County of Los Alamos

1000 Central Avenue
Los Alamos, NM 87544

Agenda - Final

Board of Public Utilities

Carrie Walker, Chair; Stephen McLin, Vice-chair; Eric Stromberg, Steve Tobin and Cornell Wright Members
Philo Shelton, Ex Officio Member
Harry Burgess, Ex Officio Member
Randall Ryti, Council Liaison

Wednesday, October 21, 2020 **5:30 PM** **Due to COVID-19 concerns, meeting will be conducted remotely. Public can view proceedings at http://losalamos.legistar.com/calendar.aspx or attend via Zoom.**

REGULAR SESSION - REMOTE ZOOM MEETING

Members of the public wishing to attend may participate and provide public comment via Zoom, by visiting the link below or by calling one of the conference call lines listed below:

Join Zoom Webinar: https://zoom.us/j/91434446500

The webinar ID: 914 3444 6500

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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 13262-20 Follow-up to Planning for Upcoming Board of Public Utilities Annual Boards & Commissions Presentation to Council

Presenters: Carrie Walker, Chair of the Board of Public Utilities

PG. 1

4.H. Approval of Board Expenses

4.I. Preview of Upcoming Agenda Items

4.I.1 13459-20 Tickler File for the Next 3 Months

Presenters: Board of Public Utilities

PG. 2-5

5. PUBLIC HEARING(S)

5.A 13159-20 Public Hearing for Revisions to the Department of Public Utilities Rules and Regulations: Sections S-2 Service Connections - Sewer, S-3 Responsibility for Sewer Facilities, and the Table of Contents

Presenters: Philo Shelton, Utilities Manager

PG. 6-11

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 13457-20 Approval of Board of Public Utilities Meeting Minutes

Presenters: Board of Public Utilities

PG. 12-35

7. BUSINESS

7.A 13462-20 Request for Support on a Grant Application by Mr. Richard Nebel, with Tibbar Plasma Technologies, Inc.

Presenters: Philo Shelton, Utilities Manager

PG. 36-54

7.B 13161-20 Approval of Department of Public Utilities Mission, Vision and Values, Strategic Goals and Objectives

Presenters: Philo Shelton, Utilities Manager

PG. 55-58

7.C 13430-20 Presentation of the 2020 Employee Survey Results

Presenters: Julie Williams-Hill, Public Relations Manager

PG. 59-93

8. STATUS REPORTS

8.A 12865-20 Quarterly Conservation Program Update

Presenters: James Alarid, Deputy Utilities Manager - Engineering

PG. 94-135

8.B 13458-20 Status Reports

Presenters: Board of Public Utilities

PG. 136-149

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

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	4.G.1
Index (Council Goals):	DPU FY2021 - 6.0 Develop and Strengthen Partnerships with Stakeholders
Presenters:	Carrie Walker, Chair of the Board of Public Utilities
Legislative File:	**13262-20**

Title

Follow-up to Planning for Upcoming Board of Public Utilities Annual Boards & Commissions Presentation to Council

Recommended Action

None

Staff Recommendation

None

Body

On September 22nd, the Board of Public Utilities was originally scheduled to give its annual Boards & Commissions presentation to Council; however, that was delayed. The Board was given an opportunity to suggest topics to include in the presentation. At the October meeting, the Board Chair will discuss plans for the presentation again.

Alternatives

None

Fiscal and Staff Impact

None

Attachments

None

County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	4.I.1
Index (Council Goals):	DPU FY2021 - N/A
Presenters:	Board of Public Utilities
Legislative File:	**13459-20**

Title

Tickler File for the Next 3 Months

Attachments

A - Tickler File for the Next 3 Months

County of Los Alamos

Tickler

Los Alamos, NM 87544
www.losalamosnm.us

Criteria: Agenda Begin Date: 11/1/2020, Agenda End Date: 1/31/2021, Matter Bodies: Board of Public Utiliti

File Number	Title	
Agenda Date: 11/18/2020		
13474-20	**Briefing/Report (Dept, BCC) - No action requested** Department of Public Utilities Quarterly Report **Department Name:** DPU **Drop Dead Date:** **Length of Presentation:** Apx. 5 Min. **Sponsors:** Philo Shelton, Utilities Manager	**04C Utilities Manager's Report**
13260-20	**Briefing/Report (Dept, BCC) - No action requested** Begin 2020 Board of Public Utilities Annual Self-evaluation **Department Name:** DPU **Drop Dead Date:** **Length of Presentation:** Apx. 10 Min. **Sponsors:** Carrie Walker, Chair of the Board of Public Utilities	**04G General Board Business**
AGR0704-20	**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 Supervisory Control Data Acquisition (SCADA) Web-hosted Solution. **Department Name:** DPU **Drop Dead Date:** **Length of Presentation:** N/A **Sponsors:** Jack Richardson, Deputy Utilities Manager - GWS Services	**06 Consent**
AGR0708-20	**General Services Agreement** Approval of Task Order No. 2 Under Services Agreement No. AGR20-48b with CDM Smith in the amount of $[amount], plus Applicable Gross Receipts Tax, for the Purpose of Design of Replacement Liner for the Los Alamos Composting Area **Department Name:** DPU **Drop Dead Date:** **Length of Presentation:** N/A **Sponsors:** James Alarid, Deputy Utilities Manager - Engineering	**06 Consent**
13429-20	**Budget Item** Budget Revision 2021-XX Due to the New International Brotherhood of Electrical Workers Collective Bargaining Agreement **Department Name:** DPU **Drop Dead Date:** **Length of Presentation:** N/A **Sponsors:** Bob Westervelt, Deputy Utilities Manager - Finance/Admin	**06 Consent**
13451-20	**Appointment** Approval of Appointment of Engineering Associate Ben Olbrich as Los Alamos' Member on the New Mexico Municipal Energy Acquisition Authority (NMMEAA) Board of Directors **Department Name:** DPU **Length of Presentation:**	**06 Consent**

File Number	Title	
	Drop Dead Date:	**Sponsors:** Bob Westervelt, Deputy Utilities Manager - Finance/Admin
AGR0720-20	**General Services Agreement**	**06 Consent**
	Approval of Amendment No. 3 to Services Agreement No. AGR16-042 with Open Access Technology, Inc. in the amount of $27,000.00, for a Total Agreement Amount Not to Exceed $706,320.00, plus Applicable Gross Receipts Tax, for Additional webTrader Functionality for the Energy Trade Capture and Scheduling Software	
	Department Name: DPU	**Length of Presentation:** N/A
	Drop Dead Date:	**Sponsors:** Steve Cummins, Deputy Utilities Manager - Power Supply
AGR0718-20	**General Services Agreement**	**07 Business**
	Approval of the (REVISED) Amendment to the Software as a Service/Spectrum and Technical Support Agreement with Sensus USA, Inc., and Amendment No. 1 to Services Agreement No. AGR19-912 with Ferguson, Inc. in the amount of $108,099.02, plus applicable gross receipts tax, for the Purpose of Implementing an Advanced Metering Infrastructure Customer Portal	
	Department Name: DPU	**Length of Presentation:** Apx. 10 Min.
	Drop Dead Date:	**Sponsors:** James Alarid, Deputy Utilities Manager - Engineering
12869-20	**Briefing/Report (Dept, BCC) - No action requested**	**08 Status Reports**
	Quarterly Update on Utility System - Gas Distribution System	
	Department Name: DPU	**Length of Presentation:** Apx. 20 Min.
	Drop Dead Date:	**Sponsors:** Jack Richardson, Deputy Utilities Manager - GWS Services

Agenda Date: 12/16/2020

12866-20	**Briefing/Report (Dept, BCC) - No action requested**	**08 Status Reports**
	Quarterly Conservation Program Update	
	Department Name: DPU	**Length of Presentation:** Apx. 10 Min.
	Drop Dead Date:	**Sponsors:** James Alarid, Deputy Utilities Manager - Engineering

Agenda Date: 01/20/2021

13467-20	**Election**	**04G General Board Business**
	Election of Board of Public Utilities Chair and Vice-chair for 2021	
	Department Name: DPU	**Length of Presentation:** Apx. 10 Min.
	Drop Dead Date:	**Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13468-20	**Appointment**	**04G General Board Business**
	Appointment of Board Member to Audit Committee for 2021	
	Department Name: DPU	**Length of Presentation:** Apx. 5 Min.
	Drop Dead Date:	**Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13469-20	**Briefing/Report (Dept,BCC) - Action Requested**	**04G General Board Business**

