good candidates, and out of the five recommended, Council should be able to find a good match for this Board.

Mr. Sheehey listed the five recommended candidates for Mr. Johnson.

4.F. Environmental Sustainability Board Liaison's Report

Ms. Susan Barns provided a written report, which is included in the minutes as an attachment.

Mr. Johnson asked Ms. Barns to elaborate on the food waste composting project.

Mr. Johnson asked Ms. Barns to discuss whether or not the brush carts have helped with the composting effort and asked if there have been any issues with contamination of non-brush materials in the carts.

In response to a question by Ms. Barns, the Board expressed some interest in having a joint meeting with the ESB to learn more about the recent Energy Use and Greenhouse Gas Emissions in Los Alamos report issued by Mr. Robert Gibson.

4.G. General Board Business

There were no items on this section of the agenda.

4.H. Approval of Board Expenses

There were no Board expenses.

4.I. Preview of Upcoming Agenda Items

No tickler was provided in the agenda packet for the Board.

5. PUBLIC HEARING(S)

There were no public hearings scheduled for this meeting.

6. CONSENT AGENDA

Ms. Taylor moved that the Board of Public Utilities approve the items on the Consent Agenda as presented and that the motions contained in the staff reports be included in the minutes for the record. The motion passed by the following vote:

Yes: 4 - Board Member Johnson, Board Member Frederickson, Board Member McLin and Board Member Taylor

Absent: 1 - Board Member Walker

6.A [11957-19](#) Approval of Board of Public Utilities Meeting Minutes

Presenters: Board of Public Utilities

I move that the Board of Public Utilities approve the meeting minutes of April 17th, 2019 as presented.

6.B [AGR0623-19](#) Approval of Amendment No. 1 to Services Agreement No. AGR18-20 with Intellibind Technologies, LLC in the amount of \$300,000.00 for a Total Contract Amount of \$800,000.00, plus Applicable Gross Receipts Tax, for the Purpose of Critical Infrastructure Protection Version 5 Comprehensive Patch Management Services

Presenters: James Alarid

I move that the Board of Public Utilities approve Amendment No. 1 to Services Agreement No. AGR18-20 with Intellibind Technologies, LLC in the amount of \$300,000.00 for a Total Contract Amount of \$800,000.00, plus Applicable Gross Receipts Tax, for the Purpose of Critical Infrastructure Protection Version 5 Comprehensive Patch Management Services and forward to Council for approval.

6.C [AGR0627-19](#) Approval of Services Agreement No. AGR20-905 with Kutak Rock, LLP in the amount of \$150,000.00, plus Applicable Gross Receipts Tax, for the Purpose of Legal Services

Presenters: Tim Glasco

I move that the Board of Public Utilities approve Services Agreement No. AGR20-905 with Kutak Rock, LLP in the amount of \$150,000.00, plus applicable gross receipts tax, for the purpose of legal services related to utilities issues.

6.D [11933-19](#) Approval of Contract No. 19-WC-40-727 with the United States Bureau of Reclamation for Lease of the 2019 Allocation of San Juan/Chama Project

Water

Presenters: Jack Richardson

I move that the Board of Public Utilities approve Contract No. 19-WC-40-727 between the Incorporated County of Los Alamos and the United States Bureau of Reclamation for lease of the County's 2019 allocation of San Juan/Chama Project water.

7. BUSINESS

7.A AGR0625-19 Consideration of Change Order No. 6 to Services Agreement AGR17-30 for the Otowi Well #2 Design, Drilling and Development Project

Presenters: James Alarid

Deputy Utility Manager of Engineering Mr. James Alarid presented this item. The following is the substance of the item being considered.

The drilling of Otowi Well #2 began on January 16, 2018. The operation was originally scheduled to take 60 days to complete the drilling and install the screen and casing. The driller was using the reverse rotary mud drilling method and encountered a fissured basalt geological formation at about 50 feet below ground level. The fissures in the basalt caused the drilling mud to be lost into the formation, and drilling was stopped. Through February and March 2018, the contractor and the DPU negotiated the project's first change order that modified the drilling equipment to change the drilling technique. Several iterations of cementing the bore hole and re-drilling through the cement were performed between April and August 2018. The cost for applying the cement, re-drilling through the cement and the time to perform this work through this 300-foot layer of fissured basalt were the subject of Change Orders 2 and 3. The costs associated with stabilizing a second 140-foot layer of basalt was the subject of Change Order No. 4. Change Order No. 5 included additional payment for the costs of labor, fuel and equipment from April 1, 2018 to August 2, 2018, which represents the timeframe where drilling occurred in the fractured basalt. The fissured basalt geological formations encountered in drilling of the well were an unforeseen condition and the justification for executing Change Orders 1 through 5. On February 11, 2019, the well construction was completed, and the final testing of the well took place on May 2, 2019. Change Order 6 includes payment for adjustment of final as-constructed quantities, additional work to meet unforeseen regulatory requirements, additional engineering services and payment for difficult drilling conditions associated with fractured basalt.

The Board discussed this item and requested clarification where necessary.

Mr. McLin moved that the Board of Public Utilities approve Change Order No. 6 to AGR 17-30 for the Otowi Well #2 Design, Drilling and Development Project in the amount of \$399,587.64 and forward to Council for approval. The motion passed by the following vote:

Yes: 4 - Board Member Johnson, Board Member Frederickson, Board Member McLin and Board Member Taylor

Absent: 1 - Board Member Walker

8. STATUS REPORTS

8.A [11958-19](#) Status Reports

Presenters: Board of Public Utilities

The following informational status reports were provided to the Board in the agenda packet:

- 1) Electric Reliability Update
- 2) Accounts Receivables Report
- 3) Safety Report

The following actions were identified for follow-up:

- 1) Mr. Glasco will check with the Risk Department to find out if a date can be added to the injury incidents on the OSHA incident rate spreadsheet.

9. PUBLIC COMMENT

Ms. Johnson opened the floor for public comment on any items. There were no comments.

10. ADJOURNMENT

The meeting adjourned at 6:51 p.m.

APPROVAL

Board of Public Utilities Chair Name

Board of Public Utilities Chair Signature

Date Approved by the Board



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 6.B
Index (Council Goals): BCC - N/A
Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin
Legislative File: 12020-19

Title

Approval of DOE/LAC Resource Pool Budget Adjustment for Fiscal Year 2019 Due to Cost of Purchased Power and Approval of Related County Budget Revision 2019-41

Recommended Action

I move that the Board of Public Utilities approve the 2019 Resource Pool budget adjustment and approve Budget Revision 2019-41 as presented and forward to the County Council for its approval. I further move that Budget Revision 2019-41 be included as an attachment in the minutes for the record.

Staff Recommendation

Staff recommends approval of these 2019 Resource Pool and County Budget Adjustments

Body

The purpose of this \$2,500,000 budget revision is to increase the expenditure budget for Electric Production for other purchased power. The revision also increases DOE wholesale sales revenue for Electric Production since LANL will pay its pro-rata share of any increased costs, and increases transfers in for EP and transfers out for ED for the LAC portion of the cost.

The adjustment is due partially to market prices exceeding budget. Purchased power was budgeted using a "most likely cost" scenario developed by NNSA's power consultant, at \$25.00 per MWh. Actual purchases have averaged \$39.75 per MWh for the fiscal year. In addition, the Pool has as needed to purchase more power on the market than was originally budgeted. This is because the scheduled outage at the San Juan Plant was extended beyond its originally scheduled duration. The revision amount is based on current prices and projected power needs

Due to agenda documentation deadlines, this budget adjustment was not approved by the Operating Committee when this staff report was prepared, but is scheduled for approval by the Operating Committee on June 13, 2019. Should that approval not happen, this item will be pulled from the June 19, 2019 Board agenda.

Alternatives

We have existing underruns in other line items so may not need this additional expenditure authority, but depending on LANL and LAC loads and market costs of purchased power, we feel

it is prudent to ensure adequate spending authority in advance. If this budget adjustment is not approved by the Board and Council, we risk exceeding our budget authority or will have to curtail other budgeted initiatives to ensure we have adequate spending authority overall for the fiscal year. We are contractually obligated to supply adequate power to meet LANL loads, so simply curtailing power purchases is not an option. As noted above, LANL will pay its pro rata share of additional power costs, which is reflected in the revenue adjustment included with this item.

Fiscal and Staff Impact

The net fiscal impact to the Joint Utilities Fund is a \$2.5 million increase to expenditures, a \$2 million increase to revenue and a decrease of \$500,000 to fund balance. The transfers in and out net to \$0 because Electric Production and Electric Distribution are sub funds of the Combined Electric Fund. Due to the Power Pool, DOE pays approximately 80% of this increased purchased power cost.

Attachments

A - Budget Revision 2019-41

B - YTD budget to actuals summary for EP

Budget Revision 2019-41

Board of Public Utilities Meeting Date: June 19, 2019

Council Meeting Date: June 25, 2019

	Fund/Dept	Brass Org	Revenue (decrease)	Expenditures (decrease)	Transfers In(Out)	Fund Balance (decrease)
1	Utilities - Electric Production	511851xx 4355 8367 7699	\$ 2,000,000	\$ 2,500,000	\$ 500,000	\$ -
1	Utilities - Electric Distribution	51285260 7699	\$ -	\$ -	\$ (500,000)	\$ (500,000)

Description: The purpose of this \$2,500,000 budget revision is to increase the expenditure budget for Electric Production for other purchased power due to market prices exceeding budget. The revision also increases DOE wholesale sales revenue and transfers in for Electric Production. It also increases transfers out and reduces fund balance for Electric Distribution. The revision amount is based on current prices and projected power needs.

Fiscal Impact: The net fiscal impact to the Joint Utilities Fund is a \$2.5 million increase to expenditures, a \$2 million increase to revenue and a decrease of \$500,000 to fund balance. The transfers in and out net to \$0 because Electric Production and Electric Distribution are subfunds of the Combined Electric Fund. Due to the Power Pool, DOE pays approximately 80% of this increased purchased power cost.

ELECTRIC PRODUCTION

As of May Month End 2019

OPERATING EXPENSES	YTD Actuals	YE Projection	Rev 2019 Budget	Projected % of Budget
El Vado Generation	503,960.00	549,774.55	567,479.00	97%
Abiquiu Generation	401,083.82	437,545.99	689,989.00	63%
Contract Administration	38,097.77	41,561.20	17,997.00	231%
Carbon Free Power Project	11,489.26	12,533.74	384,114.00	3%
Load Control	1,641,941.09	1,791,208.46	2,042,883.00	88%
Transmission - PNM	1,858,779.65	2,258,779.65	2,899,531.00	78%
Transmission - Other	441,349.69	481,472.39	1,983,778.00	24%
Purchased Power	13,847,800.95	15,147,800.95	\$12,669,418	120%
Photovoltaic Array	52,256.88	57,007.51	110,867.00	51%
Debt Service	2,069,309.04	2,257,428.04	2,774,417.00	81%
Property Taxes	315,959.61	449,087.42	449,087.42	100%
Insurance	83,750.00	\$120,000	\$120,000	100%
San Juan Operations	8,333,678.57	11,281,525.00	11,281,525.00	100%
Laramie River Operations	1,895,207.70	2,067,499.31	2,865,754.00	72%
Non-Pool Expenses	23.59	25.73	115,278.00	0%
Interdepartmental Charges	459,441.00	501,208.36	459,441.00	109%
Administrative Allocation	355,617.14	387,945.97	629,817.00	62%
TOTAL OPERATING EXPENSES	\$ 32,309,745.76	\$ 37,842,404.26	\$ 40,061,375.02	94%
CAPITAL EXPENDITURES	\$ 197,067.41	\$ 214,982.63	\$ 610,634.00	35%
TOTAL EXPENSES	\$ 32,506,813.17	\$ 38,057,386.89	\$ 40,672,009.02	94%

Difference Between Projected and Rev 2019 Budget

2,478,383.35



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 6.C
Index (Council Goals): BCC - N/A
Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin
Legislative File: 12021-19

Title

Approval of DOE/LAC Resource Pool Budget for Fiscal Years 2020/2021

Recommended Action

I move that the Board of Public Utilities approve the 2020-2021 Resource Pool budget as presented and forward to the County Council for its approval.

Staff Recommendation

Staff recommends approval of this 2019-2020 Resource Pool Budget

Body

The Electric Energy and Power Coordination Agreement (ECA) between the County of Los Alamos and the Department of Energy requires that a 24-month budget be approved each year. The budget process begins with both parties preparing a load projection by month for the budget period. From these load projections the Power Supply division prepares a Resource Supply Projection that matches the available resources to the projected loads, and also estimates the variable costs for both our owned resources and for purchased power. Finally, costs for projected generation, purchases, and transmission are allocated to the parties based on the terms of the ECA. This is normally accomplished in April or May of the preceding year.

This budget projects total costs per MWh of \$47.24 and \$49.77 for fiscal years 2020 and 2021, respectively. Actual costs for fiscal year 2019 through April were \$57.50 per MWh compared to budgeted costs of \$53.91 per MWh. The significant decrease is due to completion of the SNCR work at Laramie River Station, no planned outages at San Juan, and both Hydro's are anticipated to be on line with good production numbers.

The ten-year historical average cost per MWh for the fiscal years 2008 through 2017 was \$67.25. Beginning in FY2017 we are seeing the benefit of the lower coal price and a lower capital budget at San Juan, and retirement of the debt at LRS, which historically was passed through to the Pool through LRS direct charges. Note, the last round of environmental upgrades anticipated for San Juan were completed in FY16 with the SNCR project. Similar upgrades at Laramie River will be completed in FY19, the costs of which have been passed through to the participants over 36 months, ending in FY20.

Costs to the participants vary due to each party's load factors. The projected costs to the County per MWh are \$48.49 and \$51.39 for fiscal years 2020 and 2021, respectively.

Due to agenda documentation deadlines, the budget was not approved by the Operating Committee when this staff report was prepared, but is scheduled for approval by the Operating Committee on June 13, 2019. Should that approval not happen, this item will be pulled from the June 19, 2019 Board agenda.

Alternatives

If this budget is not approved by the Board and Council we will have to continue under the last approved budget while we continue to negotiate a budget. Certain costs are billed to the participants as budgeted (fixed charges associated with the various resources) and reconciled in the next budget cycle. Delay in approving a budget will result in adjustments being needed to reconcile actual billings with the budget after the fact when the budget is approved.

Fiscal and Staff Impact

None. DPU's expenditure authority for purchase power costs is incorporated into the budget approved by the Utilities Board and County Council during the normal budget cycle. Approval of this Resource Pool budget is a contractual requirement of the ECA. The Resource Pool budget may differ somewhat from the purchase power expenditure authority requested by DPU during the normal County budget cycle due to timing differences in the budget cycles.

Attachments

- A - Resource Pool 24-month Budget Package
- B - Loads and Resources worksheet fiscal year 2020
- C - Loads and Resources worksheet fiscal year 2021

Department of Energy / Los Alamos County Resource Pool
Including Solar Resource
Fiscal Year 2020
Budget

Los Alamos County Resources	Fiscal Year 2020 Budget												Total MWh	Cost per MWh			
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			Total		
Generation																	
San Juan Demand Charge	327,302	327,302	327,302	158,277	158,277	158,277	158,277	158,277	158,277	158,277	158,277	158,277	158,277	158,277	158,277	2,406,401	
San Juan Energy Charge	672,351	672,225	650,540	672,225	650,540	672,225	651,315	672,225	650,540	672,225	672,225	650,540	672,225	672,225	650,540	7,959,175	298,092 \$ 34.77
El Vado Demand Charge	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	31,778	381,338	
El Vado Energy Charge	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	32,953	395,439	27.65
Abiquiu Demand Charge	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	68,862	826,345	
Abiquiu Energy Charge	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	56,515	678,184	33.71
Laramie River Station Demand	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	130,087	1,561,042		
Laramie River Station Energy	80,483	80,483	75,290	40,241	55,819	80,483	77,979	76,588	38,943	38,943	67,501	77,886	67,501	77,886	832,178	73,082 \$ 32.75	
Western Demand	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	82,699		
Western Energy	5,183	4,922	4,907	6,984	7,274	8,465	7,521	6,693	6,984	6,984	4,980	4,936	4,980	4,936	73,931	5,092 \$ 30.76	
CFPP Deman																	
CFPP Energy																	#DIV/0!
Renewable Energy Purchases	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	14,128	169,540	4.216 \$ 40.21
Other Purchased Power	848,160	804,384	802,560	970,140	1,118,112	1,111,500	472,872	419,748	307,116	118,560	424,080	844,512	-	-	8,241,744	216,888 \$ 38.00	
Spinning Reserve Purchase	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Economy Sales	(14,250)	(11,400)	(14,250)	(14,250)	-	(14,250)	(8,550)	(8,550)	(14,250)	(14,250)	(11,400)	(14,250)	(11,400)	(14,250)	(136,800)	(4,800) \$ 28.50	
Transmission																	
Western (LRS)	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	30,942	371,300	
PNM Wheeling	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	204,939	2,459,272		
LASP allocation to batteries	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	2,977	35,727		
OASIS Trans./ Ancil. Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NORA	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	8,123	97,475		
Jemez	19,634	19,675	13,686	13,270	1,617	1,455	1,789	1,262	10,513	25,982	36,636	21,745	36,636	21,745	167,265		
Tri-State	3,769	3,777	2,627	2,547	310	279	343	242	2,018	4,988	7,033	4,174	7,033	4,174	32,111		
Other Costs																	
Norton-STA debt service																	
Dispatch Center	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	149,847	1,788,163		
Less Kirland Credit	(63,990)	(64,733)	(61,430)	(59,073)	(56,926)	(56,812)	(67,077)	(68,568)	(70,179)	(71,036)	(62,752)	(60,253)	(62,752)	(60,253)	(762,829)		
Administrative Costs	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	97,919	1,175,031		
Legal Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summary																	
Demand Charges	917,094	916,400	912,564	748,084	736,352	736,273	726,405	724,287	733,702	748,590	769,573	754,323	769,573	754,323	9,423,668		
Energy Charges	1,796,164	1,754,850	1,723,285	1,879,577	2,035,982	2,062,659	1,428,787	1,351,422	1,252,900	1,005,962	1,361,623	1,767,862	1,361,623	1,767,862	19,421,073		
Norton-STA Demand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Customer Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Los Alamos Resource Total	2,713,258	2,671,250	2,635,849	2,627,671	2,772,334	2,798,932	2,155,193	2,075,709	1,986,602	1,754,552	2,131,197	2,522,185	2,131,197	2,522,185	28,844,731	665,294	\$43.36

Department of Energy / Los Alamos County Resource Pool
Including Solar Resource
Fiscal Year 2020
Budget

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total	Total MWh	Cost per MWh	
Department of Energy Resources																
Generation																
501 TA-3 Fuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
503 TA-3 Steam O&M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
505 TA-3 Electric Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
513 TA-3 Maint of Electric Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
TA-3 Fixed Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combustion Turbine	15,347	15,347	15,347	15,347	15,347	15,347	15,347	15,347	15,347	15,347	15,347	15,347	184,159	4,800	\$	38.37
Western Demand	90,344	90,344	90,344	96,338	96,338	96,338	96,338	96,338	96,338	90,344	90,344	90,344	1,120,092	69,979	\$	29.86
Western Energy	75,523	78,927	71,988	69,774	75,131	80,140	88,035	84,168	87,454	79,773	86,689	91,731	969,333			
Western Peaking Capacity/TX	22,245	22,245	22,245	21,690	21,690	21,690	21,690	21,690	21,690	21,690	21,690	21,690	261,945			
Transmission																
562/571 115KV O&M	66,227	66,699	59,396	59,883	71,081	80,331	69,620	70,107	81,792	65,725	85,687	67,186	843,735			
Fixed Charges	55,509	55,509	55,509	55,509	55,509	55,509	54,278	54,278	54,278	54,278	54,278	54,278	658,724			
SVC Transmission Credit	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	72,000			
													1,574,459			
Other Costs																
SCADA O&M & Maint Projects	9,202	9,268	8,253	14,571	59,511	17,412	15,924	15,991	17,615	15,382	18,156	15,585	216,869			
Special Projects	-	-	-	71,667	71,667	71,667	71,667	71,667	96,667	96,667	96,667	96,667	745,000			
Summary																
Demand Charges	249,527	250,066	241,748	325,657	381,795	348,947	335,516	336,071	374,379	350,087	372,822	351,751	3,918,365			
Energy Charges	90,869	94,274	87,334	85,120	90,478	95,487	103,382	99,514	102,800	95,119	102,036	107,078	1,153,493			
Customer Charges																
Department of Energy Total	340,397	344,339	329,082	410,778	472,273	444,434	438,898	435,585	477,179	445,206	474,858	458,828	5,071,857	74,779		67.82

Department of Energy / Los Alamos County Resource Pool
Including Solar Resource
Fiscal Year 2020
Budget

Resource Cost	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total	Cost per MWh
	Total Transmission Cost													\$4,737,608.47
Demand														
Los Alamos	917,094	916,400	912,564	748,094	736,352	736,273	726,405	724,287	733,702	748,590	769,573	764,323	9,423,658	
Department of Energy	249,527	250,066	241,748	325,657	381,795	348,947	335,516	336,071	374,379	350,087	372,822	351,751	3,918,365	
Total	1,166,621	1,166,465	1,154,312	1,073,752	1,118,147	1,085,219	1,061,921	1,060,358	1,108,081	1,098,677	1,142,395	1,106,073	13,342,022	
Energy														
Los Alamos	1,796,164	1,754,850	1,723,285	1,879,577	2,035,982	2,062,659	1,428,787	1,351,422	1,252,900	1,005,962	1,361,623	1,767,862	19,421,073	
Department of Energy	90,869	94,274	87,334	85,120	90,478	95,487	103,382	99,514	102,800	95,119	102,036	107,078	1,153,493	
Total	1,887,033	1,849,124	1,810,619	1,964,697	2,126,460	2,158,146	1,532,169	1,450,936	1,355,700	1,101,082	1,463,660	1,874,940	20,574,566	
Norton-WTA														
Los Alamos	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW Demand														
LAC Actual Demand	21	18	14	15	16	15	16	11	15	9	14	20	20	
DOE Actual Demand	77	77	76	76	76	74	56	56	59	60	76	82	76	
Total Actual Demand	98	96	90	91	92	89	73	67	74	70	90	103	103	
MW Billing Demand														
LAC Billing Demand	21	18	14	15	16	15	16	11	15	9	14	20	20	
DOE Billing Demand	77	77	76	76	76	74	56	56	59	60	76	82	76	
Total Billing Demand	98	96	90	91	92	89	73	67	74	70	90	103	103	
Norton-WTA Demand														
LAC Billing Demand	21	18	15	15	16	15	16	15	15	15	15	20	20	
DOE Billing Demand	77	77	76	76	76	74	65	65	65	65	76	82	82	
Total Billing Demand	98	96	91	91	92	89	81	80	80	80	91	103	103	
Total Resource Cost	3,053,654	3,015,589	2,964,931	3,038,449	3,244,607	3,243,366	2,594,090	2,511,294	2,463,781	2,199,758	2,606,054	2,981,013	33,916,588	
Los Alamos Demand %	21.29%	19.25%	15.89%	16.46%	17.27%	16.65%	22.41%	16.69%	20.50%	13.45%	15.70%	19.89%	19.89%	
Los Alamos Energy %	17.67%	16.53%	15.11%	15.22%	15.70%	17.10%	21.57%	19.49%	18.14%	17.32%	14.10%	16.40%	16.40%	
Los Alamos Norton-STA %	78.71%	80.75%	84.11%	83.54%	82.73%	83.35%	77.59%	83.31%	79.50%	86.55%	84.30%	80.11%	80.11%	
Department of Energy Demand %	82.33%	83.47%	84.89%	84.78%	84.30%	82.90%	78.43%	80.51%	81.86%	82.68%	85.90%	83.60%	83.60%	
Department of Energy Energy %														
DOE Norton-STA %														
Los Alamos Power Cost														
Demand	248,411	224,595	183,384	176,755	193,130	180,653	237,931	176,926	227,142	147,727	179,389	219,971	2,199,758	
Energy	333,373	305,586	273,532	299,003	333,808	369,051	330,523	282,769	245,931	190,705	206,414	307,419	3,918,365	
Customer	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	581,784	530,181	456,917	475,758	526,938	549,704	568,453	459,696	473,073	338,432	385,803	527,390	6,118,123	
Department of Energy Power Cost														
Demand	918,210	941,871	970,928	896,997	925,017	904,566	823,991	883,432	880,939	950,949	963,006	886,103	9,423,658	
Energy	1,553,660	1,543,538	1,537,087	1,665,694	1,792,652	1,789,095	1,201,646	1,168,167	1,109,769	910,377	1,257,246	1,567,520	17,342,022	
Norton-STA	-	-	-	-	-	-	-	-	-	-	-	-	-	
Customer	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	2,471,870	2,485,409	2,508,014	2,562,691	2,717,669	2,693,661	2,025,637	2,051,599	1,990,708	1,861,326	2,220,251	2,453,623	28,042,458	
Net Due to Los Alamos	2,131,473	2,141,069	2,178,932	2,151,913	2,245,396	2,249,228	1,586,739	1,616,014	1,513,528	1,416,120	1,745,394	1,994,795	22,970,601	
Distribution Expense	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(24,552)	
Debt Service Savings Split	-	-	-	-	-	-	-	-	-	-	-	-	-	
PV Site Preparation	-	-	-	-	-	-	-	-	-	-	-	-	-	
Service Charge	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Adjusted due Los Alamos	2,129,427	2,139,023	2,176,886	2,149,867	2,243,350	2,247,182	1,584,693	1,613,968	1,511,482	1,414,074	1,743,348	1,992,749	22,946,049	
DOE TOTAL														46.94

Department of Energy / Los Alamos County Resource Pool
Including Solar Resource
Fiscal Year 2021
Budget

Department of Energy Resources	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total	Total MWh	Cost per MWh	
Generation																
501 TA-3 Fuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
503 TA-3 Steam O&M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
505 TA-3 Electric Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
513 TA-3 Maint of Electric Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TA-3 Fixed Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combustion Turbine	15,654	15,654	15,654	15,654	15,654	15,654	15,654	15,654	15,654	15,654	15,654	15,654	187,843	4,800	\$ 39.13	
Western Demand	92,151	92,151	92,151	98,264	98,264	98,264	98,264	98,264	98,264	92,151	92,151	92,151	1,142,494	69,979	\$ 30.46	
Western Energy	77,033	80,506	73,428	71,169	76,634	81,743	89,796	85,851	89,203	81,368	88,423	93,566	988,720			
Western Peaking Capacity/TX	22,690	22,690	22,690	22,124	22,124	22,124	22,124	22,124	22,124	22,124	22,124	22,124	267,184			
Transmission																
562/571 115KV O&M	67,551	68,033	60,584	61,081	72,502	81,938	71,013	71,509	83,428	67,040	87,400	68,530	860,609			
Fixed Charges	54,278	54,278	54,278	54,278	54,278	54,278	54,278	54,278	54,278	54,278	54,278	54,278	651,337			
SVC Transmission Credit	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	72,000			
Other Costs																
SCADA O&M & Maint Projects	15,636	15,703	14,668	14,862	60,701	17,760	16,242	16,311	17,967	15,690	18,519	15,897	239,957			
Special Projects	96,667	96,667	96,667	98,100	98,100	98,100	98,100	98,100	98,100	98,100	98,100	98,100	1,172,900			
Summary																
Demand Charges	354,973	355,522	347,038	354,709	411,970	378,464	366,021	366,587	380,161	355,383	378,572	357,080	4,406,481			
Energy Charges	92,687	96,159	89,081	86,823	92,288	97,397	105,449	101,504	104,856	97,022	104,077	109,219	1,176,562			
Customer Charges	447,660	451,681	436,119	441,532	504,257	475,861	471,470	468,091	485,017	452,405	482,649	466,299	5,583,043	79,579	70.16	
Department of Energy Total																

Department of Energy / Los Alamos County Resource Pool
Including Solar Resource
Fiscal Year 2021
Budget

Resource Cost	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Total	Total MWh	Cost per MWh
Demand															
Los Alamos	999,503	998,935	994,826	999,965	987,323	988,296	980,048	977,169	987,774	1,003,664	1,023,925	1,005,598	11,947,024		
Department of Energy	354,973	355,522	347,038	354,709	411,970	378,464	366,021	366,587	380,161	355,383	378,572	357,080	4,406,481		
Total	1,354,476	1,354,457	1,341,864	1,354,674	1,399,292	1,366,760	1,346,069	1,343,756	1,367,935	1,359,047	1,402,497	1,362,678	16,353,505		
Energy															
Los Alamos	1,862,743	1,847,438	1,792,804	1,908,950	2,095,324	2,167,735	1,595,326	1,423,284	1,378,109	1,086,111	1,372,728	1,955,515	20,486,068		
Department of Energy	92,687	96,159	89,081	86,823	92,288	97,397	105,449	101,504	104,856	97,022	104,077	109,219	1,176,562		
Total	1,955,430	1,943,597	1,881,885	1,995,772	2,187,612	2,265,132	1,700,776	1,524,788	1,482,966	1,183,133	1,476,805	2,064,735	21,662,631		
Norton-WTA															
Los Alamos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW Demand															
LAC Actual Demand	21	19	14	15	16	15	16	11	15	9	14	21	21		
DOE Actual Demand	81	82	80	82	81	80	82	59	62	63	77	90	90		
Total Actual Demand	102	101	95	97	97	95	78	70	77	72	91	110	110		
MW Billing Demand															
LAC Billing Demand	21	19	14	15	16	15	16	11	15	9	14	21	21		
DOE Billing Demand	81	82	80	82	81	80	82	59	62	63	77	90	90		
Total Billing Demand	102	101	95	97	97	95	78	70	77	72	91	110	110		
Norton-WTA Demand															
LAC Billing Demand	21	19	15	15	16	15	16	15	15	15	15	15	21		
DOE Billing Demand	81	82	80	82	81	80	81	65	65	65	77	90	90		
Total Billing Demand	102	101	95	97	97	95	81	80	80	80	92	110	110		
Total Resource Cost	3,309,906	3,298,054	3,223,749	3,350,446	3,586,904	3,631,891	3,046,845	2,868,544	2,850,901	2,542,180	2,879,302	3,427,412	38,016,136	763,868	\$ 49.77
Los Alamos Demand %	20.56%	18.46%	15.26%	15.65%	16.45%	15.66%	20.99%	16.14%	19.86%	13.05%	15.67%	18.74%			
Los Alamos Energy %	16.98%	15.81%	14.46%	14.34%	14.86%	16.01%	19.88%	18.97%	17.30%	16.54%	13.95%	15.16%			
Los Alamos Norton-STA %															
Department of Energy Demand %	79.44%	81.54%	84.74%	84.35%	83.55%	84.34%	79.01%	83.86%	80.14%	86.95%	84.33%	81.26%			
Department of Energy Energy %	83.02%	84.19%	85.54%	85.66%	85.14%	83.99%	80.12%	81.03%	82.70%	83.46%	86.05%	84.84%			
DOE Norton-STA %															
Los Alamos Power Cost															
Demand	278,502	250,032	204,711	211,956	230,251	214,078	282,559	216,843	271,727	177,355	219,818	255,359			
Energy	331,984	307,316	272,069	286,200	325,080	362,621	338,031	289,221	256,508	195,649	206,062	312,950			
Norton-STA	-	-	-	-	-	-	-	-	-	-	-	-			
Customer	-	-	-	-	-	-	-	-	-	-	-	-			
Total	610,486	557,348	476,780	498,156	555,330	576,699	620,589	506,064	528,235	373,004	425,880	568,308	6,296,880	122,534	\$ 51.39
Department of Energy Power Cost															
Demand	1,075,974	1,104,425	1,137,152	1,142,718	1,169,042	1,152,682	1,063,510	1,126,913	1,096,209	1,181,692	1,182,680	1,107,319			
Energy	1,623,446	1,636,281	1,609,816	1,709,572	1,862,532	1,902,510	1,362,745	1,235,567	1,226,457	987,484	1,270,743	1,751,785			
Norton-STA	-	-	-	-	-	-	-	-	-	-	-	-			
Customer	-	-	-	-	-	-	-	-	-	-	-	-			
Total	2,699,420	2,740,706	2,746,968	2,852,290	3,031,574	3,055,192	2,426,255	2,362,480	2,322,666	2,169,176	2,453,423	2,859,104	31,719,256	641,334	\$ 49.46
Net Due to Los Alamos	2,251,760	2,289,025	2,310,849	2,410,758	2,527,316	2,579,331	1,954,785	1,894,389	1,837,649	1,716,771	1,970,774	2,392,805	26,136,212		
Distribution Expense	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(2,046)	(24,552)		
Debt Service Savings Split	-	-	-	-	-	-	-	-	-	-	-	-	-		
Service Charge	-	-	-	-	-	-	-	-	-	-	-	-	-		
Service Charge	-	-	-	-	-	-	-	-	-	-	-	-	-		
Net Adjusted due Los Alamos	2,249,714	2,286,979	2,308,803	2,408,712	2,525,270	2,577,285	1,952,739	1,892,343	1,835,603	1,714,725	1,968,728	2,390,759	26,111,660		
DOE TOTAL															\$ 49.42