File Number	Title	
	Affirmation of the Incorporated County of Los Alamos Open Meetings Resolution No. 21-XX **Department Name:** DPU **Drop Dead Date:**	**Length of Presentation:** Apx. 5 Min. **Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13470-20	**Briefing/Report (Dept,BCC) - Action Requested** Approval of Meeting Agenda Outline for 2021 **Department Name:** DPU **Drop Dead Date:**	**04G General Board Business** **Length of Presentation:** Apx. 5 Min. **Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13471-20	**Briefing/Report (Dept,BCC) - Action Requested** (TENTATIVE) Schedule and Selection of Members to Attend Boards & Commissions Luncheons for 2021 **Department Name:** DPU **Drop Dead Date:**	**04G General Board Business** **Length of Presentation:** Apx. 5 Min. **Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13472-20	**Calendar** Approval of Board of Public Utilities Meeting Calendar for 2021 **Department Name:** DPU **Drop Dead Date:**	**04G General Board Business** **Length of Presentation:** Apx. 5 Min. **Sponsors:** Carrie Walker, Chair of the Board of Public Utilities
13473-20	**Briefing/Report (Dept, BCC) - No action requested** Quarterly Update on Utility System - Water System **Department Name:** DPU **Drop Dead Date:**	**08 Status Reports** **Length of Presentation:** Apx. 30 Min. **Sponsors:** Jack Richardson, Deputy Utilities Manager - GWS Services

County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	5.A
Index (Council Goals):	DPU FY2021 - 1.0 Provide Safe and Reliable Utility Services
Presenters:	Philo Shelton, Utilities Manager
Legislative File:	**13159-20**

Title

Public Hearing for Revisions to the Department of Public Utilities Rules and Regulations: Sections S-2 Service Connections - Sewer, S-3 Responsibility for Sewer Facilities, and the Table of Contents

Recommended Action

I move that the Board of Public Utilities approve the revisions to the following sections of the Department of Public Utilities Rules and Regulations as presented: Sections S-2 Service Connections - Sewer, S-3 Responsibility for Sewer Facilities, and the Table of Contents.

Staff Recommendation

Staff recommends approval of the Rules and Regulations as presented.

Body

Sections S-2 Service Connections and Sewer, and S-3 Responsibility for Sewer Facilities had some clarifying language added regarding definitions and responsibilities for sewer service lines maintained by the customer and delivery lines with property line cleanouts that require acceptance and maintenance by the Utility.

In May 2006, the DPU Rules and Regulations were updated in their entirety. At that time, three sections from an older draft were inadvertently left in the Table of Contents, but any pertinent information and rules related to those topics were incorporated into other sections. Staff would now like to clean up the Table of Contents by removing those three sections.
S-6 General Discharge Prohibitions
S-7 Water Reuse
S-8 Back Water Valves

Alternatives

The alternatives are not accept these revisions or offer a different set of revisions.

Fiscal and Staff Impact

There are no fiscal impact with these revisions.

Attachments

A - Revised Rule S-2
B - Revised Rule S-3
C - Revised Table of Contents

RULES AND REGULATIONS
SEWER (S)
RULE S-2
SERVICE CONNECTIONS - SEWER

S-2.01 GENERAL

Rule provides specific connection requirements for sewer service.

S-2.02 REFERENCE

A. Los Alamos County Code of Ordinances, Section 40, Article IV Sewer Use.

B. Uniform Plumbing Code, latest edition

S-2.03 RESIDENTIAL SEWER SERVICE LINE

For a service pipeline with no property line cleanout, Tthe "Service Line" for sewer service is from the sewer line from the main to the house. For a service pipeline with a property line cleanout approved by the Utility, the "Service Line" for sewer service is the service line from the property line cleanout to the house, and the "Delivery Line" for sewer service is the sewer line from the main to the property line cleanout. The property line cleanout is installed by the customer and approved by the Utility. The property line cleanout and delivery line are owned by the Utility. The service line is installed and owned by the customer.

S-2.04 REQUIREMENTS OF SERVICE CONNECTION

A. All sewer service connections shall be installed in accordance with Los Alamos Code of Ordinances, Section 40, Article IV Sewer Use, and the Uniform Plumbing Code, latest edition.

B. The customer shall submit an application for service together with the required payment prior to any connection in accordance with GR- 6, Application for Service.

C. The customer shall pay the associated connection fees for the installation.

D. The customer shall call for location of underground Utility before excavation in accordance with GR-24, Utility Line Locates.

E. Sewer service and trenching must be inspected and approved in its entirety by Utility Engineering prior to backfilling the trench. Customer shall be required to re-excavate the service if backfilled prior to Utility inspection and approval. Utility may disconnect water until the re-excavation takes place.

F. The connection into the sewer main shall be installed by the Utility.

G. The customer may be required to install a flow meter, lift station or other apparatus if deemed necessary by the Utility after the service request is assessed.

H. New service installations require a cleanout to the main at the property line. Additionally if any portion of the residence drain-waste-vent system is below the level of the upstream manhole on the sewer main a backwater valve or similar device is required.

Upon connection to the Utility, on-site wastewater treatment/disposal systems shall be rendered incapable of future use in compliance with applicable local, state and federal regulations and LAC 40-243, Private sewage disposal. Exception- Gray water holding and irrigation systems are

expressly allowed.

S-2.05 NUMBER OF SERVICES

A. Customers occupying separate premises or quarters shall be supplied with individual service connections in accordance with this rule, except as provided in Rule GR-10, Service Connection and Connection to Utility.

B. In general, one sewer service line is allowed for each dwelling. Multiple dwelling units (up to four units) require separate service lines.

C. A main extension with manholes of appropriate size is required for properties with more than four (4) dwelling units.

D. Customer may apply for separate services to accommodate future lot splits. Additional costs for separate services shall be recovered by the Utility from the Customer.

S-2.05 COMMERCIAL SEWER SERVICES

A. Commercial sewer service lines six inches in diameter or greater shall terminate in a main line manhole at Customer sole expense.

B. Traps and interceptors as required by the Utility shall be installed per Uniform Plumbing Code, latest edition at customer sole expense.

RULES AND REGULATIONS
SEWER (S)
RULE S-3
RESPONSIBILITY FOR SEWER FACILITIES

S-3.01 GENERAL

Rule provides the Utility and Customer responsibility for sewer equipment.

S-3.02 UTILITY RESPONSIBILITY

A. The Utility shall be responsible for the installation, repair, maintenance and replacement of sewer mains.

B. Upon a customer's request, the Utility shall provide maintenance and cleaning services of a customer's ~~service~~delivery line from the property line cleanout to the main at no charge to the customer, if an accepted property line clean-out exists at the time of the request.

C. All sewer main taps will be performed by the Utility and charged to the customer.

S-3.03 CUSTOMER RESPONSIBILITY

A. The Customer shall be responsible for:

1) The installation, repair, replacement and maintenance of the service line and connection to the sewer main stub out at the property line.
2) Installation of the service line to the main if no stub out exists.

B. Service lines from the property line to the main if there is no property clean out. Service line taps of this type needing replacement or repair will be replaced by the Utility and charged to the customer. If there is a property line clean out the Utility is responsible for the tap and the line between the tap and the property line clean out.

If a customer elects to install a property line cleanout in an existing service line, the Utility GWS (Gas Water and Sewer) management must inspect the tap and stub out and provide a written acceptance of those components prior to taking over responsibility for them.

C. The customer is responsible for cleaning out service lines to the sewer main except as provided in Section S-3-02.B above.

B. For existing service where the owner requests the utility to maintain the service line between the property line and the main the utility will install the property line cleanout plus a back water valve if required at customer expense.

RULES AND REGULATIONS
TABLE OF CONTENTS

Preface

General Rules (GR)
GR-1 Jurisdiction
GR-2 Update Procedures
GR-3 Definitions
GR-4 Protection of Utility Systems
GR-5 Mandatory Connections
GR-6 Application for Service
GR-7 Liability and Interruption of Service
GR-8 Right to Access Customer Property
GR-9 Temporary Services
GR-10 Service Connections and Connection to Utility
GR-11 Unauthorized Connections
GR-12 Responsibility for Equipment
GR-13 Disconnection and Reconnection of Service
GR-14 Rates and Fees
GR-15 Deposits
GR-16 Advanced Metering Infrastructure
GR-17 Presentation and Payment of Bills
GR-18 Utilities Assistance Program (UAP)
GR-19 Estimated Bills
GR-20 Disputed Bills
GR-21 Meter Tests and Adjustments of Bills for Meter Error
GR-22 Utility Extensions
GR-23 Limitation and Restrictions of Use
GR-24 Utility Line Locates
GR-25 Inspection
GR-26 Rights-of-Way and Utility Easements

Electric (E) Red Tab
E-1 Description of Service
E-2 Service Connections – Electric
E-3 Meter Requirements – Electric
E-4 Responsibility for Electric Equipment
E-5 Interconnection – Connection with Cogeneration and Small Power Producers

Gas (G) Yellow Tab
G-1 Description of Service
G-2 Service Connections – Gas
G-3 Meter Requirements – Gas
G-4 Responsibility for Gas Equipment

Water (W) Blue Tab
W-1 Description of Service
W-2 Service Connections – Water
W-3 Meter Requirements – Water
W-4 Responsibility for Water Equipment
W-5 Fire Hydrants
W-6 Backflow Prevention and Cross Connections
W-7 Private Water Wells
W-8 Water Conservation

Sewer (S) Green Tab

S-1 Description of Service
S-2 Service Connections – Sewer
S-3 Responsibility for Sewer Facilities
S-4 Sewer Interceptors (Traps)
S-5 Private Sewage Disposal
~~S-6 General Discharge Prohibitions~~
~~S-7 Water Reuse~~
~~S-8 Back Water Valves~~

Subdivision (SD) Brown Tab

SD-1 Subdivision & Site Plan Development Process

Fee Schedule (FS)

Administrative Fees
Deposits
Service Fees
Meter Tests Fees
Construction Fees
North Mesa Connection Fee
Subdivision/Commercial Inspection Fees

Appendix 1

Standard Interconnection Agreement For Qualifying Facilities 10 kW Or Less

County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	6.A
Index (Council Goals):	DPU FY2021 - N/A
Presenters:	Board of Public Utilities
Legislative File:	**13457-20**

Title

Approval of Board of Public Utilities Meeting Minutes

Recommended Action

I move that the Board of Public Utilities approve the meeting minutes of September 16th, 2020 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. Cornell Wright - 6.C. "He further move..." was changed to "He further moved..."
2. Cornell Wright - 7.B. "I further move..." was changed to "He further moved..."

Attachments

A - Draft BPU Regular Session Minutes - September 16th, 2020

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

County of Los Alamos

Minutes

Board of Public Utilities

1000 Central Avenue
Los Alamos, NM 87544

LOS ALAMOS

Carrie Walker, Chair; Stephen McLin, Vice-chair; Eric Stromberg, Steve Tobin and Cornell Wright Members
Philo Shelton, Ex Officio Member
Harry Burgess, Ex Officio Member
Randall Ryti, Council Liaison

Wednesday, September 16, 2020 **5:30 PM** **Due to COVID-19 concerns, meeting will be conducted remotely. Public can view proceedings at http://losalamos.legistar.com/calendar.aspx or attend via Zoom.**

REGULAR SESSION - REMOTE ZOOM MEETING

1. CALL TO ORDER

The regular meeting of the Incorporated County of Los Alamos Board of Public Utilities was held on Wednesday, September 16th, 2020 at 5:30 p.m. In the absence of the Board Chair, the Vice-chair, Steve McLin called the meeting to order at 5:35 p.m.

The meeting was held remotely and BPU members, staff and the public participated through an online video conferencing platform. This social distancing was to comply with the recommendations of the Centers for Disease Control (CDC) to prevent the spread of COVID-19. Members of the public were able to live-stream the meeting online and submit public comment during the meeting.

Present 5 - **Vice Chair McLin, Board Member Stromberg, Board Member Tobin, Board Member Wright and Board Member Shelton**

Absent 2 - **Chair Walker and Board Member Burgess**

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

****

Mr. McLin moved that the Board of Public Utilities approve the following statement for inclusion in the minutes: The matters discussed in the closed session held on September 16th, 2020 at 5:00 p.m. were limited only to those topics specified in the notice of the closed session, and no action was taken on any matter in that closed session. The motion passed by the following vote:
****

Yes: 4 - **Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright**

Absent: 1 - **Chair Walker**

2. PUBLIC COMMENT

Mr. McLin 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.

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

3. APPROVAL OF AGENDA

Mr. McLin asked that item 6.B be moved to Business and Mr. Wright asked that item 6.C. be moved to Business.

****

Mr. Wright moved that the agenda be approved. The motion passed by the following vote:

****

Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

Absent: 1 - Chair Walker

4. BOARD BUSINESS

4.A. Chair's Report

Mr. McLin reported on the following items:

1) Mr. McLin addressed a public comment that was made at the August regular meeting. The person said that the Board never seemed to respond to public comment. Mr. McLin has always felt the same and a little confused, but he understood that the reason the Board does not normally engage individuals during public comment is so that members don't enter into a confrontational debate with the public at that time. This can make it seem like the Board is ignoring those individuals who make comments. Assistant County Attorney, Mr. Kevin Powers, added that the practice also helps to ensure that the Board does not violate the Open Meetings Act by discussing items that have not been properly published and that the purpose of public comment is intended to be a way for the Board to gain additional information to make more informed decisions.

As a follow-up, Mr. McLin suggested that this practice be discussed more during review of the Board's Procedural Manual or during the Board's annual self-evaluation.

4.B. Board Member Reports

Board members had nothing to report.

4.C. Utilities Manager's Report

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

4.C.1 13349-20 Department of Public Utilities Quarterly Report

Presenters: Philo Shelton

The Board requested that the quarterly report be presented each quarter. The report was given to the Board in the agenda packet but was not discussed.

4.D. County Manager's Report

Mr. Lynne reported on the following items:

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

1) This past Friday, the County opened a grant application period for coronavirus relief funds. This is federal money given to the State. The County applied and received the award. The two programs open for applications are for small business continuity and individual assistance. In both of those programs, there are opportunities for businesses or individuals to receive grant money to help pay for utility costs. This could help with delinquent utility accounts that have been accumulating during this period. The application period is open for two weeks, then they will go through an evaluation period.

Mr. Tobin asked how small business owners could learn that this program exists. Mr. Lynne discussed the publication efforts, including press releases, meetings for small businesses and individuals, posting on the website and other combinations of outreach.

Mr. McLin asked if it was appropriate for the Utilities Department to contact those with delinquent accounts to inform them of the program. Mr. Shelton explained that staff was already planning to e-mail information about the meetings to both commercial and residential customers with past due accounts.

4.E. Council Liaison's Report

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

Mr. McLin suggested that staff contact representatives from Los Alamos National Laboratory to schedule an update on Mortendad Canyon hexavalent chromium plume remediation efforts. Mr. Ryti explained that Council has also asked representatives from N3B to provide an update to Council as well.

4.F. Environmental Sustainability Board Liaison's Report

Ms. Hiedi Rogers had nothing to report. The ESB will meet on September 17th and a report will be given in October.

4.G. General Board Business

There was no General Board Business.

4.H. Approval of Board Expenses

There were no Board expenses.

4.I. Preview of Upcoming Agenda Items

4.I.1 13356-20 Tickler File for the Next 3 Months

Presenters: Board of Public Utilities

There were no new items added to the tickler provided in the agenda packet; although, Mr. Wright pointed out that a special Board meeting had already been scheduled for October 9th.

5. PUBLIC HEARING(S)

There were no public hearings.

6. CONSENT AGENDA

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

****

Mr. Wright moved 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. The motion passed by the following vote:

****

Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

Absent: 1 - Chair Walker

6.A 13347-20

Approval of Board of Public Utilities Meeting Minutes

Presenters: Department of Public Utilities

I move that the Board of Public Utilities approve the meeting minutes of August 19th, 2020 as presented.

6.D AGR0707-20

Approval of Task Order No. 03 Under Services Agreement No. AGR17-914 with Alpha Southwest in the Amount of $92,418.62, Plus Applicable Gross Receipts Tax, For the Purpose of Inspection, Repair, and Ancillary Services on County Well Guaje Well 3A.