LOADS and RESOURCES, FY2020

Note	Energy, MWh	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	FY2020 Totals	WAPA Summer	Winter	CF %	% of Total Schedule Total
1	San Juan	25,177	25,177	24,365	25,177	24,365	25,177	25,177	24,394	25,177	24,365	25,177	24,365	298,092			91.97	40.28
2	Laramie	7,068	7,068	6,612	3,534	4,902	7,068	7,068	6,848	6,726	3,420	5,928	6,840	73,082			83.43	9.87
3	El Vado	3,162	3,794	2,448	1,897	0	0	0	0	1,897	4,896	6,324	3,672	28,091			40.08	3.80
4	Abiquiu	5,059	4,427	3,060	3,162	0	0	0	1,897	1,897	5,508	8,854	5,508	37,475			30.56	5.06
5	Abiquiu LFTG	315	333	443	710	703	633	778	549	776	892	751	274	7,158			2.72	0.97
6	TA-3 Steam	0	0	0	0	0	0	0	0	0	0	0	0	0			0.00	-
7	LANL CT, 25 MW	400	400	400	400	400	400	400	400	400	400	400	400	4,800		35,442	2.74	0.65
8	WAPA DOE, Firm	4,963	5,039	4,905	5,079	5,631	5,410	6,183	6,404	6,735	6,316	6,518	6,796	69,979	34,537		31.95	9.46
9	WAPA LAC, Firm	357	339	338	481	501	583	518	461	481	350	343	340	5,092	2,067	3,025	37.05	0.69
10	WAPA Peaking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
11	WAPA WRP and CDP	0	2,568	3,120	3,210	624	3,210	1,284	606	642	3,120	0	624	19,008	0	0	0.00	2.57
12	PV Landfill	357	357	346	357	346	357	357	334	357	346	357	346	4,216	0	0	0.00	0.57
13	Future Resource (PPA)	22,320	18,600	18,000	22,320	28,800	26,040	11,160	10,440	7,440	0	11,160	21,600	197,880			0.00	26.74
14	Economy Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0			0.00	-
15	Economy Sales	(500)	(400)	(500)	(500)	(500)	(500)	(300)	(300)	(500)	(400)	(400)	(500)	(4,800)			(0.65)	0.00
16	Outage Assistance	0	0	0	0	0	0	0	0	0	0	0	0	0			0.00	0.00
17	Load + Losses	68,664	67,612	63,488	65,781	66,254	68,357	52,561	50,075	52,021	49,156	65,353	70,217	739,539			Total	100.00
18	MWh Avail	68,679	67,703	63,536	65,828	66,272	68,378	52,625	50,136	52,029	49,213	65,412	70,265	740,073			Total	Transmission Energy cost
19	MWh Scheduled	68,679	67,703	63,536	65,828	66,272	68,378	52,625	50,136	52,029	49,213	65,412	70,265	740,073			Total	Transmission Energy cost
20	MWh +Excess-Deficit	15	90	48	47	18	21	64	61	8	57	58	48	534			Total	Transmission Energy cost
21	Peaking PB>Pool	0	0	0	0	0	0	0	0	0	0	0	0	0				
22	Peaking PB>Purch	0	0	0	0	0	0	0	0	0	0	0	0	0				
23	LANSC	0	0	0	0	0	0	0	0	0	0	0	0	0				
24	LANL-LANSCE	0	0	0	0	0	0	0	0	0	0	0	0	0				
25	LEDA	0	0	0	0	0	0	0	0	0	0	0	0	0				
26	DOE Total	54,887	54,795	52,327	54,145	54,227	55,017	40,022	38,142	41,343	39,458	54,502	56,994	596,860				
27	LAC	11,777	10,848	9,312	9,719	10,098	11,349	11,008	9,475	9,162	8,266	8,948	11,178	121,140				
28	Total Load	66,664	65,643	61,639	63,865	64,324	66,366	51,030	48,617	50,505	47,724	63,450	68,172	717,999				
29	Losses	2,000	1,969	1,849	1,916	1,930	1,991	1,531	1,459	1,515	1,432	1,903	2,045	21,540				
30	DOE %	0.82333	0.83474	0.84893	0.84781	0.84302	0.82900	0.78428	0.80511	0.81859	0.82680	0.85897	0.83604	0.83128				
31	LAC %	0.17667	0.16526	0.15107	0.15219	0.15698	0.17100	0.21572	0.19489	0.18141	0.17320	0.14103	0.16396	0.16872				
32	Purchase, MWh	22,677	21,525	21,466	25,887	29,770	29,607	12,801	11,380	8,439	3,466	11,517	22,570	221,104				
33	% of Total	33	32	34	39	45	43	24	23	16	7	18	32	30				
33a	SJ Unit-1 Day Avail	31	31	30	31	31	31	31	29	31	30	31	30	30				
33s	SJ Unit-4 Day Avail																	

LOADS and RESOURCES, FY2020

Capacity, MW	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Totals
33b LRS Unit-day @100%	62	62	58	31	43	62	62	58	59	30	52	60	0
34 San Juan Unit 1	36	36	36	36	36	36	36	37	36	36	36	36	0
35 San Juan Unit 4	10	10	10	5	7	10	10	10	10	5	8	10	105
36 Laramie	5	6	4	3	0	0	0	0	3	8	10	6	45
36 El Vado	8	7	5	5	0	0	0	0	3	9	14	9	60
27 Abiquiu	0.50	0.53	0.72	1.12	1.15	1.00	1.23	0.93	1.23	1.46	1.19	0.45	12
38 Abiquiu LFTG	0	0	0	0	0	0	0	0	0	0	0	0	0
39 TA-3 Steam	25	25	25	25	25	25	25	25	25	25	25	25	300
40 LANL CT, 20 MW	10	10	8	10	10	12	11	11	10	8	8	9	118
41 WAPA DOE Firm	1	1	1	1	1	1	1	1	1	1	1	1	12
42 WAPA LAC, Firm	0	0	0	0	0	0	0	0	0	0	0	0	0
43 WAPA Peaking	2	2	2	2	2	2	2	2	2	2	2	2	24
44 PV Landfill	4	5	5	5	5	5	5	5	5	5	5	5	60
45 WAPA WRP and CDP	0	0	0	0	0	0	0	0	0	0	0	0	0
46 Outage Assistance	30	25	25	30	40	35	15	15	10	0	15	30	270
47 Future Resource (PPA)	0	0	0	0	0	0	0	0	0	0	0	0	0
48 Economy Purchases	5	5	5	5	5	5	5	5	5	5	5	5	60
49 Spinning Reserve Purch	0	0	0	0	0	0	0	0	0	0	0	0	0
50 LANSCC, MW	0	0	0	0	0	0	0	0	0	0	0	0	0
51 LANL-LANSCC, MW	0	0	0	0	0	0	0	0	0	0	0	0	0
52 LEDA, MW	0	0	0	0	0	0	0	0	0	0	0	0	0
53 DOE Total, MW	77.1	77.2	75.6	75.9	75.7	73.8	56.4	56.1	56.6	60.2	76.1	82.4	845
54 LAC, MW	21	18	14	15	16	15	16	11	15	9	14	20	186
55 Total Load, MW	98	96	90	91	92	89	73	67	74	70	90	103	1,031
56 Required Reserve	8	8	8	8	8	8	6	6	6	6	8	8	88
57 Losses, MW	4	3	3	3	3	3	2	2	2	2	3	4	34
58 Total Required, MW	110	107	101	102	103	100	81	75	82	78	101	115	1,153
59 MW Avail	132	132	126	128	128	132	109	109	107	105	126	134	1,469
60 Excess/-Deficit, MW	23	25	26	26	26	32	12	33	25	28	24	20	299
61 DOE %	0.78707	0.80746	0.84113	0.83539	0.82728	0.83353	0.77594	0.83314	0.79501	0.86554	0.84297	0.80112	0.81988
62 LAC %	0.21293	0.19254	0.15887	0.16461	0.17272	0.16647	0.22406	0.16686	0.20499	0.13446	0.15703	0.19888	0.18012
63 Load	98	96	90	91	92	89	73	67	74	70	90	103	
64 WAPA Trans Use	11	15	14	16	12	18	15	13	12	14	9	11	
65 Imports	96	97	91	93	93	97	75	75	73	71	91	98	
66 Purchase, MW	37	36	37	42	48	47	24	23	18	12	22	38	384
67 % of Total	34	34	37	41	47	47	30	31	22	15	22	33	33

LOADS and RESOURCES, FY2021

Energy, MWh	FY2021												WAPA Summer	Winter	CF %	Schedule Total
	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21				
1 San Juan	25,177	25,177	24,365	25,177	24,365	25,177	25,177	22,740	21,928	20,304	25,177	24,365	289,129	89.20	36.45	
2 Laramie	7,068	7,068	6,840	7,068	6,840	7,068	6,384	6,384	7,068	6,840	7,068	6,840	83,220	95.00	10.49	
3 El Vado	3,162	3,794	2,448	1,897	0	0	0	0	1,897	4,896	6,324	3,672	28,091	40.08	3.54	
4 Abiquiu	5,059	4,427	3,060	3,162	0	0	0	0	1,897	5,508	8,854	5,508	37,475	30.56	4.72	
5 Abiquiu LFTG	315	333	443	710	703	633	778	530	776	892	751	274	7,139	2.72	0.90	
6 TA-3 Steam	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	-	
7 LANL CT, 45 MW	400	400	400	400	400	400	400	400	400	400	400	400	4,800	2.74	0.61	
8 WAPA DOE Firm	4,963	5,039	4,905	5,079	5,631	5,410	6,183	6,404	6,316	6,316	6,518	6,796	69,979	31.95	8.82	
9 WAPA LAC, Firm	357	339	338	481	501	583	518	461	481	350	343	340	5,092	37.05	0.64	
10 WAPA Peaking	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	-	
11 WAPA WRP and CDP	0	3,210	3,120	1,284	624	1,284	3,210	1,764	3,210	0	642	624	18,972	0.00	2.39	
12 PV Landfill	357	357	346	357	346	357	323	323	357	346	357	346	4,205	0.53	0.53	
13 Future Resource (PPA)	26,040	22,320	21,600	26,040	32,400	33,480	14,880	13,440	11,160	7,200	11,160	28,800	248,520	31.33	31.33	
14 Economy Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	
15 Economy Sales	(100)	(400)	(200)	(500)	(400)	(400)	(400)	(400)	(300)	(500)	(200)	(500)	(3,500)	(0.44)	(0.44)	
16 Outage Assistance	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	
17 Load + Losses	72,784	71,993	67,603	71,132	71,310	74,384	58,119	52,426	55,586	52,473	67,313	77,381	792,513	Total	100.00	
18 MWh Avail	72,799	72,065	67,664	71,156	71,410	74,392	58,171	52,446	55,610	52,552	67,394	77,465	793,122	793,122	Transmission	
19 MWh Scheduled	72,799	72,065	67,664	71,156	71,410	74,392	58,171	52,446	55,610	52,552	67,394	77,465	793,122	793,122	Energy cost	
20 MWh +Excess/-Deficit	15	72	61	23	99	8	52	20	15	79	81	84	609	609		
21 Peaking PB>Pool	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
22 Peaking PB>Purch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PB Total= 0	
23 LANSCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
24 LANL-LANSCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
25 LEDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
26 DOE Total	58243	58419	55739	58729	58519	60218	44885	40947	44317	42213	55827	63279	641,334	641,334		
27 LAC	11,910	10,972	9,420	9,832	10,214	11,478	11,134	9,585	9,269	8,364	9,053	11,305	122,534	122,534		
28 Total Load	70,153	69,390	65,159	68,561	68,733	71,695	56,018	50,531	53,586	50,576	64,880	74,584	763,868	763,868		
29 Losses	2,631	2,602	2,443	2,571	2,577	2,689	2,101	1,895	2,009	1,897	2,433	2,797	28,645	28,645		
30 DOE %	0.83022	0.84188	0.85543	0.85660	0.85140	0.83991	0.80125	0.81032	0.82703	0.83464	0.86047	0.84843	0.83959	0.83959		
31 LAC %	0.16978	0.15812	0.14457	0.14340	0.14860	0.16009	0.19875	0.18968	0.17297	0.16536	0.13953	0.15157	0.16041	0.16041		
32 Purchase, MWh	26,397	25,887	25,066	27,681	33,370	35,121	18,447	15,527	14,727	7,546	12,159	29,770	271,697	271,697		
33 % of Total	36	36	37	39	47	47	32	30	26	14	18	38	34	34		
33a SJ Unit-1 Day Avail																
33s SJ Unit-4 Day Avail	31	31	30	31	30	31	31	28	27	25	31	30	Totals	Totals		
33b LRS Unit-day @100%	62	62	60	62	60	62	62	56	62	60	62	60	0	0		
34 San Juan Unit 1	36	36	36	36	36	36	36	36	31	30	36	36	0	0		
San Juan Unit 4	10	10	10	10	10	10	10	10	10	10	10	10	120	120		
35 Laramie	5	6	4	3	0	0	0	0	3	8	10	6	45	45		
36 El Vado	8	7	5	5	0	0	0	0	3	9	14	9	60	60		
27 Abiquiu	0.50	0.53	0.72	1.12	1.15	1.00	1.23	0.93	1.23	1.46	1.19	0.45	12	12		
38 Abiquiu LFTG	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
39 TA-3 Steam	25	25	25	25	25	25	25	25	25	25	25	25	300	300	CROD	
40 LANL CT, 45 MW	10	10	8	10	10	12	11	10	10	8	8	9	118	118	32,441	
41 WAPA DOE Firm	1	1	1	1	1	1	1	1	1	1	1	1	12	12	982	
42 WAPA LAC, Firm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43 WAPA Peaking	2	2	2	2	2	2	2	2	2	2	2	2	24	24	15,000	
44 PV Landfill	5	5	5	5	5	5	5	5	5	5	5	5	30	30		
45 WAPA WRP and CDP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46 Outage Assistance	35	30	30	35	45	45	20	20	15	10	15	40	340	340		
47 Future Resource (PPA)																
48 Economy Purchases																



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 7.A
Index (Council Goals): BCC - N/A
Presenters: Board of Public Utilities
Legislative File: 12017-19

Title

Approval of Appointment of New Utilities Manager

Recommended Action

I move that the Board of Public Utilities approve the appointment of Philo S. Shelton III as Utilities Manager for Los Alamos County and an employment agreement dated June 30th, 2019.

Staff Recommendation

None

Body

The present Utilities Manager, Timothy A. Glasco, has by written notice dated February 20, 2019, notified the Board of Public Utilities of his intention to retire in 2019. His intention is to retire effective July 12, 2019.

The Board of Public Utilities has selected Philo S. Shelton III, the present Public Works Director, for the Utilities Manager position, subject to approval of the Council. The Board has interviewed Mr. Shelton and negotiated an employment agreement with him. It is the Board's opinion that the Department of Public Utilities will continue to excel under the management of Mr. Shelton.