Presenters: Jack Richardson

I move that the Board of Public Utilities approve Task Order No. 3 under Services Agreement No. AGR17-914 with Alpha Southwest, Inc. in the amount of $92,418.62, plus applicable gross receipts tax, for the purpose of Inspection, Repair, and Ancillary Services on County Well Guaje Well 3A.

6.E AGR0709-20

Approval of Task Order No. 2 Under Services Agreement No. AGR20-48a with Bohannan Huston in the amount of $78,804.00, plus Applicable Gross Receipts Tax, for the Purpose of Preparation of a Risk and Resilience Assessment and an Emergency Response Plan of the Los Alamos Water System as required by the America's Water Infrastructure Act (AWIA) of 2018

Presenters: James Alarid

I move that the Board of Public Utilities approve Task Order No. 2 Under Services Agreement No. AGR20-48a with Bohannan Huston in the amount of $78,804.00, and a contingency in the amount of $20,000.00, for a total of $98,804.00, plus Applicable Gross Receipts Tax, for the Purpose of Preparation of a Risk and Resilience Assessment and an Emergency Response Plan.

6.F RE0444-20

Incorporated County of Los Alamos Resolution No. 20-15; A Resolution Authorizing the County Council Chair or Los Alamos County Utilities Manager to Approve Submission of Completed Applications and Necessary Documents for 2021 Applications to the Water Trust Board for Funding Non-Potable Water System Projects

Presenters: James Alarid

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

I move that the Board of Public Utilities approve Resolution 20-15; A Resolution Authorizing the County Council Chair or Los Alamos County Utilities Manager to Approve Submission of Completed Applications and Necessary Documents for 2021 Applications to the Water Trust Board for Funding Non-Potable Water System Projects, and forward to Council for approval.

7. BUSINESS

7.A 13125-20

Approval of AGR21-924 Water Services for the Los Alamos National Laboratory National Nuclear Security Administration (NNSA) - 89233119CNA000145

Presenters: Philo Shelton

Mr. Shelton presented this item. The following is the substance of the item being considered.

The current Water Services Agreement to Los Alamos National Laboratory (LANL) is a 1-year bridge agreement that expires on September 30, 2020. DPU has negotiated and received approval with LANL-NNSA on a water rights agreement that is also for a ten-year term, starting with the beginning of the State's water year on October 1, 2020, with the goal to bring both of these agreements in alignment to have the same contract periods and renewal dates so one does not expire before the other. The total estimated contract price is for $15 million over a ten-year term, which is $1 million above LANL's ten-year water usage and costs forecast to allow for a contingency. This agreement also includes provisions to add the Camp May Waterline Project, allow for emergency waterline repairs, and a provision to sell non-potable water services should LANL request this service.

The Board discussed this item and requested clarification where necessary.

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Mr. Tobin moved that the Board of Public Utilities approve AGR21-924 Water Services to Los Alamos National Laboratory NNSA (Contract No. 89233119CNA000145) and authorize the Utilities Manager and County Attorney's Office to negotiate and incorporate additional final edits requested by NNSA for Utilities Manager's signature. He further moved that the final version be forward to Council for approval. The motion passed by the following vote:

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Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

Absent: 1 - Chair Walker

7.B 13290-20

Approval of Recommendations from the Utilicast Energy Imbalance Market Gap Assessment Report Including Addition of One-Regular Full Time Equivalent and Approval of Budget Revision 2021-14

Presenters: Steve Cummins

Deputy Utility Manager of Power Supply Mr. Steve Cummins and the Power Systems Supervisor, Mr. Jordan Garcia, presented this item. The following is the substance of the item being considered.

The Los Alamos County Department of Public Utilities (LAC) and Los Alamos National Laboratory (LANL) are directly affected by the Public Service Company of New Mexico

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

(PNM) joining the California Independent System Operators (CAISO) Energy Imbalance Market (EIM) as a result of the loads falling in PNM's Balancing Area. LAC contracted with Utilicast to perform a gap assessment, which compares the current state of LAC's resources, processes and technology with what would be necessary to operate in the EIM. This information was presented to the Board at their August 19th meeting. On September 8th, this information, along with alternatives, was presented to operating committee members for the Electric Coordination Agreement to decide the best course of action with regards to joining the EIM. The Operating Committee approved the recommendation as presented as a pool expense. These additional resources will be shared by the Power Pool, Sandia National Laboratory and Kirtland Airforce Base through the existing Scheduling Agent Services Agreement. The LAC share is an additional $32,637 for fiscal year 2021. The budget revision is to support the addition of one Full Time Employee, purchase software to manage the EIM transactions and a one-time cost for consulting service to help with the transition to the EIM.

The Board discussed this item and requested clarification where necessary.

The following actions were identified for follow-up:

1) Mr. McLin asked if there were any American Public Power Association webinars available on this topic. Mr. Cummins and Mr. Garcia will look into it and will also share some additional information recently obtained from the Utah Associated Municipal Power Association regarding this topic.

2) Mr. Stromberg asked if this topic could be revisited in a few months to get more details on how things are progressing.

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Mr. Wright moved that the Board of Public Utilities approve the recommendations from the Energy Imbalance Market Gap Assessment Report. He further moved to add 1 Regular FTE to the Utilities Department and that the Board approve Budget Revision 2021-14. He further moved that the budget revision be included in the minutes as an attachment and forwarded to Council for approval. The motion passed by the following vote:

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Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

Absent: 1 - Chair Walker

7.C 13350-20

Approval of DOE/LAC Resource Pool Budget Adjustment for Fiscal Year 2021/2022 Due to Energy Imbalance Market (EIM) Recommendations for Implementation

Presenters: Steve Cummins

Mr. Garcia presented this item. The following is the substance of the item being considered.

The purpose of this FY2021 $239,550.00 budget revision and FY2022 $121,500.00 budget revision is to increase the expenditure budget for Electric Production for EIM Implementation as described in agenda item 7.B. The budget adjustment reflects the recommendations from Utilicast for an additional FTE to support operations, an expansion of LAC's Software Support contract and the implementation of a consulting contract. On

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

September 8th, the Power Pool agreed with the recommendations from Utilicast and the associated budget revision.

The Board discussed this item and requested clarification where necessary.

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Mr. Wright moved that the Board of Public Utilities approve the 2021-2022 Resource Pool budget adjustment as presented and forward to the County Council with a recommendation for approval. The motion passed by the following vote:

****

Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

Absent: 1 - Chair Walker

7.D 13292-20 Presentation on Financing Water and Sewer Infrastructure Projects with State Revolving Loans

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 time is approaching where staff begins to plan for upcoming budget preparation. The water production fund and the wastewater fund present a challenge when balancing replacement needs while meeting financial plan goals. Funding two new wastewater plants has been the biggest challenge that has faced the wastewater fund. Although the Department has successfully formulated a path forward to fund the plants, it has come at the expense of deferring collection system capital improvements. As planning begins for the FY 2022 annual budget, the Department is faced with a new $2,000,000 capital need in the water production fund to replace motor control centers (MCC) in wells and booster stations. In addition, plans to drill a new well in two years are anticipated to cost $4,500,000. Funding these projects with cash reserves negatively impacts the Department's financial plan goals. Considering loans that have entered a historically low interest rate environment is a tool to consider in meeting DPU's financial objectives within the established rates while achieving capital renewal and replacement projects. The New Mexico Environment Department Clean Water State Revolving Loan (CWSRL) Program and the Drinking Water State Revolving Loan (DWSRL) Program both offer below market interest rates, minimal fees and variable terms to public utilities within the state of New Mexico. Staff has evaluated various funding scenarios to complete upcoming capital needs and proposes to finance capital improvement projects through three loans. If authorization to pursue loans is not approved, projects will be prioritized and deferred as necessary.

The Board discussed this item and requested clarification where necessary.

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Mr. Wright moved that the Board of Public Utilities authorize staff to apply for loans from the CWSRL and DWSRL programs to fund Water Production and Wastewater Capital Improvement Projects as presented. The motion passed by the following vote:

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Yes: 4 - Vice Chair McLin, Board Member Stromberg, Board Member Tobin and Board Member Wright

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

Absent: 1 - **Chair Walker**

ITEM 6.B. WAS MOVED FROM CONSENT TO BUSINESS

6.B 13284-20 Approval of Agreement Between The Incorporated County of Los Alamos and The International Brotherhood of Electrical Workers (IBEW) Local 611, for the period of October 1, 2020 through September 30, 2024.

Presenters: Denise Cassel and Philo Shelton

Human Resources Director Ms. Denise Cassel presented this item. The following is the substance of the item being considered.

The County and IBEW met through electronic meetings in order to negotiate a new contract. Several of the updates to the contract were minor edits regarding clarification and the inclusion of the Water System Electrical Technicians under the contract. Ms. Cassel outlined the more significant changes, also presented in the staff report. The IBEW members ratified the agreement prior to this meeting.

The Board discussed this item and requested clarification where necessary.

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Mr. Stromberg moved that the Board of Public Utilities recommend to County Council that County Council approve the Agreement Between the Incorporated County of Los Alamos and The International Brotherhood of Electrical Workers (IBEW) Local 611, for the period of October 1, 2020 through September 30, 2024. The motion passed by the following vote:

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Yes: 3 - **Board Member Stromberg, Board Member Tobin and Board Member Wright**

Abstain: 1 - **Vice Chair McLin**

Absent: 1 - **Chair Walker**

ITEM 6.C. WAS MOVED FROM CONSENT TO BUSINESS

6.C AGR0687-20 Approval of the Amendment to the Software as a Service/Spectrum and Technical Support Agreement with Sensus USA, Inc., and Amendment No. 1 to Services Agreement No. AGR19-912 with Ferguson, Inc. in the amount of $108,099.02, plus applicable gross receipts tax, for the Purpose of Implementing an Advanced Metering Infrastructure Customer Portal

Presenters: James Alarid

Mr. Alarid presented this item. The following is the substance of the item being considered.

The purpose of this amendment is for the development, installation and on-going maintenance of a customer portal for County utility users for ten years. The customer portal will allow County utility customers the ability to access their data recorded by the Sensus Advanced Metering Infrastructure (AMI) for the purpose of viewing their utility consumption, setting up customized alerts, paying bills and providing an additional communication channel to the Department of Public Utilities(DPU). The DPU will have the

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

ability to include customizable administrative utility features and alerts, which will allow DPU staff to add custom content, such as conservation tips, leak detection and outage management/notification. The DPU will use the availability of the near real-time consumption to create new conservation measures, which can now be individualized to each customer. The costs will be funded by approved contingency for the AMI project.

The Board discussed this item and requested clarification where necessary.

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Mr. Wright moved that the Board of Public Utilities approve the Amendment to the Software as a Service/Spectrum and Technical Support Agreement with Sensus USA, Inc., which is Attachment D to AGR19-912 with Ferguson, Inc., for the purpose of implementing an Advanced Metering Infrastructure (AMI) Customer Portal, funding for which is payable through the Ferguson agreement. He further moved that the Board approve Amendment No. 1 to Services Agreement No. AGR19-912 with Ferguson, Inc. in the amount of $108,099.02, plus applicable gross receipts tax for the AMI Customer Portal. He further moved that the Board authorize the Utilities Manager to sign both amendments and that the amendments be forwarded to Council for approval. The motion passed by the following vote:

****

Yes: 3 - **Board Member Stromberg, Board Member Tobin and Board Member Wright**

No: 1 - **Vice Chair McLin**

Absent: 1 - **Chair Walker**

8. STATUS REPORTS

8.A 13353-20 Status Reports

Presenters: Board of Public Utilities

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

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

The following actions were identified for follow-up:

1) Mr. Wright noted that on the Accounts Receivables Report the amount and number of accounts on one row appeared to be transposed. Mr. Shelton will check into it with staff.

2) Mr. Wright asked for clarification on why the 120-day past due numbers on the Accounts Receivables Report seems to be increasing more than is warranted and questioned why those would not have been reflected on the previous month's report. Mr. Shelton will check into it with staff and will report back to the Board next month.

9. PUBLIC COMMENT

Mr. McLin opened the floor for public comment on any items. There were no comments.

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

10. ADJOURNMENT

The meeting adjourned at 8:02 p.m.

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APPROVAL

_____

Board of Public Utilities Chair Name

_____

Board of Public Utilities Chair Signature

_____

Date Approved by the Board

ATTACHMENT
OFFICER REPORTS
SUBMITTED AT THE MEETING

Utility Manager's Report
September 16, 2020

1. Over the Labor Day weekend, Leo Ortiz, a lineman with the electric distribution team, passed away. I would like to remember him and pass along my condolences to his family. DPU purchased a tree in his name as part of his memorial. Several staff members took advantage of grief counselling through this difficult time.

2. The IBEW have agreed to a four-year contract beginning October 1, 2020 and this contract is on tonight's agenda for BPU's consideration. I would like to thank both Denise Cassel, Valerie Park with Human Resources, and Jack Richardson, Stephan Marez, and Heather Garcia with DPU staff who were part of these negotiations and Katie Thwaits for her legal support in getting this contract completed.

3. Attended weekly meetings with UAMPS on the Carbon Free Power Project (CFPP) regarding subscription and development costs for first phase of the licensing period. Today the Project Management Committee (PMC) has extended the deadline again until October 31, 2020 for this amended budget and plan of finance and added an additional withdrawal and reduction period (Off-Ramp) at the Class III cost estimate due in January 2022. This allows additional time for the anticipated $1.4 billion multiyear grant award by DOE to be announced. While this additional off-ramp does not change the overall UAMPS budget need for this first phase of $19.9 million for the project, it allows another withdrawal and reduction period once the project is two thirds along within this first phase of development and reduces some risk to the participants. The new resolutions are under review by legal to determine if these resolutions need to be brought back to BPU and Council for reconsideration.

4. The exact cause of the Guaje Well No. 3A breakdown last month could not be determined by Alpha Southwest. However, their opinion was it was not caused by lack of maintenance since it appears that the shaft had adequate oil lubrication. The catastrophic failure occurred at the water lubricated bearings located at the bottom of the pump at 560 feet below the surface, and subsequently this bearing failure caused the failure of the impellers. Lessons learned: since this 20-year old pump was refurbished 18 months ago with the hope of getting additional life out of this pump, this may not have been the best approach. Going forward given the age of a pump, staff will recommend in the future a new pump assembly since removing and replacing the pump is most of the costs versus the actual pump assembly costs.

5. Staff met with Public Works Staff to advance a joint project to replace water line and road on 33rd to 34th at Villa. Public Works is finalizing budget numbers and a supplemental budget adjustment will be requested for this project. This segment of road has experienced numerous waterline breaks and is at the end of its useful life.

6. Staff continues to work with NMED and Laboratory to cleanup an area of the soil containing the oil of approximately 1.2 cubic yards of soil located next to Otowi Well #4 at DP Los Alamos Canyons confluence. Staff held meetings with LANL and NMED and Staff is taking additional samples in confirming the limits of the cleanup for finalizing a flood plain permit application.

7. Held a special ECA meting to receive approval for the budget adjustment and hiring an additional staff member to handle the participation in Energy Imbalance Market. This budget adjustment will be shared 40% with Sandia and 60% with the ECA and Los Alamos share within the ECA is about 20% of this 60% share. After start-up costs, the on-going costs are mostly related to this additional staff person.

8. Attended another LANL Cleanup Technical Working Group meeting and covered the status of the MDA3 waste site. The soil vapor extraction remedy is several years away from being implemented.

9. Allied 360 has made great progress in getting the replacement lift station installed and has another month of work to complete this project. Next Month, Bethel Development plans to tie into this project to serve the Canyon Walk Apartments. This project is funded by the economic development fund. After the project is completed, staff will seek reimbursement from DOE or from the County's insurance policy for these additional costs.

10. The Water Sales Agreement with NNSA is in draft final form and one addition was made today by NNSA because they are not able to pull together a separate agreement for gas service for the HRL building. They asked to include one year of gas service under this contract.

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

Council Liaison Report, Randall Ryti Vice Chair

September 16, 2020

August 25, 2020 Regular Meeting

Closed session on threatened or pending litigation

Consent items included: approval of budget and designation for MainStreet services in White Rock, approval of removing uncollectable utility account, approval of the water rights agreement with DOE/NNSA, appointments to the Labor Management Relations Board, and established a panel to review the request to rename a field at Overlook Park in honor of Hope Jaramillo.