The appointment will become effective June 30, 2019 to coincide with the start of a new work week.

Alternatives

The Board could choose not to approve appointment of Mr. Shelton.

Fiscal and Staff Impact

None

Attachments

None



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 7.B
Index (Council Goals): BCC - N/A
Presenters: Bob Westervelt, Deputy Utilities Manager - Finance/Admin
Legislative File: 11924-19

Title

Financial Plan Update

Recommended Action

N/A - Discussion item only

Staff Recommendation

N/A - Discussion item only

Body

The Board of Public Utilities adopted formal policies for financial targets in August of 2016. For review, that guidance is attached as Attachment A. With adoption of formal targets for desired cash balances for the Utilities funds, initial steps for implementation involved assessment of then current status, followed by consideration of methods and alternatives for resolving differences. It has been a little over two years since adoption. This report is intended to provide information to help assess progress toward financial goals, and to assist the Board in determining if revision of guidelines or targets is prudent at this time.

Status of the Utility Department's cash position as relates to the Board adopted financial policies is presented as Attachment B. The Exhibit shows reserve status by Utility, broken down by reserve category, and showing the total amount over or under policy targets by utility. Status upon adoption is shown, and current status is shown as well.

There are some anomalies with this presentation. Debt service payments are made twice a year, but amounts are "deposited" into the debt service reserve monthly to facilitate recognition of that expense monthly. In addition, the debt covenants require that the entire next year's payments be held in a restricted fund. Payments are due in either July and January, or June and December. Thus, as of March 30, there are several month's "extra" funds showing in the reserve account.

Also, the guidance calls for a significant rate stabilization fund in Electric, but due to the Power Pool it has never been funded. This reserve may be one where revisiting the guidance would be prudent.

It also shows that electric operations reserves are negative in total, but by looking at the Cash report (Attachment C), we can see that in the Electric Distribution sub fund, unrestricted cash reserves are significantly improved. The difference in in Electric Production and is related to the Cap Charge running balance and collections from LANL. Staff suggests that by revisiting this target we may be able to come up with goals that better reflect financial needs but are not as susceptible to the anomalies of the Power Pool. Staff was, however, unable to develop a proposed alternative to present this evening.

While Water Distribution is still struggling, progress is being made and staff recommendation is to stay the course that has been set in prior discussions, but to continue to monitor and make adjustments later, if necessary.

Sewer is still not fully funded but with recent and planned rate actions, combined with cost saving measures already implemented, is making progress as planned, and again, staff recommendation is to continue per previous discussion.

If one looks at total cash, we see a significant decrease in cash, but it is important to note that does not indicate a lack of progress toward achieving our reserve targets. One must compare the revised targets with the revised cash balances. These would change as some projects were budgeted to be paid from fund balance (cash reserves). The new water well, and most of the projects in ED are examples.

As shown on the exhibits, in total the department has sufficient cash reserves to meet minimum (“floor”) policy requirements, and has improved significantly since 2016, but the electric is still showing a shortage for the reasons discussed above. The sewer sub fund is now meeting recommended “floor” levels. Gas and water are sufficiently funded compared to policy “floors”

Compared to target amounts, cash reserves in both the sewer and the electric sub-funds do have shortages, but as noted, much progress has been made in the sewer fund, and, as noted, electric needs additional analysis to establish perhaps more meaningful targets. Gas and Water remain adequately funded compared to policy targets.

Correction or adjustment of cash position as relates to recommended targets can be accomplished through various actions, most notably adjustment of rates, adjustment of operational plans and budgets, adjustment of capital plans and budgets, issuance of debt, or a combination of those things. The long-range plans previously presented and discussed for water and sewer are examples of this analysis and demonstrate the importance of balancing rate actions with operational plans to maintain sufficient cash without constantly reacting to what are essentially short-term variables. This approach is supported in the policies by the language that allows the department to develop corrective actions within reasonable time frames to correct variances from cash targets. A similar analysis has been completed as part of the normal budget process since adoption of these financial policies. The ten-year forecast and financial analysis prepared with the FY20 budget submission included as Attachment D for reference

Alternatives

N/A - Discussion item only

Fiscal and Staff Impact

No immediate impact. We have sufficient reserves to meet minimum requirements overall. Fiscal impact to individual funds in terms of rate impacts and operational and capital plans will be determined during planning and normal budgetary cycles.

Attachments

- A - Financial Guidelines approved by BPU 8-17-16
- B - Reserve Status by Utility
- C - Cash Balances by Fund - GL Report
- D - FY2020 - 2029 Ten Year Forecast

Utilities Financial Policies
Department of Public Utilities, Los Alamos County

I. Purpose

The Department of Public Utilities (DPU) operates the Los Alamos County-owned electric, gas, water, and sewer utility systems under jurisdiction and control of the Board of Public Utilities. This policy is intended to ensure adequate cash is available for effective and efficient operations of all County-owned utilities. For budgeting, rate-setting, and operational planning purposes, DPU shall adhere to the following guidance in regard to cash reserves. DPU shall first consider the terms of the Los Alamos County Charter (LAC Charter) and the Los Alamos County, NM Code of County Ordinances (County Code) in managing these cash reserves.

II. Background

- A. The LAC Charter, Article V, Section 509 Priority of Budgeted Expenditures states: “In order that the Department of Public Utilities can plan and utilize its proceeds for the maintenance, improvement and extension of the utilities system before any part of such proceeds is diverted to general County purposes, all funds derived from the operation of the utilities shall be managed and expended in accordance with the following policies. From the proceeds of the operation of the Department:
1. There shall first be set aside the funds required for current operation.
 2. There shall next be set aside the funds required to redeem and pay interest on any bond issue for the utility which shall become due and payable during the next fiscal year.
 3. There shall next be provided an adequate reserve to finance replacements required by normal depreciation of the utility plant or equipment as provided in the Schedule of Funds. These reserves may not be used by the County for financing County operations.
 4. There shall be paid to the General fund those amounts set forth in the budget as payment to be made to the County in lieu of franchise fees and taxes that would be normally assessed against privately owned gas and electric utilities.
 5. There shall next be a provision for additions and improvements foreseen as necessary to meet future requirements for the utility systems as provided in the Schedule of Funds.
 6. All remaining operating profits shall be transferred to the County General Fund.”
- B. The County Code, Chapter 40, Article II, Division 2., Section 40-65, Schedule of Funds states, “The schedule of funds, and any amendment of the schedule, as proposed by the board, shall be referred to the council for consideration for adoption. The schedule of funds shall prescribe the necessary yearly funding of reserves for replacements, additions and improvements, and other reserves authorized by Charter, bond

ordinances and bond indentures or other governing instrument and shall be consistent with the needs of the utilities systems. The replacement reserve shall cover (among other things) tools, equipment, vehicles and system replacements. The schedule of funds shall reflect separate reserve allocations for separate utility systems.” Currently vehicle replacement reserves are handled by the LAC Fleet Fund.

C. Fundamental Considerations

1. Operations and maintenance should be budgeted and covered through operating revenues.
2. DPU should have adequate cash reserves, achieved through operating revenues, to cover most unplanned or corrective maintenance that may be required for continued operations.
3. With the adoption of this policy, the users benefitting from a major utility system or plant replacement shall bear the costs of that system or plant. This is a shift from historical DPU practice in which customers did not contribute to major system replacement reserves when existing utility systems were transferred from the Department of Energy (DOE) to Los Alamos County (LAC). As a result of this shift in practice, large system replacements should be funded through debt financing. Customers benefitting from the new facilities will contribute to the cost through debt service. Examples of major utility system or plant replacements include wastewater treatment plants, replacements of large segments of the water distribution or wastewater collection systems, or electric substations.
4. For smaller capital projects, a capital replacement reserve should be funded. Examples of such projects include replacement of a single section of water line, and replacement of a motor control or switchgear. If the urgency or magnitude of a capital project or group of projects exceeds available reserves, and if funding through rates would result in unacceptable rate fluctuations, debt financing will be considered.
5. Rates should be just, reasonable and comparable to those in neighboring communities [LAC Charter, Article V, Section 504]. In determining comparability, consideration will be given to topography, age and complexity of systems.
6. Rates should also be non-discriminatory with consideration given to social necessity. The goal is to serve the interests of DPU, LAC, and utility customers. While rates can be used and designed to achieve specific conservation or other social goals, they should be carefully evaluated to avoid undesired consequences.
7. All debt must be funded with adequate coverage to achieve or maintain the best credit rating available to a public utility with the operational characteristics of DPU.
8. All statutory, contractual or prudent retirement obligations must be funded on a planned schedule to achieve appropriate funding levels at obligatory due dates.

III. Cash Reserve Guidelines

- A. For purposes of this policy, cash is defined as both unrestricted and restricted equity in pooled cash and investments, cash and cash equivalents, and investments.

- B. Rates will be established to cover budgeted operations and maintenance costs, projected commodities costs when and if a pass-through rate structure is not in place, and reserve requirements. To the extent practical, rates will be designed to recover costs according to cost drivers, with consideration for other political or social objectives identified in rate analysis.
- C. Rates will be just, reasonable and comparable to those in neighboring communities. [LAC Charter, Article V, Section 504.] In determining comparability, consideration will be given to topography, age and complexity of systems.
- D. Immediate implementation of this policy upon adoption may not be practical due to pre-existing deviations from the targets specified. Upon adoption by the Board of Public Utilities, DPU management will assess current cash balances, develop a plan and determine a time frame for implementation. The plan will be presented to the Board no later than the third regular Board meeting from the policy adoption date.
- E. In each of the utility sub funds:
 - 1. Operations Reserve: A target cash balance for operations will be established. This balance should equal 180 days of budgeted operations and maintenance expenditures as identified in the annual LAC budget book. A floor, or lowest acceptable balance, will also be established, equaling 90 days of budgeted operations and maintenance expenditures as identified in the annual LAC budget book.
 - a. This reserve may be utilized for correcting deposits to or from other reserves.
 - b. If the cash balance falls below target, DPU will initiate corrective action and determine the following:
 - i. Can the balance be expected to recover by the end of the subsequent fiscal year through the normal course of business?
 - ii. Is the curtailment of expenditures warranted?
 - iii. Is immediate rate action required?
 - c. If the cash balance falls below the floor, immediate action must be taken to first curtail expenditures and then, if necessary, adjust rates to restore cash to the floor level within 180 days.
 - 2. Capital Expenditures Reserve: A 10-year capital plan for projects not financed through debt will be maintained. An annuity will be included in the annual budget to ensure availability of funds for the capital plan. Through this capital plan and associated annuity, funds will accrue toward future planned capital expenditures, with a target minimum reserve in each sub fund equal to annual depreciation plus 2.5 percent to provide for inflationary or technology evolution pressures. Due to the long-term, future-focused nature of the capital plan as well as the opportunity for periodic adjustments as warranted, no funding floor is necessary.

3. Contingency Reserve: A contingency reserve will be established and maintained for each sub fund. The reserve will be equal to the replacement cost of the single largest piece of equipment with potential for failure, as defined by DPU's asset management team for that sub fund. In the event that a contingency reserve is used, the reserve amount will be restored from insurance, grant, or disaster recovery funds, if applicable, as soon as those funds become available. Otherwise DPU will establish a plan within 90 days to reestablish contingency reserves by the end of the subsequent fiscal year through curtailment of other expenditures or through rate actions.
4. Debt Service Reserve: Debt service reserves will be established to sufficiently fund all debt service requirements as required by the Charter, bond ordinances and bond indentures, or any other debt agreement (County Code, Chapter 40, Article II, Division 2., Section 40-63,(c)(2). The debt coverage ratio, based on total debt, is a key bond rating criteria. If the balance of this required reserve falls below required amounts, the reserve will be restored immediately by transfer of funds from the Operations Reserve [Cash Reserve Guidelines, Section III.E.1.a].
5. Retirement/Reclamation Reserve: Retirement/reclamation reserves will be funded to meet all statutory and contractual requirements and schedules and to satisfy prudent utility practices. If required by contractual agreements, reserves will be placed in trust funds set up for specified purposes. Otherwise, reserves will be accounted for as restricted and will not be available to supplement other reserves. When funding targets are based on future dates, monthly annuities designed to accumulate the required future fund balances will be established. When project cost analysis necessitates an adjustment to reserve requirements, funds will be transferred to or from the Operations Reserve [Cash Reserve Guidelines, Section III.E.1.a] to adjust the reserve accordingly.
6. Rate Stabilization Reserve: A rate stabilization reserve will be maintained when a pass-through rate mechanism for commodities is not in place. The rate stabilization reserve will be maintained with a target balance equal to the 10-year historical average cost of the commodity per unit times 12 months average projected consumption. A funding floor will be established equal to the 10-year historical average cost of the commodity per unit times 180 days average projected consumption. Should the cash balance drop below the target, DPU will initiate corrective action by determining the following:
 - a. Can the balance be expected to recover by the end of the subsequent fiscal year through the normal course of business?
 - b. Is the curtailment of expenditures warranted?
 - c. Is immediate rate action required?

- d. If the cash balance of the rate stabilization reserve falls below the floor, immediate action must be taken to first curtail expenditures and then, if necessary, adjust rates to restore cash to the floor level within 180 days.
7. Consideration of the funding of these reserves, as projected in the Schedule of Funds, should take into account the following priority order:
- a. Operating Reserve
 - b. Debt Service Reserve
 - c. Retirement/Reclamation Reserve
 - d. Capital Expenditure Reserve
 - e. Rate Stabilization Reserve
 - f. Contingency Reserve
8. If excess cash balances exist in relation to targets, DPU will establish plans to spend down or adjust the excess cash within three fiscal years. The plans may include rate reductions, acceleration of the 10-year capital plan, or prudent increase in maintenance activities. When necessary, use of cash in one sub-fund may include transfer to another sub-fund only as a loan subject to a market rate of interest and with approval of both the Board of Public Utilities and the Los Alamos County Council.
9. Rates will be established to cover budgeted operations and maintenance costs, projected commodities costs in the absence of a pass-through rate structure, and all reserve requirements. Rates will, to the extent possible, be designed to recover costs according to cost drivers, with consideration for other political or social objectives identified in rate analysis.
- F. Financing for each of the utility sub funds will adhere to the following:
- 1. Improvements to the system will be scheduled and budgeted with consideration of any rate impacts that may result. DPU will avail itself of below-market-rate loans or financing when available. DPU management will evaluate financing alternatives including phasing, deferral, or debt financing as project funding methods.
 - 2. Replacement projects of smaller subsystems will normally be funded from the capital annuity and replacement reserve. If the inclusion of the capital annuity in the annual budget would result in rate impacts that would force rates beyond pre-determined standards [Cash Reserve Guidelines, Section II.C.5-6; III, E, 9], DPU management will evaluate alternatives to total rate financing, including phasing or deferral of projects or debt financing.
 - 3. Large system replacements will be funded through debt financing. Examples of such replacements include a new wastewater treatment plant, a large segment of the

water distribution or wastewater collection system, or an electric substation. When cash reserves have already been established and are supported through rates, such as for water well replacements, those funding mechanisms for future plant replacements will be continued. This determination and funding method will be reviewed by the Board of Public Utilities and the Los Alamos County Council as part of the normal budget review process.

RESERVE STATUS BY UTILITY		8/31/2016 cash balance	over/under target	4/30/19 cash balance	over/under target
ELECTRIC UTILITY		Calc details		Calc details	
Operations Reserves					
	FY17 Budget O&M - Distribution	\$3,658,263		\$3,810,280	
	Target	\$1,829,132	\$409,008	\$1,905,140	-\$595,068
	Floor	\$914,566		\$952,570	
Capital Expenditures Reserve					
	minimum ann'l depr. + 2.5% Capital annuity Worksheet	\$6,083,754		\$6,025,716	
	Amount	\$6,083,754	\$2,827,303	\$6,025,716	-\$1,792,373
Contingency Reserve					
	FY15 gross plant in service (for reference) 1% gross plant in service Department recommendation	\$166,867,964		\$176,553,524	
		\$1,668,680		\$1,765,535	
		\$500,000 substation	-\$500,000	\$515,113 substation	\$0
Debt Service Reserve					
	Amount	\$3,793,750	\$40,189	\$1,253,438	\$4,664,364
Rate Stabilization Reserve					
	Target	\$8,673,509	-\$8,673,509	\$6,101,620	-\$6,101,620
	Floor	\$4,336,754		\$3,050,810	
Retirement/reclamation reserve					
	FY15 gross plant in service	\$166,867,964		\$176,553,524	
	Identified Items on site	\$300,000	-\$300,000	\$300,000	-\$300,000
	Identified items, external:				
	LRS Decommissioning	\$694,792	-\$24,812	\$799,980	\$845,446
	San Juan Decommissioning	\$4,287,196	\$215,052	\$4,637,031	\$5,414,969
	San Juan Mine Reclamation	\$3,027,369	\$610,142	\$4,469,884	-\$25,389
	total	\$8,309,357		\$10,206,895	
		TOTAL ELECTRIC	-\$5,396,627	TOTAL ELECTRIC	-\$5,746,935
		\$23,792,874		\$20,260,987	

RESERVE STATUS BY UTILITY		8/31/2016 cash balance	over/under target	Calc details	4/30/19 cash balance	over/under target
GAS UTILITY						
Operations Reserves						
	FY17 Budget O&M	\$1,988,668		\$2,008,463		
	Target	\$994,334	\$5,362,805	\$1,004,232	\$3,292,703	\$2,288,472
	Floor	\$497,167		\$502,116		
Capital Expenditures Reserve						
	minimum ann'l depr. + 2.5%	\$386,911		\$404,006		
	Capital annuity Worksheet	\$603,092		\$234,606		
	Amount	\$603,092	-\$603,092	\$404,006	\$404,006	\$0
Contingency Reserve						
	FY15 gross plant in service	\$15,307,977		\$16,302,648		
	(for reference) 1% gross plant in service	\$153,080		\$163,026		
	Department recommendation	\$250,000	regulator sta	\$250,000	regulator sta	\$0
Debt Service Reserve						
	Amount	\$0	\$0	\$0	\$0	\$0
Rate Stabilization Reserve						
	N/A					
Retirement/reclamation reserve						
	FY15 gross plant in service	\$15,307,977		\$16,302,648		
	Identified Items	\$50,000	abandon one	\$50,000	abandon one	\$0
		\$0	-\$50,000	\$50,000	\$50,000	\$0
		TOTAL GAS	\$4,459,713	TOTAL GAS	\$3,996,709	\$2,288,472
		\$6,357,139				

RESERVE STATUS BY UTILITY		8/31/2016 cash balance	over/under target	4/30/19 cash balance	over/under target
WATER UTILITY		Calc details	over/under target	Calc details	over/under target
Operations Reserves					
	\$3M well replacement not included but is budgeted to fund through cash reserves				
	FY17 Budget O&M - Production	\$3,042,938		\$3,271,539	
	FY17 Budget O&M - Distribution	\$2,163,228		\$2,236,153	
	FY17 Budget O&M - Non Potable	\$642,187		\$290,135	
	Target	\$8,924,177	\$8,276,472	\$2,898,914	\$6,911,317
	Floor	\$1,462,088		\$1,449,457	\$4,012,404
Capital Expenditures Reserve					
	minimum ann'l depr. + 2.5%	\$2,085,473		\$2,126,832	
	Capital annuity Worksheet	\$5,107,664		\$1,343,590	
	Amount	\$5,107,664	-\$5,107,664	\$2,126,832	\$0
Contingency Reserve					
	FY15 gross plant in service	\$83,748,255		\$87,576,372	
	(for reference) 1% gross plant in service	\$837,483		\$875,764	
	Department recommendation	\$750,000	-\$750,000	\$750,000	\$0
	Well Pump				
Debt Service Reserve					
	Amount	\$254,182	-\$52,960	\$258,373	-\$90,466
Rate Stabilization Reserve					
	N/A				
Retirement/reclamation reserve					
	FY15 gross plant in service	\$83,748,255		\$87,576,372	
	Identified Items	\$150,000	-\$150,000	\$150,000	\$0
	one tank or t	\$0		\$150,000	
	well retirement funded as part of replacement well CIP				well retirement funded as part of replacement well CIP
	TOTAL WATER	\$11,401,870	\$2,215,848	\$10,106,056	\$3,921,937

RESERVE STATUS BY UTILITY							
SEWER UTILITY		<u>Calc details</u>	<u>8/31/2016 cash balance</u>	<u>over/under target</u>	<u>Calc details</u>	<u>4/30/19 cash balance</u>	<u>over/under target</u>
	Operations Reserves						
	FY17 Budget O&M	\$3,295,427			\$1,909,583		
	Target	\$1,647,714	-\$643,319	-\$2,291,033	\$954,792	\$954,792	\$1
	Floor	\$823,857			\$477,396		
	Capital Expenditures Reserve						
	minimum ann'l depr. + 2.5%	\$861,219			\$885,052		
	Capital annuity Worksheet	\$1,902,725			\$663,398		
	Amount	\$1,902,725	\$0	-\$1,902,725	\$885,052	\$683,096	-\$201,956
	Contingency Reserve						
	FY15 gross plant in service	\$41,507,545			\$46,319,378		
	(for reference) 1% gross plant in service	\$415,075			\$463,194		
	Department recommendation	\$350,000	\$0	-\$350,000	\$350,000	\$0	-\$350,000
	Debt Service Reserve						
	Amount	\$1,155,799	\$1,362,985	\$207,186	\$861,219	\$1,682,644	\$821,425
	Rate Stabilization Reserve						
	N/A						
	Retirement/reclamation reserve						
	FY15 gross plant in service	\$41,507,545			\$46,319,378		
	Identified Items	\$500,000	\$0	-\$500,000	\$500,000	\$0	-\$500,000
		TOTAL SEWE	\$719,666	-\$4,836,572	TOTAL SEWE	\$3,320,532	-\$230,530

RESERVE STATUS BY UTILITY		<u>Calc details</u>	<u>8/31/2016 cash balance</u>	<u>over/under target</u>	<u>Calc details</u>	<u>4/30/19 cash balance</u>	<u>over/under target</u>
TOTALS		<u>Status upon adoption of policies</u>		<u>Status upon adoption of policies</u>		<u>Status upon adoption of policies</u>	
	<u>Total requirements (target)</u>	<u>Calc details</u>	<u>8/31/2016 cash balance</u>	<u>over/under target</u>	<u>Calc details</u>	<u>04/30/2019 cash balance</u>	<u>over/under target</u>
	Electric	29,189,501	\$23,792,874	-\$5,396,627	\$26,007,922	\$20,260,987	-\$5,746,935
	Gas	1,897,426	\$6,357,139	\$4,459,713	\$1,708,237	\$3,996,709	\$2,288,472
	Water	9,186,023	\$11,401,870	\$2,215,848	\$6,184,119	\$10,106,056	\$3,921,937
	Sewer	5,556,238	\$719,666	-\$4,836,572	\$3,551,062	\$3,320,532	-\$230,530
		45,829,187	42,271,549	(3,557,638)	\$37,451,340	\$37,684,284	\$232,944
	Total requirements (floor)						
	Electric	23,938,181	\$23,792,874	-\$145,307	\$22,004,542	\$20,260,987	-\$1,743,555
	Gas	1,400,259	\$6,357,139	\$4,956,880	\$1,206,122	\$3,746,709	\$2,540,587
	Water	7,723,934	\$11,401,870	\$3,677,936	\$4,734,662	\$10,106,056	\$5,371,394
	Sewer	4,732,381	\$719,666	-\$4,012,715	\$3,073,667	\$3,320,532	\$246,865
		37,794,755	42,271,549	4,476,794	\$31,018,992	\$37,434,284	\$6,415,292

**LOS ALAMOS DEPARTMENT OF PUBLIC UTILITIES
CASH & INVESTMENTS**

	6/30/2016	8/31/2016	4/30/2019
EP	Cash & Investment (1011/1028/1049/1111)	9,300,164	1,936,337
EP	1521 Res Asset - Debt Reserve & Service	1,993,763	3,705,157
EP	1531 Res Asset - Cash-O&M/2006 funds (\$165,489)	165,489	-
EP	1532 Res Asset SJ Decommissioning	4,470,848	4,502,248
EP	1533 Res Asset SJ Mine Reclamation	1,137,558	1,137,511
EP	1534 Res Asset Laramie River Decommissioning	663,480	669,980
EP	1535 Res Asset SJ Reclam Pooled Reserve	2,500,000	2,500,000
EP	1571 Res Asset - Bond Funded Capital Projects	1,472,593	1,475,241
	Total Restricted Cash	12,403,732	15,939,561
EP	TOTAL CASH - EP	21,703,896	17,875,898
ED	Cash & Investment (1011/1111)	(7,844,634)	(2,531,405)
ED	1521/1531 Res Asset - Debt Reserve & Service	1,255,256	1,422,278
ED	1571 - Bond Funded Capital Projects	7,429,023	7,435,816
	Total Restricted Cash	8,684,279	4,916,494
ED	TOTAL CASH - ED	839,645	2,385,089
GA	Cash & Investment (1011)	6,382,449	3,996,709
DW	Cash & Investment (1011)	615,779	(673,523)
WP	Cash & Investment (1011)	10,362,736	10,611,672
WP	1521/1531 Res Asset - Debt Reserve & Service	179,962	201,222
	TOTAL CASH - WP	10,542,697	10,779,579
WW	Cash & Investment (1011/1049)	(574,011)	1,637,888
WW	1521/1531 Restricted Loan Reserves	1,362,985	1,682,644
	TOTAL CASH - WW	788,974	3,320,532
	TOTAL UNRESTRICTED CASH & INVESTMENTS	18,242,483	14,977,678
	TOTAL RESTRICTED CASH & INVESTMENTS	22,630,958	22,706,606
	TOTAL CASH & INVESTMENTS	40,873,441	37,684,284

Los Alamos County Utilities Department
10-Year Financial Forecast - FY2020-FY2029
Electric Distribution

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
Expenditure Forecast										
Supervision, Misc Direct Admin	580,507	589,215	598,053	607,024	616,129	625,371	634,752	644,273	653,937	663,746
Substation Maintenance	33,768	34,274	34,788	35,310	35,840	36,377	36,923	37,477	38,039	38,610
Switching Station Maintenance	52,717	53,508	54,310	55,125	55,952	56,791	57,643	58,507	59,385	60,276
Overhead Maintenance	519,375	527,166	535,074	543,100	551,246	559,515	567,908	576,426	585,073	593,849
Underground Maintenance	386,740	392,541	398,430	404,406	410,472	416,629	422,879	429,222	435,660	442,195
Meter Maintenance	90,167	91,519	92,892	94,285	95,699	97,135	98,592	100,071	101,572	103,096
Interdepartmental Charges	724,306	735,171	746,198	757,391	768,752	780,283	791,988	803,867	815,925	828,164
Administrative Division Allocation	868,810	881,842	895,070	908,496	922,123	935,955	949,994	964,244	978,708	993,389
In Lieu Taxes	553,891	406,419	409,768	413,151	416,567	420,018	423,503	427,022	430,577	430,577
Debt Service	1,253,438	1,253,443	1,133,909	982,377	984,776	1,015,816	1,178,311	1,178,311	1,178,311	1,178,311
Profit Transfer	610,735	626,552	633,752	641,024	648,369	655,788	663,281	670,848	678,492	678,492
Cost of Power	6,017,156	6,101,620	6,198,340	6,145,624	5,275,355	5,467,262	5,599,527	5,921,880	6,009,011	6,028,849
Total Operations Expenses	11,691,609	11,693,271	11,730,584	11,587,313	10,781,282	11,066,940	11,425,299	11,812,149	11,964,690	12,039,554
Capital	1,400,000	757,500	714,070	721,211	2,879,005	2,907,795	2,936,873	2,251,484	2,273,999	2,296,739
Total Cash Requirements	13,091,609	12,450,771	12,444,654	12,308,524	13,660,287	13,974,735	14,362,172	14,063,634	14,238,689	14,336,293
Revenue Forecast										
KWh Sales	121,140,000	122,533,734	123,941,892	125,364,131	126,800,592	128,251,418	129,716,752	131,196,739	132,691,527	132,691,527
Revenue per KWh	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189	\$0.1189
Rate Increase Percentage										
Total Sales Revenue	14,203,145	14,570,969	14,738,419	14,907,543	15,078,358	15,250,882	15,425,130	15,601,121	15,778,872	15,778,872
Bond Federal Subsidy	67,942	67,942	67,942	67,942	66,045	64,099	58,759	47,731	47,731	47,732
Interest on Utility Reserves	-	96,381	159,947	229,441	308,303	359,566	408,514	453,223	510,636	569,552
Pole Rentals	53,601	53,601	53,601	53,601	53,601	53,601	53,601	53,601	53,601	53,601
Misc. Service Revenues	54,500	54,500	54,500	54,500	54,500	54,500	54,500	54,500	54,500	54,500
Revenue on Recoverable Work	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Total Cash Inflow	14,529,188	14,993,394	15,224,409	15,463,027	15,710,808	15,932,648	16,150,504	16,360,176	16,595,340	16,654,258
R&R and Cash Flows										
Net Cash Flow										
Cumulative Net Cash Flow	1,437,579	2,542,623	2,779,755	3,154,503	2,050,521	1,957,914	1,788,333	2,296,542	2,356,652	2,317,965
Recommended Cash Balance	1,641,516	4,184,139	6,963,894	10,118,397	12,168,919	14,126,832	15,915,165	18,211,707	20,568,359	22,886,324
Cash Balance	3,855,256	6,397,879	9,177,634	12,332,138	14,382,659	16,340,572	18,128,905	20,425,447	22,782,099	25,100,064
Recommended Cash Balance	11,098,211	11,166,579	11,041,997	10,068,504	10,311,766	10,524,684	11,059,813	11,197,900	11,269,380	11,380,211

Los Alamos County Utilities Department
10-Year Financial Forecast - FY2020-FY2029
Electric Production

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
Expenditure Forecast										
Total Cash Requirements	40,373,670	41,644,707	43,622,206	45,875,383	39,694,456	42,873,700	43,756,385	53,527,635	56,606,141	56,944,217
	1.50%									
	1.01%									
Revenue Forecast										
Mwh Sales - LANL	596,860	641,334	717,214	721,328	717,284	764,460	763,422	941,382	998,335	998,335
Mwh Sales - LAC Distribution	121,140	122,534	123,942	125,364	126,801	128,251	129,717	131,197	132,692	132,692
Total Mwh Sales	718,000	763,868	841,156	846,692	844,084	892,711	893,139	1,072,579	1,131,027	1,131,027
Revenue per Mwh	\$48.23	\$49.09	\$47.20	\$48.91	\$41.54	\$42.67	\$43.43	\$45.11	\$45.31	\$45.44
DOE Revenues	28,613,163	31,399,418	33,506,565	35,262,827	29,789,322	32,626,932	33,185,822	42,458,120	45,238,060	45,360,911
Economy Sales	4,183,283	3,850,925	3,955,233	4,146,575	4,312,539	4,465,464	4,660,582	4,841,702	5,053,136	5,248,523
Interest on Reserves	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000
Bond Federal Subsidy	33,984	33,984	33,984	33,984	30,867	27,669	24,080	19,561	19,561	19,561
Transfer from Distribution Fund	6,017,156	6,101,620	6,198,340	6,145,624	5,275,355	5,467,262	5,599,527	5,921,880	6,009,011	6,028,849
Total Cash Inflow	38,977,585	41,515,947	43,824,123	45,719,009	39,538,083	42,717,327	43,600,012	53,371,262	56,449,767	56,787,843
Net Cash Flow	(1,396,084)	(128,760)	201,917	(156,373)	(156,373)	(156,373)	(156,373)	(156,373)	(156,373)	(156,373)
Cumulative Net Cash Flow	(1,396,084)	(1,524,844)	(1,322,928)	(1,479,301)	(1,635,675)	(1,792,048)	(1,948,421)	(2,104,795)	(2,261,168)	(2,417,541)
Cash Balance	12,279,980	12,151,220	12,353,137	12,196,763	12,040,390	11,884,017	11,727,643	11,571,270	11,414,897	11,258,523
Recommended Cash Balance	18,794,850	18,612,759	18,798,887	18,986,876	19,176,744	19,368,512	19,562,197	19,757,819	19,955,397	20,154,951
Reserves										
Retirement/Reclamation Reserve	10,665,552	10,878,845	11,070,297	11,008,523	10,586,060	10,186,921	9,835,481	9,401,674	8,955,058	8,605,995
Identified items on site	309,068	313,704	318,409	323,185	328,033	332,953	337,948	343,017	348,162	353,385
San Juan Decommissioning	5,086,620	5,275,020	5,463,420	5,651,820	5,840,220	6,028,620	6,217,020	6,405,420	6,593,820	6,782,220
Laramie River Decommissioning	799,980	838,980	877,980	916,980	955,980	994,980	1,033,980	1,072,980	1,111,980	1,150,980
San Juan Mine Reclamation	4,469,884	4,451,141	4,410,488	4,116,538	3,461,827	2,830,368	2,246,533	1,580,257	901,096	319,410