Main business item was the amendment to the CFPP agreement. After a long discussion Council approved funding up to $1.26m to remain in the project. We look forward to the project being successful and providing electric power to the County in 2030.

Another business item was approval of $476k for LAPS to support their operations during COVID-19 – remote learning software and outdoor shade structures.

September 8, 2020 Regular Meeting

Proclamation for the re-scheduled Clean up Los Alamos Day (Sep 12th)

Consent agenda items included: awarded a contract for the golf course building patio and HVAC improvements, approved a VoIP services contract, State approval of County FY21 budget, adoption of property tax rates, appointments of the Historic Preservation Advisory Board, and added a new Custodian trainee position.

Took action to recognize the racial equity citizen petition by condemning police killings of George Floyd, Breonna Taylor, and numerous others and asked staff to bring to Council specific options to address racial equity locally.

Council approved the Infrastructure and Capital Improvement Plan so that it can be shared with the State for possible funding. We also appointed members to the Tourism Implementation Task Force to serve through September 2022.

Council heard the appeal of the Board of Appeals decision in the matter of Sirphey versus Michael Areliano Chief Building Official. Council voted to sustain the decision of the Board of Appeals.

Other Relevant Meetings

Technical Work Group – September 2nd returned to the discussion about Material Disposal Area (MDA) C with a focus on the solvent plume trends, interim action to address this plume was discussed (other topics are the Chromium and RDX contaminant groundwater plumes)

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

Downtown plans – visioning workshops Aug 19th and 20th, design workshops Sep 25th (Los Alamos) and Oct 5th (White Rock), web site https://losalamosconnect.org/

Potential Development and Land Use

North Mesa Housing Feasibility Study (Los Alamos Public Schools property), report is final, nine other projects are in various phases of planning or development.

DP Road parcels transferred from DOE and available for development. A-8-A and A-16-A. Seven other commercial properties are in various phases of planning or development.

See Figure 8 on page 39 in the "Los Alamos County Housing Market Needs Analysis, 2019" for maps showing LAC and LAPS owned land to consider for housing. Map does not show those lands with existing uses.

Los Alamos Canyon may be available for recreational use based on a "special use" permit.

LOS ALAMOS

BOARD OF PUBLIC UTILITIES
ADDITIONAL MEETING DOCUMENTS

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

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

MEETING DATE	09/16/2020
AGENDA ITEM	7.A. Approval of AGR21-924 Water Services for the Los Alamos National Laboratory National Nuclear Security Administration (NNSA) - 89233119CNA000145
DOCUMENT TITLE(S)	A – Water Services Agreement – Attachment 1
FROM	Philo Shelton
NEW OR REVISED? Is this a revision that is different from what was in the agenda packet, or is it something entirely new?	Revised
RECOMMENDED ACTION If you have a new or revised recommended motion for the Board, enter it here.	**N/A**
ADDITIONAL INFORMATION Please VERY BRIEFLY explain the purpose of this information or document.	Some changes were made to this attachment of the agreement. Mr. Shelton will discuss them during the meeting

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

ATTACHMENT 1
DE-NA000145
Statement of Work
Water Services for the Los Alamos National Laboratory
National Nuclear Security Administration (NNSA)
Dated April 7, 2020

1.0 INTRODUCTION/BACKGROUND

In 2000, the Department of Energy/National Nuclear Security Administration (DOE/NNSA or the Government) transferred the Los Alamos Water Production System (LAWPS) to the Incorporated County of Los Alamos (the County) under the Comprehensive Agreement DE-RE32-98AL79408. The transfer included waterlines, water tanks, electrical lines, valves and other associated equipment located around the Los Alamos National Laboratory (LANL) and within the Los Alamos County Townsite. Easements were granted under the Comprehensive Agreement to the County for the waterlines and associated equipment that remains on the DOE/NNSA property.

There are areas of the LAWPS that go through Potential Release Sites (PRS). Under the Comprehensive Agreement, the DOE/NNSA agreed to continue to operate the water system through the PRS until the Government completes remediation of the PRS. Once they complete the remediation of the PRS site then the Government will convey that portion of the waterline to the County. The waterlines that are within the DOE/NNSA property supply potable water to the LANL. Attachment 10 of the contract provides a map of the PRS (also referred to as SWMUs or AOCs) easements for the exception. The PRS exceptions are covered under Amendment 2 of the Comprehensive Agreement DE-RE32-98AL79408.

The DOE/NNSA also transferred 70% (3878.91 acre-ft.) of its water rights and leased the remaining 30% (1,662.39 acre-ft.) of the water rights to the County. The total amount of water rights are 5541.3 acre-ft per year. A new water rights lease (M20NA70285) for the 30% will be signed in conjunction with this water supply contract so it runs concurrently.

The DOE/NNSA also has a need in the future for non-potable water to supply the cooling towers for the supercomputing centers located within the main LANL Technical Area-3. The cooling towers for the SCC receives water from the onsite SERF facility. The LDCC cooling towers receives potable water which has high silica in the water and this causes maintenance issues with the cooling system.

The DOE/NNSA is seeking a contract for potable and non-potable water services.

2.0 OBJECTIVE

To provide the DOE/NNSA potable and non-potable water service for the LANL.

3.0 SCOPE

The Government is contemplating the award of a 10-year contract for the purpose of obtaining potable and non-potable water service and other utility services.

The Government plans to install the necessary infrastructure to obtain non-potable water services to the LANL in the future. The Government will work with the County once these services are needed. The contract and statement of work will be modified when this occurs. A new real property agreement will also be required.

4.0 TECHNICAL REQUIREMENTS

The County shall abide by the terms and condition outlined the contract.

The County shall invoice the Department of Energy Environmental Management Office (EM-LA) and its contractor for potable water used at Technical Area-21 using meters ii and iii identified in Section 5.0(b)(1) below. A courtesy copy of the bill will be attached to the DOE/NNSA invoice and stamped "information only".

For emergency repairs and excavations on the County facilities located within the Government premises, the County will follow the coordination procedure titled "Emergency Operations on County Facilities Requiring Excavation on DOE Land". The County's utility crew will be allowed to access the Pajarito Corridor within the Government premises using a Los Alamos County badge and vehicle for emergency repairs and excavation only. They will be denied access if they do not have a Los Alamos County badge. The County will be responsible for updating the procedure annually.

For non-emergency work or routine maintenance, repairs, removal, replacement, etc. on DOE/NNSA property, the County must obtain an excavation permit prior to execution of work. Issuance of an excavation permit takes at least two (2) weeks for review and approval.

The County shall furnish all labor, materials, tools, equipment, facilities, transportation, pumping energy and incidentals necessary to provide water supply service to the Points of Delivery. Water service means traditional utility service which includes supply, transmission, coordination, operation, maintenance, terminal storage, disinfection, and treatment.

The Los Alamos County Department of Public Utilities shall ensure the installation and maintenance of a gas meter in the Health Research Laboratory (HRL) at TA-43, located at the corner of Diamond Drive and West Road. The purpose of this meter is to monitor the supply of gas into the HRL heating system. The Utility Board will also secure the delivery of gas for the HRL at TA-43 for the period of one year, from 1 October 2020 through 30 September

2021, or sooner after a new gas delivery contract is established. The Los Alamos County shall submit invoices electronically through VIPERS in accordance with the billing instructions at DOE-G-2005.

5.0 RATES

(a) Procedures for establishing rates. Rates shall be established in accordance with the procedures in the Los Alamos County Charter and Ordinances.

(b) Camp May Waterline Project. The County will install a water conveyance system to serve Camp May facilities. A new 200,000 gallon water tank will be installed adjacent to Pajarito Tank 4. Water conveyed to Camp May will be metered and deducted from the LANL water bill monthly. Both parties agree to complete the necessary administrative requirements in support of the project.