Los Alamos County Utilities Department
10-Year Financial Forecast - FY2020 through FY2029
Electric Fund Cash Reserve Analysis

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
ELECTRIC DIST & PROD CASH RESERVES										
Combined Cash Balance ED & EP	16,135,236	18,549,099	21,530,771	24,528,901	26,423,049	28,224,589	29,856,549	31,996,717	34,196,996	36,358,588
Recommended Cash Balance (ED)	11,098,211	11,166,579	11,041,997	10,068,504	10,311,766	10,524,684	11,059,813	11,197,900	11,269,380	11,380,211
Recommended Cash Balance (EP)	18,794,850	18,612,759	18,798,887	18,986,876	19,176,744	19,368,512	19,562,197	19,757,819	19,955,397	20,154,951
Recommended Cash Balance	29,893,061	29,779,339	29,840,884	29,055,379	29,488,510	29,893,196	30,622,010	30,955,719	31,224,778	31,535,162
TARGET RESERVE BALANCES										
Debt Service Reserve	4,028,191	3,663,977	1,724,896	1,454,051	1,454,032	1,472,933	1,635,428	1,635,428	1,635,428	1,635,429
Retirement/Reclamation Reserve	10,665,552	10,878,845	11,070,297	11,008,523	10,586,060	10,186,921	9,835,481	9,401,674	8,955,058	8,605,995
Identified items on site	309,068	313,704	318,409	323,185	328,033	332,953	337,948	343,017	348,162	353,385
San Juan Decommissioning	5,086,620	5,275,020	5,463,420	5,651,820	5,840,220	6,028,620	6,217,020	6,405,420	6,593,820	6,782,220
Laramie River Decommissioning	799,980	838,980	877,980	916,980	955,980	994,980	1,033,980	1,072,980	1,111,980	1,150,980
San Juan Mine Reclamation	4,469,884	4,451,141	4,410,488	4,116,538	3,461,827	2,830,368	2,246,533	1,580,257	901,096	319,410
Operations Reserve	6,609,686	6,889,208	8,619,894	8,975,822	10,057,819	10,688,511	11,261,689	11,919,583	12,592,660	13,168,790
Capital Expenditures Reserve	1,972,900	1,626,129	1,749,491	1,802,986	1,376,615	1,390,382	1,404,285	1,418,328	1,432,512	1,446,837
Contingency Reserve	515,113	522,839	530,682	538,642	546,722	554,922	563,246	571,695	580,270	588,974
Rate Stabilization Reserve	6,101,620	6,198,340	6,145,624	5,275,355	5,467,262	5,599,527	5,921,880	6,009,011	6,028,849	6,089,138
	29,893,061	29,779,339	29,840,884	29,055,379	29,488,510	29,893,196	30,622,010	30,955,719	31,224,778	31,535,162
RESERVE BALANCE FORECAST										
Debt Service Reserve	4,028,191	3,663,977	1,724,896	1,454,051	1,454,032	1,472,933	1,635,428	1,635,428	1,635,428	1,635,429
Retirement/Reclamation Reserve	10,665,552	10,878,845	11,070,297	11,008,523	10,586,060	10,186,921	9,835,481	9,401,674	8,955,058	8,605,995
Operations Reserve	1,441,494	4,006,277	8,619,894	8,975,822	10,057,819	10,688,511	11,261,689	11,919,583	12,592,660	13,168,790
Capital Expenditures Reserve	-	-	115,684	1,802,986	1,376,615	1,390,382	1,404,285	1,418,328	1,432,512	1,446,837
Contingency Reserve	-	-	-	538,642	546,722	554,922	563,246	571,695	580,270	588,974
Rate Stabilization Reserve	-	-	-	748,877	2,401,800	3,930,920	5,156,419	6,009,011	6,028,849	6,089,138
Total Cash Remaining	-	-	-	-	-	-	-	1,040,998	2,972,218	4,823,425

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020-FY2029
 Gas Distribution

1.50%

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
Expenditure Forecast										
Supervision, Misc Direct Admin	281,596	285,820	290,107	294,459	298,876	303,359	307,909	312,528	317,216	321,974
Customer Service	62,917	63,861	64,819	65,791	66,778	67,780	68,797	69,829	70,876	71,939
Gas Distribution	270,141	274,193	278,306	282,480	286,718	291,018	295,384	299,814	304,312	308,876
Gas Meters	134,475	136,492	138,539	140,617	142,727	144,867	147,041	149,246	151,485	153,757
Capital Support & Inspection	6,158	6,250	6,344	6,439	6,536	6,634	6,733	6,834	6,937	7,041
Interdepartmental Charges	390,244	396,098	402,039	408,070	414,191	420,404	426,710	433,110	439,607	446,201
Administrative Division Allocation	639,210	648,798	658,530	668,408	678,434	688,610	698,940	709,424	720,065	730,866
In Lieu Taxes	223,722	223,722	223,722	223,722	223,722	223,722	223,722	223,722	223,722	223,722
Profit Transfer	279,133	212,944	214,552	216,578	219,628	223,290	226,863	230,614	235,934	239,506
Cost of Gas	1,938,510	1,895,288	1,929,713	1,973,088	2,038,419	2,116,832	2,193,332	2,273,657	2,387,565	2,464,065
TOTAL Operations Expenses	4,226,106	4,143,465	4,206,671	4,279,652	4,376,028	4,486,516	4,595,429	4,708,778	4,857,718	4,967,948
Capital	25,000	50,500	286,648	298,787	311,141	322,660	336,502	349,516	363,840	377,321
TOTAL Cash Requirements	4,251,106	4,193,965	4,493,319	4,578,439	4,687,169	4,809,176	4,931,931	5,058,294	5,221,558	5,345,269
<i>Total Cash Requirements less COG</i>	<i>2,312,596</i>	<i>2,298,678</i>	<i>2,563,606</i>	<i>2,605,351</i>	<i>2,648,750</i>	<i>2,692,345</i>	<i>2,738,599</i>	<i>2,784,637</i>	<i>2,833,993</i>	<i>2,881,204</i>

Revenue Forecast

Therm Sales	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000
Revenue per Therm	\$ 0.781	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230	\$ 0.230
Rate Increase Percentage										
Cost of Gas Sales Revenue	1,938,510	1,895,288	1,929,713	1,973,088	2,038,419	2,116,832	2,193,332	2,273,657	2,387,565	2,464,065
Sales Rev from Fixed/Svc Chg	4,038,644	2,664,546	2,664,546	2,664,546	2,664,546	2,664,546	2,664,546	2,664,546	2,664,546	2,664,546
Total Sales Revenue	5,977,154	4,559,834	4,594,259	4,637,634	4,702,965	4,781,378	4,857,878	4,938,203	5,052,111	5,128,611
Interest on Utility Reserves	30,496	59,098	65,777	68,586	70,817	72,434	73,427	73,746	73,383	72,280
Revenue on Recoverable Work	20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868
TOTAL Cash Inflow	6,027,650	4,639,231	4,680,640	4,727,134	4,795,009	4,875,358	4,953,173	5,034,145	5,148,024	5,223,759

R&R and Cash Flows

Net Cash Flow	1,776,544	445,266	187,321	148,694	107,840	66,181	21,243	(24,149)	(73,533)	(121,510)
Cummulative net cash flow	553,506	998,772	1,186,093	1,334,787	1,442,627	1,508,808	1,530,051	1,505,902	1,432,369	1,310,859
Cash Balance	3,939,834	4,385,100	4,572,421	4,721,115	4,828,955	4,895,136	4,916,379	4,892,230	4,818,697	4,697,187
Recommended Cash Balance	1,312,288	1,565,685	1,595,331	1,625,455	1,655,011	1,687,160	1,718,757	1,751,941	1,784,566	1,785,678

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020 through FY2029
 Gas Cash Reserve Analysis

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
GAS UTILITY CASH RESERVES										
Cash Balance	3,939,834	4,385,100	4,572,421	4,721,115	4,828,955	4,895,136	4,916,379	4,892,230	4,818,697	4,697,187
Recommended Cash Balance	1,312,288	1,565,685	1,595,331	1,625,455	1,655,011	1,687,160	1,718,757	1,751,941	1,784,566	1,785,678
TARGET RESERVE BALANCES										
Operations Reserve	1,004,231	1,017,617	1,031,203	1,044,993	1,058,990	1,073,197	1,087,617	1,102,254	1,117,110	1,132,188
Capital Expenditures Reserve	50,500	286,648	298,787	311,141	322,660	336,502	349,516	363,840	377,321	359,002
Contingency Reserve	257,556	261,420	265,341	269,321	273,361	277,461	281,623	285,847	290,135	294,487
Rate Stabilization Reserve*	-	-	-	-	-	-	-	-	-	-
	1,312,288	1,565,685	1,595,331	1,625,455	1,655,011	1,687,160	1,718,757	1,751,941	1,784,566	1,785,678
RESERVE BALANCE FORECAST										
Operations Reserve	1,004,231	1,017,617	1,031,203	1,044,993	1,058,990	1,073,197	1,087,617	1,102,254	1,117,110	1,132,188
Capital Expenditures Reserve	50,500	286,648	298,787	311,141	322,660	336,502	349,516	363,840	377,321	359,002
Contingency Reserve	257,556	261,420	265,341	269,321	273,361	277,461	281,623	285,847	290,135	294,487
Rate Stabilization Reserve*	-	-	-	-	-	-	-	-	-	-
Total Cash Remaining	2,627,547	2,819,415	2,977,089	3,095,660	3,173,944	3,207,976	3,197,622	3,140,289	3,034,131	2,911,509

* Assumes pass-through cost of gas rate remains in place.

Los Alamos County Utilities Department
10-Year Financial Forecast - FY2020-FY2029
Water Distribution

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
Expenditure Forecast										
Supervision, Misc Direct Admin	241,000	244,615	248,285	252,009	255,789	259,626	263,520	267,473	271,485	275,557
Hydrants	-	-	-	-	-	-	-	-	-	-
Water Distribution	418,621	424,900	431,274	437,743	444,309	450,974	457,738	464,605	471,574	478,647
Water Meters	599,820	299,820	304,317	308,882	313,515	318,218	322,991	327,836	332,753	337,745
Capital Project Inspections & Support	6,158	6,250	6,344	6,439	6,536	6,634	6,733	6,834	6,937	7,041
Interdepartmental Charges	333,426	338,427	343,504	348,656	353,886	359,194	364,582	370,051	375,602	381,236
Administrative Division Allocation	637,128	646,685	656,385	666,231	676,225	686,368	696,664	707,114	717,720	728,486
Cost of Water	2,985,026	3,208,500	3,348,000	3,479,750	3,580,500	3,650,250	3,712,250	3,766,500	3,820,750	3,875,000
Capital	-	50,500	688,568	463,635	483,881	525,505	546,683	568,714	591,634	820,264
Total Operation Expenses	5,221,179	5,169,198	5,338,109	5,499,711	5,630,760	5,731,264	5,824,479	5,910,413	5,996,821	6,083,712
Total Capital Expenditures	0	50,500	688,568	463,635	483,881	525,505	546,683	568,714	591,634	820,264
Total Expenditures	5,221,179	5,219,698	6,026,676	5,963,346	6,114,641	6,256,769	6,371,162	6,479,127	6,588,455	6,903,976
Revenue Forecast										
kgal Sales	775,000	775,000	775,000	775,000	775,000	775,000	775,000	775,000	775,000	775,000
Revenue per kgal	\$ 6.99	\$ 7.29	\$ 7.58	\$ 7.81	\$ 7.96	\$ 8.10	\$ 8.22	\$ 8.35	\$ 8.47	\$ 8.60
Rate Increase Percentage	5.00%	4.25%	4.00%	3.00%	2.00%	1.75%	1.50%	1.50%	1.50%	1.50%
Total Sales Revenue	5,418,608	5,648,899	5,874,855	6,051,100	6,172,122	6,280,135	6,374,337	6,469,952	6,567,001	6,665,506
Interest on Utility Reserves	-	-	-	-	-	-	-	-	-	-
Revenue on Recoverable Work	15,000	15,225	15,453	15,685	15,920	16,159	16,402	16,648	16,897	17,151
Misc Service Revenues	15,000	15,225	15,453	15,685	15,920	16,159	16,402	16,648	16,897	17,151
Total Cash Inflow from Operations	5,448,608	5,679,349	5,905,761	6,082,471	6,203,963	6,312,453	6,407,140	6,503,247	6,600,796	6,699,808
R&R and Cash Flows										
Net Cash Flow	227,428	459,650	(120,915)	119,125	89,322	55,684	35,978	24,120	12,341	(204,169)
Cumulative Net Cash Flow	232,070	691,721	570,806	689,930	779,253	834,937	870,915	895,035	907,375	703,207
Cash Balance	(2,933,336)	(2,473,686)	(2,594,601)	(2,475,476)	(2,386,153)	(2,330,469)	(2,294,491)	(2,270,371)	(2,258,031)	(2,462,199)
Recommended Cash Balance	1,748,985	1,617,567	1,638,644	1,660,006	1,681,656	1,703,598	1,725,836	1,748,375	1,771,219	1,794,371

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020-FY2029
 Water Distribution

Rates											
Commodity rate per kgal											
Residential Tier 1 - < 9,000 gals	5.55	5.79	6.02	6.20	6.32	6.43	6.53	6.63	6.73	6.83	6.83
Residential Tier 2 - 9 to 15,000 gals	5.90	6.15	6.40	6.59	6.72	6.84	6.94	7.04	7.15	7.26	7.26
Residential Tier 3 - > 15,000 gals	7.06	7.36	7.65	7.88	8.04	8.18	8.30	8.42	8.55	8.68	8.68
Multi-Family Tier 1 - < 9,000 gals	5.55	5.79	6.02	6.20	6.32	6.43	6.53	6.63	6.73	6.83	6.83
Multi-Family Tier 2 - 9 to 15,000 gals	5.84	6.09	6.33	6.52	6.65	6.77	6.87	6.97	7.07	7.18	7.18
Multi-Family Tier 3 - > 15,000 gals	5.96	6.21	6.46	6.65	6.78	6.90	7.00	7.11	7.22	7.33	7.33
Commercial All Tiers	5.55	5.79	6.02	6.20	6.32	6.43	6.53	6.63	6.73	6.83	6.83
County & Schools All Tiers	5.55	5.79	6.02	6.20	6.32	6.43	6.53	6.63	6.73	6.83	6.83
Customer Charge per Meter Size											
= or < 1.25"	10.51	10.96	11.40	11.74	11.97	12.18	12.36	12.55	12.74	12.93	12.93
1.5"	33.30	34.72	36.11	37.19	37.93	38.59	39.17	39.76	40.36	40.97	40.97
2"	49.70	51.81	53.88	55.50	56.61	57.60	58.46	59.34	60.23	61.13	61.13
2.5" to 3"	98.07	102.24	106.33	109.52	111.71	113.66	115.36	117.09	118.85	120.63	120.63
4"	167.00	174.10	181.06	186.49	190.22	193.55	196.45	199.40	202.39	205.43	205.43
6"	352.55	367.53	382.23	393.70	401.57	408.60	414.73	420.95	427.26	433.67	433.67
8"	582.49	607.25	631.54	650.49	663.50	675.11	685.24	695.52	705.95	716.54	716.54