(c) Bulk Delivery Rate

(1) Water delivered to the Government at the following Bulk Points of Delivery, net of any credit from the two return bulk flow meters (Numbers (iv) and (v) from the list below), shall be charged at the Bulk Rate adopted from time to time by ordinance

i. Pajarito Booster Pump Station No. 2 meter
ii. DP East Site meter (TA-21)
iii. DP West Site meter (TA-21)
iv. South Site Booster No. 1 two-way meter
v. Pajarito Booster Pump Station No. 1 two way meter
vi. Pajarito Well No. 3 Booster Pump Meter (TA-72)
vii. Otowi Well No. 4 Tank Meter (TA-53 backfeed)

(2) The Bulk Delivery Rate shall include the total projected costs of water production, transmission, storage in terminal storage reservoirs, disinfections or other treatment and booster pumping (regardless of location) and the associated operating and administrative costs, and shall consist of two components, a customer service charge and water consumption charge.

i. The customer service charge shall be the cost to the County by providing service to the each Bulk Delivery customer, and shall include the costs of billing, meter calibration and meter reading
ii. The water consumption charge shall be determined by multiplying the Bulk Delivery Rate adopted from time to time by ordinance by the volume of water delivered to the Government. It is understood that cost and usage projections will be used to set rates.

(3) For the purposes of setting the Bulk Delivery Rate, all disinfection and other treatment costs will be included whether the treatment occurs at LAWPS or distribution facility of the Government or County. Similarly, operation and maintenance costs of all booster pump stations in existence as of the date of execution of this contract, whether serving the LAWPS or Government or County distribution systems will be included, except the Government's fire system booster stations which are not operated as part of the LAWPS.

(4) Under the LAWPS Comprehensive Agreement, the Government agreed to continue to operate the water system through the Potential Release Sites (PRS) until the Government has completed remediation of the sites. Once remediation is complete then those site will be conveyed to the County. The County does not have the necessary training to work in a PRS site. If the LAWPS is within a PRS site and needs maintenance, repairs (emergency and non-emergency), replacement, removal, etc then the Government will be reimbursed per Section 52.241-5(f). Attachment 10 to be added at a later date.

(5) The Bulk Delivery Rate and flat monthly customer service charge are established under current Los Alamos County Ordinance is set forth in Attachment 6, which may be amended or superseded by subsequent ordinances. Section 52.241.7 provides the terms and conditions for changes in rates.

(d) Distribution Delivery Rates

(1) Water delivered to the Government at the Health Research Laboratory (6" meter) shall be charged at the County's Distribution Rates adopted from time to time by County Ordinance for equivalent classes of customers.

(2) The County Distribution flat monthly customer service charge (6" water meter size), are established under current Los Alamos County Ordinance are set forth in Attachment 6, which may be amended or superseded by subsequent ordinances. Section 52.241.7 provides the terms and conditions for changes in rates

(3) Deliveries to the County customers from Government's Distribution System. The Parties agree that service to non-DOE water customers which are supplied from the Government's Distribution System will be administered as County customers. The County agrees to bill these customers at the applicable County Distribution Rates. On payments made by these customers, the County will retain the service charges paid and credit the Government for the water consumption charges. The credit will serve as full compensation to Government for the use of Government's distribution system and reimburse the Government for the water delivery charges related to the customers.

(e) Non-potable rates will be added when the Government notifies the County they require non-potable water services.

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

6.0 ESTIMATED QUANTITY AND ESTIMATED TOTAL CONTRACT PRICE

Estimated quantity for 10 years (2020 forecast and pricing) Price is based on current County rate ordinance as identified in Attachment 6.

Contract Year	Bulk (Kgal)	Distri. (Kgal)	Total (Kgal)	Bulk ($)	Dist($)	Total ($)
FY21	293,469.87	840	294,309.87	$1,174,061.94	$12,368.64	$1,186,430.58
FY22	293,226.57	840	294,066.57	$1,220,371.81	$12,863.38	$1,233,235.20
FY23	288,960.73	840	289,800.73	$1,232,822.74	$13,184.97	$1,246,007.71
FY 24	286,454.49	840	287,294.49	$1,252,768.53	$13,514.59	$1,266,283.12
FY25	286,860.92	840	287,700.92	$1,285,895.37	$13,852.46	$1,299,747.82
FY26	293,797.13	840	294,637.13	$1,349,663.18	$14,198.77	$1,363,861.95
FY27	307,942.64	840	308,782.64	$1,449,502.71	$14,553.74	$1,464,056.44
FY28	311,534.19	840	312,374.19	$1,502,942.13	$14,917.58	$1,517,859.71
FY29	335,949.76	840	336,789.76	$1,660,378.36	$15,290.52	$1,675,668.88
FY30	336,007.25	840	336,847.25	$1,702,177.11	$15,672.78	$1,717,849.89

The annual water usage estimates do not obligate the Government to make any minimum level of purchases. The above estimated costs and total contract costs are provided solely for the purpose of projecting the Total Estimated Contract Price. The Government is not obligated to expend these amounts; nor is the County obligated to charge the rates implied in these amounts. The actual rate will be set by the then current ordinance, the revised rate will be effective as of the effective date of the ordinance, and will not require a modification to the Contract unless the revised rate increases the Total Estimated Price included here. The revised ordinances are attached as Attachments 3-R1. Any official updated estimates of future water requirements shall be furnished to the County when such estimates become available. Except as set forth in Section 6(b)(1), the Total Estimated Contract Price is provided solely to permit the Government to appropriate sufficient funds, and none of the estimates of usage, rates, charges or other estimates, shall be used for any other purposes.

A. Expansion of the LAWPS resulting from an increase in Government requirements.

a. The Government shall notify the County any time that a revised forecast of Government's distribution system requirements which could require substantial expansion of LAWPS. For the purpose of this contract, a "substantial expansion" is one which will cost more than $500,000 or once in which the Government estimates its future water requirements will increase by more than 50,000 kGallons/year above the estimated amounts.

b. The County shall evaluate the Government's forecast. If the County agrees that a substantial expansion is necessary, the Parties will modify the Contract or

DRAFT - These minutes have not yet been approved by the Board of Public Utilities.

execute a special contract commitment setting forth the terms and conditions for the expansion of the LAWPS, which will protect other County ratepayers from adverse economic consequences, if any, from such expansion. The modification or contract commitment will give appropriate recognition to past and projected growth of the County and the Government as well as declining production capabilities of existing wells, which may be contributing factor to the need for and sizing of new facilities.

c. The County may, in its sole discretion, waive in writing the requirements that the Parties modify the Contract or execute a special contract commitment.
d. Cost to the LAWPS because of a substantial expansion caused by a new customer of the LAWPS other than the Government shall not be included in the Bulk Delivery Rate, unless DOE/NNSA or Los Alamos National Laboratory benefits from such substantial expansion.

7.0 REQUEST FOR INFORMATION REGARDING POSSIBLE RATE CHANGES

For purposes of the Government's budget planning process, the Government may request, in writing, information from the County concerning any possible changes to applicable rates during the proposed budget year. The County shall respond to the Government's written request within 30 days. The County's response shall in no way bind the County to propose or adopt any changes in its rates.

County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	7.A
Index (Council Goals):	DPU FY2021 - 5.0 Achieve Environmental Sustainability; DPU FY2021 - 6.0 Develop and Strengthen Partnerships with Stakeholders
Presenters:	Philo Shelton, Utilities Manager
Legislative File:	**13462-20**

Title

Request for Support on a Grant Application by Mr. Richard Nebel, with Tibbar Plasma Technologies, Inc.

Recommended Action

I move that the Board of Public Utilities direct the Utilities Manger to write a letter of support for Tibbar Plasma Technologies, Inc. grant application prepared by Mr. Richard Nebel and if awarded the grant, support the preparation of an equipment lease for $1 per year for use of the two Nissan Leaf Batteries and equipment remaining from the Smart House as an in-kind support for this project.

Staff Recommendation

Staff recommends that the Board approve as presented.

Body

Mr. Richard Nebel approached Staff regarding his proposal for homeowners to utilize the energy stored in their electric car during peak electric periods and charge their car during off peak periods. Time of use rates that are proposed once AMI is implemented would incentivize the use of non-peak power and shed peak power load demands. This pilot project will demonstrate a new technology and the County can support the data collection and time of use rates though existing net metering and AMI infrastructure. This grant opportunity is through the State of New Mexico's Energy Transition Act Grant program. Mr. Nebel is requesting a letter of support that details our partnership as described above and in-kind support with the lease of the two Nissan Leaf Batteries and equipment remaining from the Smart House for $1/year to help test and demonstrate this new technology. The grant application is due October 31, 2020.

Alternatives

Do not support this grant application and local partnership.

Fiscal and Staff Impact

This pilot program may assist DPU in establishing and recommending a time of use rate structure. There will be some staff time collecting and analyzing the AMI data collected.