Los Alamos County Utilities Department
10-Year Financial Forecast - FY2020-FY2029
Water Production

	BUDGET	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
Expenditure Forecast												
Supervision and Operations	671,044	681,110	691,327	701,696	712,222	722,905	733,749	744,755	755,926	767,265		
Pumping Power	821,157	833,474	845,976	858,666	871,546	884,619	897,889	911,357	925,027	938,903		
Wells	131,803	133,780	135,787	137,824	139,891	141,989	144,119	146,281	148,475	150,702		
Booster Pump Stations	130,403	132,359	134,345	136,360	138,405	140,481	142,588	144,727	146,898	149,102		
Treatment	155,269	157,598	159,962	162,362	164,797	167,269	169,778	172,325	174,910	177,533		
Storage Tanks	42,202	42,835	43,477	44,129	44,791	45,463	46,145	46,837	47,540	48,253		
Transmission Lines	212,342	215,527	218,760	222,041	225,372	228,753	232,184	235,667	239,202	242,790		
Capital Project Inspection & Support	14,034	14,244	14,458	14,675	14,895	15,118	15,345	15,575	15,809	16,046		
Non Potable System	272,560	276,648	280,798	285,010	289,285	293,624	298,029	302,499	307,037	311,642		
Ski Hill	17,575	17,839	18,107	18,378	18,654	18,934	19,218	19,506	19,799	20,096		
Interdepartmental Charges	348,171	353,394	358,694	364,075	369,536	375,079	380,705	386,416	392,212	398,095		
Administrative Division Allocation	700,114	710,615	721,275	732,094	743,075	754,221	765,535	777,018	788,673	800,503		
State Water Tax	45,000	45,675	46,360	47,056	47,761	48,478	49,205	49,943	50,692	51,453		
Debt Service	258,373	306,914	356,139	645,312	691,916	624,327	500,759	547,161	586,686	586,687		
Capital	1,655,000	941,600	1,611,985	4,500,000	2,015,936	1,736,885	1,641,444	2,049,621	1,441,520	1,865,848		
Capital Paid with Debt/Grants/Reimb	880,000	780,000	750,000	4,500,000	1,300,000	400,000	633,000	1,000,000	350,000	350,000		
Capital Paid with Cash	775,000	161,600	861,985	-	715,936	1,336,885	1,008,444	1,049,621	1,091,520	1,515,848		
Total Operations Expenses	3,820,048	3,922,013	4,025,465	4,369,677	4,472,148	4,461,262	4,395,247	4,500,067	4,598,886	4,659,070		
Total Capital Expenditures	1,655,000	941,600	1,611,985	4,500,000	2,015,936	1,736,885	1,641,444	2,049,621	1,441,520	1,865,848		
Less Capital Paid by WTB/Other	(880,000)	(780,000)	(750,000)	(4,500,000)	(1,300,000)	(400,000)	(633,000)	(1,000,000)	(350,000)	(350,000)		
Total Cash Requirements	4,595,048	4,083,613	4,887,450	4,369,677	5,188,083	5,798,147	5,403,691	5,549,688	5,690,405	6,174,917		

Revenue Forecast												
Non-potable												
Non-potable production in kgal	90,400	94,500	94,500	108,600	136,500	136,500	136,500	136,500	136,500	136,500	136,500	136,501
Revenue per kgal	\$ 1.79	\$ 1.86	\$ 1.94	\$ 2.00	\$ 2.04	\$ 2.07	\$ 2.11	\$ 2.14	\$ 2.18	\$ 2.21	\$ 2.18	\$ 2.21
Non-potable rate per 1000 gallons	\$ 2.63	\$ 2.74	\$ 2.85	\$ 2.94	\$ 3.00	\$ 3.05	\$ 3.10	\$ 3.15	\$ 3.20	\$ 3.25	\$ 3.20	\$ 3.25
Rate Increase Percentage	5.00%	4.25%	4.00%	3.00%	2.00%	1.75%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Non-potable sales revenue	\$ 161,671	\$ 176,072	\$ 183,141	\$ 217,113	\$ 278,460	\$ 283,101	\$ 287,742	\$ 292,383	\$ 297,024	\$ 301,667	\$ 297,024	\$ 301,667

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020-FY2029
 Water Production

	BUDGET	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Potable											
Production in thousand gallons	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000
Revenue per thousand gallons	\$ 3.83	\$ 3.99	\$ 4.15	\$ 4.27	\$ 4.36	\$ 4.44	\$ 4.51	\$ 4.58	\$ 4.65	\$ 4.72	
Rate Increase Percentage	5.00%	4.25%	4.00%	3.00%	2.00%	1.75%	1.50%	1.50%	1.50%	1.50%	1.50%
Potable sales revenue	\$ 4,404,500	\$ 4,588,500	\$ 4,772,500	\$ 4,910,500	\$ 5,014,000	\$ 5,106,000	\$ 5,186,500	\$ 5,267,000	\$ 5,347,500	\$ 5,428,000	
Total Sales Revenue	\$ 4,566,171	\$ 4,764,572	\$ 4,955,641	\$ 5,127,613	\$ 5,292,460	\$ 5,389,101	\$ 5,474,242	\$ 5,559,383	\$ 5,644,524	\$ 5,729,667	
Repayment & Interest on Inter-Utility Loans	187,569	187,569	187,569	187,569	187,569	93,784	-	-	-	-	-
Interest on Utility Reserves	79,426	71,175	85,684	91,219	107,184	113,491	110,688	113,564	115,540	116,713	
Bond Federal Subsidy	27,576	27,576	27,576	27,576	21,338	14,940	10,459	8,496	8,496	8,497	
Econ Dev Fund/Ski Hill Reimb	-	-	-	-	-	-	-	-	-	-	-
Federal or State Grant/Loan	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	4,860,742	5,050,892	5,256,470	5,433,977	5,608,551	5,611,315	5,595,389	5,681,443	5,768,560	5,854,876	
R&R and Cash Flows											
Net Cash Flow	265,694	967,279	369,020	1,064,300	420,468	(186,831)	191,698	131,755	78,155	(320,041)	
Cumulative Net Cash Flow	(5,624,578)	(4,657,299)	(4,288,278)	(3,223,978)	(2,803,511)	(2,990,342)	(2,798,644)	(2,666,889)	(2,588,734)	(2,908,775)	
Cash Balance	4,744,991	5,712,271	6,081,291	7,145,591	7,566,059	7,379,228	7,570,925	7,702,680	7,780,835	7,460,794	
Recommended Cash Balance	4,273,876	4,375,473	4,478,477	4,822,161	4,924,019	4,912,436	4,845,637	4,949,583	5,047,437	5,106,562	

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020 through FY2029
 Water Fund Cash Reserve Analysis

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
WATER DIST & PROD CASH RESERVES										
Combined Cash Balance DW & WP	1,811,656	3,354,835	3,734,691	5,088,616	5,799,906	5,878,008	6,322,684	6,695,559	7,003,055	6,695,845
Recommended Cash Balance (DW)	1,748,985	1,617,567	1,638,644	1,660,006	1,681,656	1,703,598	1,725,836	1,748,375	1,771,219	1,794,371
Recommended Cash Balance (WP)	4,273,876	4,375,473	4,478,477	4,822,161	4,924,019	4,912,436	4,845,637	4,949,583	5,047,437	5,106,562
Recommended Cash Balance	6,022,861	5,993,040	6,117,121	6,482,167	6,605,675	6,616,034	6,571,473	6,697,958	6,818,655	6,900,933
TARGET RESERVE BALANCES										
Debt Service Reserve	258,373	306,914	356,139	645,312	691,916	624,327	500,759	547,161	586,686	586,687
Operations Reserve	2,898,914	2,787,899	2,829,717	2,872,163	2,915,246	2,958,974	3,003,359	3,048,409	3,094,135	3,140,547
Capital Expenditures Reserve	2,092,905	2,113,968	2,135,242	2,156,729	2,178,430	2,200,349	2,222,487	2,244,846	2,267,428	2,290,237
Contingency Reserve	772,669	784,259	796,023	807,963	820,082	832,384	844,869	857,542	870,406	883,462
	6,022,861	5,993,040	6,117,121	6,482,167	6,605,675	6,616,034	6,571,473	6,697,958	6,818,655	6,900,933
RESERVE BALANCE FORECAST										
Debt Service Reserve	258,373	306,914	356,139	645,312	691,916	624,327	500,759	547,161	586,686	586,687
Operations Reserve	1,553,282	2,787,899	2,829,717	2,872,163	2,915,246	2,958,974	3,003,359	3,048,409	3,094,135	3,140,547
Capital Expenditures Reserve	-	260,023	548,834	1,571,141	2,178,430	2,200,349	2,222,487	2,244,846	2,267,428	2,290,237
Contingency Reserve	-	-	-	-	14,313	94,358	596,080	855,143	870,406	678,374
Total Cash Remaining	-	-	-	-	-	-	-	-	184,399	-



Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020-FY2029
 Wastewater Division

1.50%

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
EXPENSE FORECAST										
WASTEWATER COLLECTION										
Supervision, Misc Direct Admin	302,427	306,963	311,567	316,241	320,984	325,799	330,686	335,647	340,681	345,791
Wastewater Collection Operations	341,652	346,777	351,978	357,258	362,617	368,056	373,577	379,181	384,868	390,641
Sewer Lift Stations	159,288	161,677	164,102	166,564	169,062	171,598	174,172	176,785	179,437	182,128
Capital Project Inspection & Support	4,058	4,119	4,180	4,243	4,307	4,371	4,437	4,504	4,571	4,640
Total WWC Operations Expenses	807,424	819,536	831,829	844,306	856,971	869,825	882,873	896,116	909,557	923,201
WASTEWATER TREATMENT										
LA WWTP Operations & Maintenance	1,310,004	1,329,654	1,349,599	1,369,843	1,390,391	1,411,247	1,432,415	1,453,902	1,475,710	1,497,846
WR WWTP Operations & Maintenance	358,966	364,350	369,816	375,363	380,993	386,708	392,509	398,396	404,372	410,438
Total WWTP Operations Expenses	1,668,970	1,694,005	1,719,415	1,745,206	1,771,384	1,797,955	1,824,924	1,852,298	1,880,083	1,908,284
Interdepartmental Charges	545,371	553,552	561,855	570,283	578,837	587,519	596,332	605,277	614,356	623,572
Administrative Division Allocation	797,400	809,361	821,501	833,824	846,331	859,026	871,912	884,990	898,265	911,739
Operations encumbrances rolled forward										
Debt Service (WWT)	698,314	1,625,124	1,625,123	1,625,123	1,625,124	1,531,339	1,437,555	1,437,554	1,434,213	1,434,214
Capital	-	13,050,500	-	184,424	878,270	371,007	1,049,843	714,042	406,071	828,467
Total Operations Expenses	4,517,480	5,501,577	5,559,723	5,618,742	5,678,647	5,645,665	5,613,595	5,676,236	5,736,475	5,801,009
Total Capital Expenditures	-	13,050,500	-	184,424	878,270	371,007	1,049,843	714,042	406,071	828,467
Total Cash Requirements	4,517,480	18,552,077	5,559,723	5,803,166	6,556,917	6,016,672	6,663,439	6,390,278	6,142,546	6,629,476
REVENUE FORECAST										
Mgal Processed	430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000
Res'l Single-Family Flat Rate Customers	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629
Res'l Single Family Flat Rate	42.56	43.84	44.72	44.72	44.72	44.72	44.72	44.72	44.72	44.72
Res'l Single-Family Service Charge	11.76	12.11	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35
Rate Increase Percentage	6.00%	3.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Revenue from Res'ls Flat Rate	4,277,837	4,406,203	4,494,406	4,494,406	4,494,406	4,494,406	4,494,406	4,494,406	4,494,406	4,494,406

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020-FY2029
 Wastewater Division

1.50%

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
Res'l Multi-Family Flat Rate Customers	75	75	75	75	75	75	75	75	75	75
Res'l Multi-Family Service Charge	11.76	12.11	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35
No. of Res'l Multi-Family Dwelling Units	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585
Res'l Multi-Family Flat Rate	35.46	36.52	37.25	37.25	37.25	37.25	37.25	37.25	37.25	37.25
Rate Increase Percentage	6.00%	3.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Revenue from Res'l MF Flat Rate	643,931	663,179	676,433	676,433	676,433	676,433	676,433	676,433	676,433	676,433
Non-Residential Customers	291	291	291	291	291	291	291	291	291	291
Non-Residential Service Charge	11.76	12.11	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35
Non-Residential Sales in Kgal	45,572	45,481	45,390	45,299	45,209	45,118	45,028	44,938	44,848	44,758
Adjustment Factor	1.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Adjusted Non-Residential Sales in Kgal	46,370	45,481	45,390	45,299	45,209	45,118	45,028	44,938	44,848	44,758
Non-Res'l Commodity Charge per Kgal	20.03	20.63	21.04	21.04	21.04	21.04	21.04	21.04	21.04	21.04
Rate Increase Percentage	6.00%	3.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Revenue from Non-Residential	940,752	951,141	968,186	966,333	964,484	962,639	960,797	958,959	957,125	1,868,900
Total Sales Revenue	5,582,581	6,020,524	6,139,025	6,137,173	6,135,324	6,133,478	6,131,637	6,129,799	6,127,965	7,039,740
Interest on Utility Reserves	35,667	85,956	99,816	116,794	128,064	120,726	126,664	116,536	112,937	115,396
Inter-Utility Loan										
Loan Proceeds	-	13,000,000								
Revenue on Recoverable Work										
Total Cash Inflow	5,618,248	19,106,480	6,238,841	6,253,967	6,263,388	6,254,204	6,258,301	6,246,334	6,240,902	7,155,136
Net Cash Flow	1,100,768	554,403	679,118	450,801	(293,529)	237,532	(405,138)	(143,943)	98,356	525,660
Cumulative Net Cash Flow	1,536,933	2,091,336	2,770,455	3,221,255	2,927,726	3,165,259	2,760,121	2,616,178	2,714,533	3,240,193
Cash Balance	3,438,238	3,992,641	4,671,759	5,122,560	4,829,031	5,066,563	4,661,425	4,517,482	4,615,838	5,141,497
Recommended Cash Balance	3,829,695	4,816,653	4,860,089	4,904,132	4,948,792	4,900,292	4,852,425	4,898,984	4,942,855	4,990,729

Los Alamos County Utilities Department
 10-Year Financial Forecast - FY2020 through FY2029
 Wastewater Fund Cash Reserve Analysis

	BUDGET 2020	FORECAST 2021	FORECAST 2022	FORECAST 2023	FORECAST 2024	FORECAST 2025	FORECAST 2026	FORECAST 2027	FORECAST 2028	FORECAST 2029
WASTEWATER UTILITY CASH RESERVES										
Cash Balance *	3,438,238	3,992,641	4,671,759	5,122,560	4,829,031	5,066,563	4,661,425	4,517,482	4,615,838	5,141,497
Recommended Cash Balance	3,829,695	4,816,653	4,860,089	4,904,132	4,948,792	4,900,292	4,852,425	4,898,984	4,942,855	4,990,729
TARGET RESERVE BALANCES										
Debt Service Reserve	698,314	1,625,124	1,625,123	1,625,123	1,625,124	1,531,339	1,437,555	1,437,554	1,434,213	1,434,214
Operations Reserve	1,909,583	1,938,226	1,967,300	1,996,809	2,026,761	2,057,163	2,088,020	2,119,341	2,151,131	2,183,398
Capital Expenditures Reserve	861,219	887,315	896,188	905,150	914,202	923,344	932,577	941,903	951,322	960,835
Contingency Reserve	360,579	365,987	371,477	377,049	382,705	388,446	394,272	400,186	406,189	412,282
	3,829,695	4,816,653	4,860,089	4,904,132	4,948,792	4,900,292	4,852,425	4,898,984	4,942,855	4,990,729
RESERVE BALANCE FORECAST										
Debt Service Reserve	698,314	1,625,124	1,625,123	1,625,123	1,625,124	1,531,339	1,437,555	1,437,554	1,434,213	1,434,214
Operations Reserve	1,909,583	1,938,226	1,967,300	1,996,809	2,026,761	2,057,163	2,088,020	2,119,341	2,151,131	2,183,398
Capital Expenditures Reserve	830,341	429,291	896,188	905,150	914,202	923,344	932,577	941,903	951,322	960,835
Contingency Reserve	-	-	183,148	377,049	262,944	388,446	203,273	18,684	79,172	412,282
Total Cash Remaining	-	-	-	218,428	-	166,272	-	-	-	150,768

Los Alamos County Department of Public Utilities
 10-Year Financial Forecast - FY2020 - FY2029
 Customer Impact

Projected Typical Bill for Residential

	ELECTRIC 500 kwh	GAS 75 therms (assumes \$0.30 variable)	WATER 6,000 gal	SEWER	Total (excludes refuse)	Total % annual Increase	Total cumulative % Increase
FY2020	\$69.60	\$49.25	\$43.84	\$54.32	\$217.01	2.44%	6%
FY2021	\$69.60	\$49.25	\$45.71	\$55.95	\$220.51	1.61%	7%
FY2022	\$69.60	\$49.25	\$47.54	\$57.07	\$223.46	1.34%	9%
FY2023	\$69.60	\$49.25	\$48.96	\$57.07	\$224.88	0.64%	9%
FY2024	\$69.60	\$49.25	\$49.94	\$57.07	\$225.86	0.44%	10%
FY2025	\$69.60	\$49.25	\$50.82	\$57.07	\$226.73	0.39%	10%
FY2026	\$69.60	\$49.25	\$51.58	\$57.07	\$227.50	0.34%	11%
FY2027	\$69.60	\$49.25	\$52.35	\$57.07	\$228.27	0.34%	11%
FY2028	\$69.60	\$49.25	\$53.14	\$57.07	\$229.06	0.34%	11%
FY2029	\$69.60	\$49.25	\$53.93	\$57.07	\$229.85	0.35%	12%

Utility Expense as a Percentage of Income

	Total Bill for Average Household	Los Alamos Median Household Income	Assumed Annual Income Increase	Percentage Needed to Pay Utility Bill
FY2020	\$217.01	\$108,639	2.5%	2.40%
FY2021	\$220.51	\$111,355	2.5%	2.38%
FY2022	\$223.46	\$114,139	2.5%	2.35%
FY2023	\$224.88	\$116,992	2.5%	2.31%
FY2024	\$225.86	\$119,917	2.5%	2.26%
FY2025	\$226.73	\$122,915	2.5%	2.21%
FY2026	\$227.50	\$125,988	2.5%	2.17%
FY2027	\$228.27	\$129,137	2.5%	2.12%
FY2028	\$229.06	\$132,366	2.5%	2.08%
FY2029	\$229.85	\$135,675	2.5%	2.03%



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Staff Report

June 19, 2019

Agenda No.: 8.A
Index (Council Goals): BCC - N/A
Presenters: Board of Public Utilities
Legislative File: 12047-19

Title

Status Reports

Body

Each month the Board receives in the agenda packet informational reports on various items. No presentation is given, but the Board may discuss any of the reports provided.

Attachments

A - Electric Reliability Report

B - Accounts Receivables Report

C - Safety Report

STATUS REPORTS

ELECTRIC RELIABILITY

Los Alamos County Utilities



Electric Distribution Reliability

June 19, 2019

Stephen Marez
Electrical Engineering Manager

Electric Distribution Reliability Study
Twelve Month Outage History

Prepared by Stephen Marez
Senior Engineer L.A.C.U.

Date	Call Rcd.	Circuit	Cause	Start Time	End Time	Duration	Customers Affected (Meters)	Combined Customer Outage Durations	Total Outage H:M:S	Running SAIDI
6/3/2018	Utilities	WR2	URD Failure	15:00	16:00	1:00	50	50:00:00	50:00:00	0:00:20
6/3/2018	Utilities	WR2	URD Failure	15:00	16:45	1:45	27	47:15:00	97:15:00	0:00:39
6/3/2018	Utilities	WR2	URD Failure	15:00	17:45	2:45	21	57:45:00	155:00:00	0:01:02
6/12/2018	Utilities	13	URD Failure	20:45	9:30	12:45	15	191:15:00	346:15:00	0:02:18
6/17/2018	Utilities	16	URD Failure	18:30	20:00	1:30	2	3:00:00	349:15:00	0:02:19
7/15/2018	Utilities	14	URD Failure	23:30	5:30	6:00	30	180:00:00	529:15:00	0:03:31
7/20/2018	Utilities	WR2	URD Failure	10:10	11:30	1:20	12	16:00:00	545:15:00	0:03:37
8/7/2018	Utilities	13	URD Failure	20:00	1:00	5:00	50	250:00:00	795:15:00	0:05:17
8/19/2018	Utilities	WR2	URD Failure	19:00	23:00	4:00	24	96:00:00	891:15:00	0:05:55
9/1/2018	Utilities	WR2	URD Failure	5:00	8:30	3:30	21	73:30:00	964:45:00	0:06:24
9/3/2018	Utilities	WR1	OH Failure	13:30	16:30	3:00	15	45:00:00	1009:45:00	0:06:42
9/4/2018	Utilities	WR1	Weather	17:50	19:30	1:40	15	25:00:00	1034:45:00	0:06:52
9/13/2018	Utilities	WR1	HUMAN	14:45	15:15	0:30	14	7:00:00	1041:45:00	0:06:55
9/13/2018	Utilities	WR2	URD Failure	9:30	11:15	1:45	24	42:00:00	1083:45:00	0:07:11
10/3/2018	Utilities	WR2	URD Failure	8:00	11:30	3:30	7	24:30:00	1108:15:00	0:07:21
11/13/2018	Utilities	13	SAFETY	9:45	15:00	5:15	87	456:45:00	1565:00:00	0:10:23
11/23/2018	Utilities	13	URD Failure	11:45	12:00	0:15	7	1:45:00	1566:45:00	0:10:24
11/30/2018	Utilities	13	TREE	19:00	20:52	1:52	15	28:00:00	1594:45:00	0:10:35
11/30/2018	Utilities	13	TREE	19:00	0:00	5:00	15	75:00:00	1669:45:00	0:11:05
2/4/2019	Utilities	WR2	HUMAN	9:30	9:34	0:04	961	64:04:00	1733:49:00	0:11:30
2/8/2019	Utilities	WR2	URD Failure	15:57	17:15	1:18	25	32:30:00	1766:19:00	0:11:43
2/14/2019	Utilities	WR1	URD Failure	4:00	6:00	2:00	30	60:00:00	1826:19:00	0:12:07
3/3/2019	Utilities	EA4	OH Failure	14:41	17:45	3:04	15	46:00:00	1872:19:00	0:12:25
3/12/2019	Utilities	WR2	OH Failure	14:30	14:58	0:28	13	6:04:00	1878:23:00	0:12:28
3/12/2019	Utilities	13	TREE	3:00	9:40	6:40	104	693:20:00	2571:43:00	0:17:04
3/12/2019	Utilities	13	TREE	3:00	0:00	21:00	12	252:00:00	2823:43:00	0:18:44
3/12/2019	Utilities	13	TREE	14:30	17:10	2:40	1541	4109:20:00	6933:03:00	0:45:59
3/12/2019	Utilities	13	TREE	14:30	17:30	3:00	114	342:00:00	7275:03:00	0:48:16
3/12/2019	Utilities	13	TREE	16:30	20:30	4:00	2	8:00:00	7283:03:00	0:48:19
3/12/2019	Utilities	15	TREE	15:00	17:10	2:10	10	21:40:00	7304:43:00	0:48:27
4/15/2019	Utilities	16	OH Failure	7:00	9:30	2:30	7	17:30:00	7322:13:00	0:48:34
5/22/2019	Utilities	14	URD Failure	15:00	18:15	3:15	5	16:15:00	7338:28:00	0:48:41
5/22/2019	Utilities	16	OH Failure	22:00	23:30	1:30	120	180:00:00	7518:28:00	0:49:52
5/27/2019	Utilities	WR1	URD Failure	17:00	23:30	6:30	10	65:00:00	7583:28:00	0:50:18

Twelve Month History	May 2019	
Total # Accounts	9045	
Total # Interruptions	34	
Sum Customer Interruption Durations	7583:28:00	hours:min:sec
# Customers Interrupted	3420	
SAIFI(APPA AVG. = 1.0)	.38	int./cust.
SAIDI (APPA AVG. = 1:00)	00:50	hours:min
CAIDI	2:13	hours:min/INT
ASAI	99.9996%	% available

- SAIFI - System Average Interruption Frequency Index**
 A measure of interruptions per customer (Per Year)

$$\text{SAIFI} = \frac{\text{(Total number of customer interruptions)}}{\text{(Total number of customers served)}}$$

- SAIDI – System Average Interruption Duration Index**
 A measure of outage time per customer if all customers were out at the same time (hours per year)

$$\text{SAIDI} = \frac{\text{(Sum of all customer outage durations)}}{\text{(Total number of customers served)}}$$

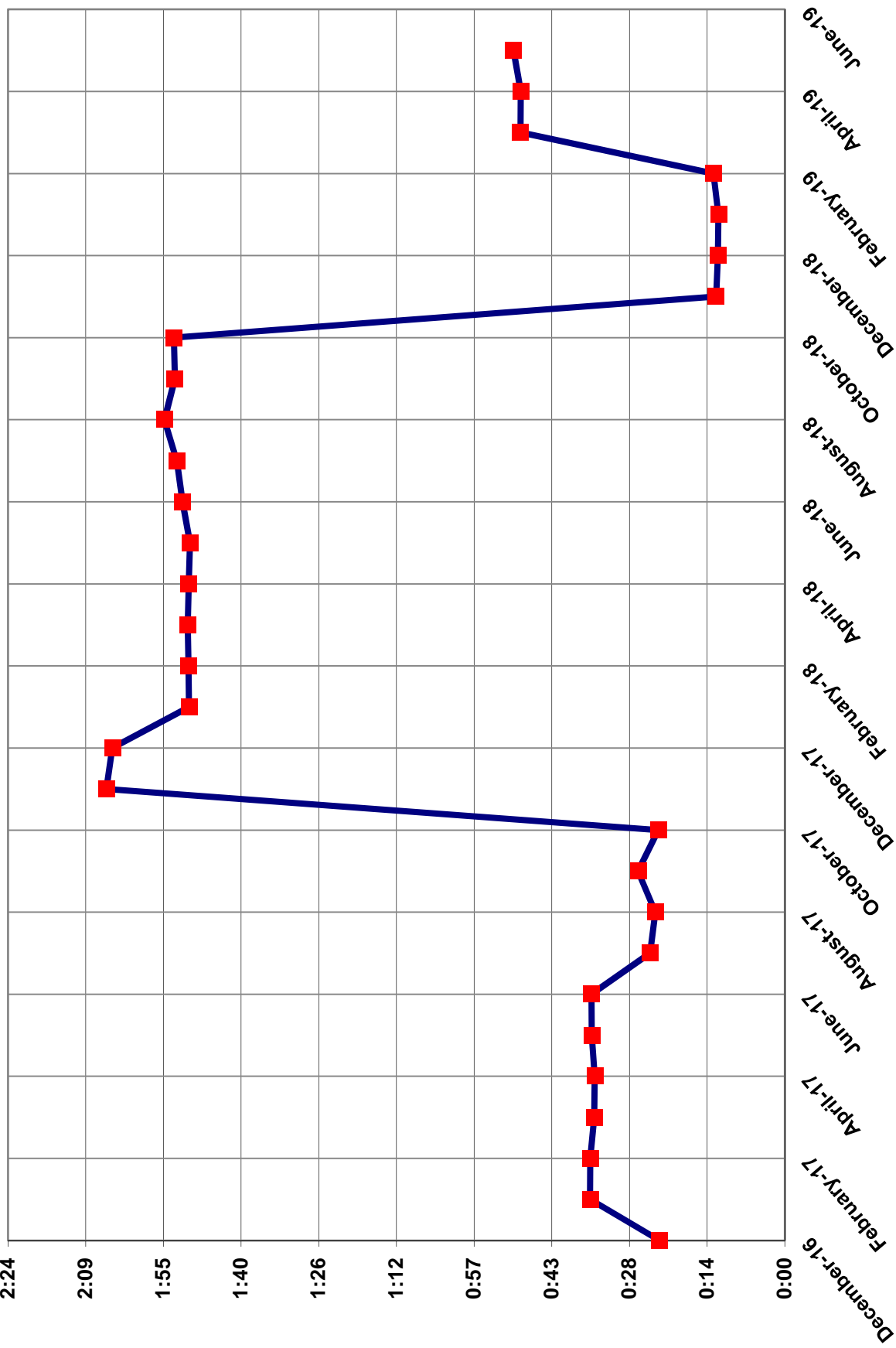
- CAIDI – Customer Average Interruption Duration Index**
 A measure of the average outage duration per customer (hours per interruption)

$$\text{CAIDI} = \frac{\text{(Sum of all customer outage durations)}}{\text{(Total number of customer interruptions)}} = \frac{\text{SAIDI}}{\text{SAIFI}}$$

- ASAI – Average System Availability Index**
 A measure of the average service availability (Per unit)

$$\text{ASAI} = \frac{\text{(Service hours available)}}{\text{(Customer demand hours)}} = \frac{8760 - \text{SAIDI}}{8760}$$

EACH POINT IS A 12 MONTH SAIDI HISTORY
 1:00:00 = APPA BENCHMARK SAIDI



STATUS REPORTS

ACCOUNTS RECEIVABLES

Due to technical difficulties, the report was not available at the time of agenda publication

STATUS REPORTS

SAFETY

DEPARTMENT OF PUBLIC UTILITIES CLAIMS

May 2019

(Information provided by the County Risk Department)

TORT CLAIMS

1. Claim alleges damage to backyard landscape due to County repair excavation.
2. Claim alleges damage to yard due to a water main break

WORKERS COMPENSATION

None

COUNTY PROPERTY DAMAGE

None

OSHA INCIDENT REPORT

Attached

MONTH	Hours Worked		Hours Worked		Hours Worked		Hours Worked		Hours Worked		Hours Worked	
	ADMIN	EL DIST	EL PROD	GWS	WA PROD	WWTP						
Jan - 2019	3589.0	1793.0	2317.0	4119.0	1678.0	1139.0						
Feb - 2019	3221.0	1358.0	3244.0	3319.0	1132.0	1244.0						
Mar - 2019	2563.0	1941.0	2332.0	3955.0	1641.0	1281.0						
Apr - 2019	3592.0	1760.0	1890.0	3196.0	1199.0	1040.0						
May - 2019	3512.0	1510.0	2149.0	4114.0	1731.0	1231.0						
June - 2018	3523.0	1292.0	1586.0	3754.0	1155.0	1168.0						
July - 2018	3825.0	1292.0	1641.0	3553.0	1286.0	1420.0						
Aug - 2018	4982.0	1471.0	2240.0	3947.0	2456.0	2771.0						
Sept - 2018	3150.0	1168.0	1421.0	3242.0	1198.0	1059.0						
Oct - 2018	2499.0	1194.0	1270.0	3847.0	1181.0	1009.0						
Nov - 2018	3476.0	1416.0	1506.0	3398.0	1182.0	1201.0						
Dec - 2018	3204.0	1251.0	1372.0	3047.0	2427.0	946.0						
Total Hrs Worked ->	41136.0	17446.0	22968.0	43491.0	18266.0	15509.0						
Number of Recordable Injury and Illness Cases	0	1	0	1	0	1						
OSHA Recordable Injury & Illness Incidence Rate	0.00	11.46	0.00	4.60	0.00	12.90						
Number of OSHA Days Away Days Restricted (DART) cases	0	0	0	3	0	0						
OSHA Days Away Days Restricted (DART) Rate	0.00	0.00	0.00	7.00	0.00	0.00						