Attachments

A - Draft Grant Application
B - PowerPoint Presentation

ETAC RFI SUBMISSION FORM

Organization Name:

Tibbar Plasma Technologies, Inc.

Principal Contact:

Dr. Richard Nebel

Contact Phone/Email:

(505) 662-0867/r_nebel@hotmail.com

Submission Date:

10/??/2020

Description of Organization:

Tibbar Plasma Technologies, Inc. is a scientific research company based in Los Alamos, NM. We have experience with High Voltage DC electrical transmission, and in particular we have 5 patents for plasma-based electrical transformers.

Statement of Need Idea Addresses:

Both solar energy and wind energy have capacity factors of about 25%. Consequently, if these technologies are going to be extensively used they require energy storage. This is a major unsolved problem for renewable energy. We are proposing to solve this problem in a novel way using electric vehicles to provide this energy storage.

Qualifications and Credentials of Organization or Key Partners:

Dr. Richard Nebel has over 45 years experience as a research scientist with over 50 publications. He has worked on energy storage in the past, primarily tied to nuclear fission reactors. He holds 5 patents for plasma-based electrical transformers. He worked for 30 years at Los Alamos National Laboratory as a staff member and a group leader. He worked for three years as the President/CEO of EMC2 and has spent the past decade as President /CEO of Tibbar Plasma Technologies, Inc.

Dr. Nebel received his Bachelor's degree in General Engineering from the University of Illinois with highest honors in 1975. He received his Master's Degree in Nuclear Engineering from the University of Illinois in 1976. He received his Phd in Nuclear Engineering from the University of Illinois in 1980.

Keith Moser spent much of his career working for Exelon Corporation on nuclear reactors. He retired as the head of innovation for that corporation. He is very familiar with power generation and distribution. Mr. Moser has over 30 years experience designing, manufacturing, constructing and operating nuclear power plants. Mr. Moser developed and managed the Innovation Process at Exelon Nuclear. Since introducing the Innovation Process in 2006, Exelon Nuclear has developed over 170 innovations that represent 1080 person-rem of radiation exposure savings, over $796 million in cost savings and a record 32 Nuclear Energy Institute Top Industry Practice Awards. As a result of Exelon's Innovation Management results, Mr. Moser was awarded the American Nuclear Society Utility Leadership Award in August 2012.

Prior to this assignment, Mr. Moser was the Exelon Nuclear Corporate Asset Manager for Reactors and Reactor Internals. In this role he developed programs, processes and techniques for inspection, evaluation, mitigation, repair/replacements for original and uprated operations. As a result of his involvement with Asset Management Mr. Moser has either been the Team Lead or Team Member on 9 Nuclear Energy Institute Top Industry Practice Awards. In 2005, Mr. Moser was honored by the World Association of Nuclear Operators (WANO) as the recipient of the Nuclear Excellence Award for his innovative approaches in resolving equipment degradation problems in Budapest Hungary.

Before to joining Exelon, Mr. Moser was the Chief Inspector for Chicago Bridge and Iron Company (CB&I) and responsible for quality for nuclear, military, petrochemical, water treatment and other fabricated product lines. While at CB&I; Keith Moser held various other position of responsibility in Design, Manufacturing and Construction of Nuclear Power Plants and Nuclear Navy components. This provided invaluable experience in understanding, developing and performing Asset Management for heavy equipment that include steam generators, reactor/internals, pressurizers and turbine generators

Mr. Moser received his Bachelor of Engineering from LeTourneau University in 1980 and Masters of Business from Olivet University in 1990.

Greg Mechels has over 20 years experience in design/installation of renewable energy systems, high-voltage distribution systems, high-voltage distribution systems, industrial/commercial/residential electrical services.

Licensed New Mexico Journeyman Electrician, JE98
Licensed New Mexico Electrical Contractor, EE98
Founder and Owner:
Get Wired Electrical Services, NM#83773, est. 2000
Select Solar LLC, NM#373363, est. 2011

Buddy Laird is an automobiles mechanic with over 40 years experience. He has extensive experience with modifications of vehicles, which makes him well suited for this program. He owns and operates Preventech Automotive

Description of Proposal/Idea:

We are proposing a novel energy storage project in collaboration with Los Alamos County. This project was motivated by the observation that a large residential battery backup supply stores about 16kW-hrs of energy. In contrast, a Tesla automobile stores about 80 kW-hrs of energy. So, why not develop a standardized hookup that would allow customers to hookup their electric cars to the grid and sell power to a utility?

These proposed connections would require an electrical hookup on the automobile, an electric hookup on the house, a DC-AC invertor, a production meter (like the one presently used on solar systems) a switch and a metering device to limit the current so the battery stored power could be slowly transferred to the grid. Our goal is to develop a package like this that could eventually be bought and installed for less than $3000 per hookup. We are proposing a pilot program to see if this type of system can be successfully utilized on an existing grid, in particular the grid for the county of Los Alamos.

If New Mexico is to be a leader in renewable energy, we have to address the energy storage issue. Both solar and wind power have capacity factors of about 25%. Energy storage is a necessity if these renewable forms of energy are going to provide more than a small percentage of our electric power. The approach we are proposing has the potential to solve the energy storage problem.

When cell phones were first introduced, all they did was make phone calls. Now they serve as a tracking device, GPS, internet access device, etc. And they also can be used to make phone calls. Similarly, we are proposing that electric cars can be viewed as a portable energy storage device that also provides transportation.

If this pilot project is successful, it can provide a model for similar projects to be implemented around the state. This will provide opportunities for installers on both the electric automobiles and on homes and businesses. This will also require manufacturing some of the required electrical components. Although Los Alamos will be the test bed, the benefits will be distributed statewide. The manufacturing can be done in communities that have suffered from the loss of fossil fuel jobs.

What our company proposes to do is this:

1. Obtain a grant to finance the project.
2. Design and certify the components so they are acceptable on the grid (hopefully we can use off-the -shelf components that are already certified).
3. Test the concept using two Nissan Leaf kW-hr battery banks leased from Los Alamos County.
4. Procure and install the components for anyone in Los Alamos County requesting them free of charge.

For their part, the Los Alamos County Public Works Department will provide an incentive for people to use their electric vehicles in this matter. For instance, a nighttime rate that is higher than the daytime rate would encourage people to recharge their cars during the daytime and then use the power to power their homes during peak time periods that are monitored through the Automated Metering infrastructure net meter. They would save money on the rate difference which would be compensation for the wear and tear on the batteries in their electric vehicles while shaving peak loads for the County. This is a very opportune time to try this on the Los Alamos grid since by next Spring the county will have installed Smart meters throughout the county which will allow them to have time dependent rates.

The goal for this pilot project is to install these hookups on approximately 100 vehicles. We may also utilize existing batteries. That is how the bulk of the funding will be spent. This will provide us with enough data to determine if this approach is viable for energy storage. The questions we will seek to answer are:

1. How much incentive will be required to entice electric car owners to use their vehicles in this manner?
2. Can this be done with minimal battery lifetime degradation?
3. What is required to manage a grid with distributed energy storage devices?
4. What is the best way to extract energy from these batteries?
5. Is it cost effective?

There are significant advantages of this approach to both utilities such as the Los Alamos County Department of Public Utilities and the power consumer:

1. It can provide a large amount of energy storage which requires no investment in batteries by the utility.
2. No battery maintenance is required by the utility. This is provided by the consumer.
3. The technology would be updated free of charge (by the car owners) as the battery storage technology improves.

Los Alamos County is interested in working with us on this program. In fact, they will provide an in-kind contribution of some existing batteries at a lease rate of $1.00/year. Tibbar Plasma Technologies will provide an existing commercial 20 kW solar PV array. We are presently constructing a 10kW residential array which will also be made available. We will utilize these two solar arrays and the Nissan Leaf batteries to test the concept of charging the batteries with a solar array during the day and discharging them back into the grid at night. This should give us information as to how this technology interfaces with solar PV energy on a real grid.

The primary value of this project is not in the immediate employment of people, but rather the potential for growing a new type of business. This idea is a paradigm change, and it could flourish into a large business. The major goal of this program is to see if this approach is viable.

Costs:

Hookups in the automobile have been estimated to cost $1207 per automobile. The cost for the home installations is $2000.

Jobs created:

3

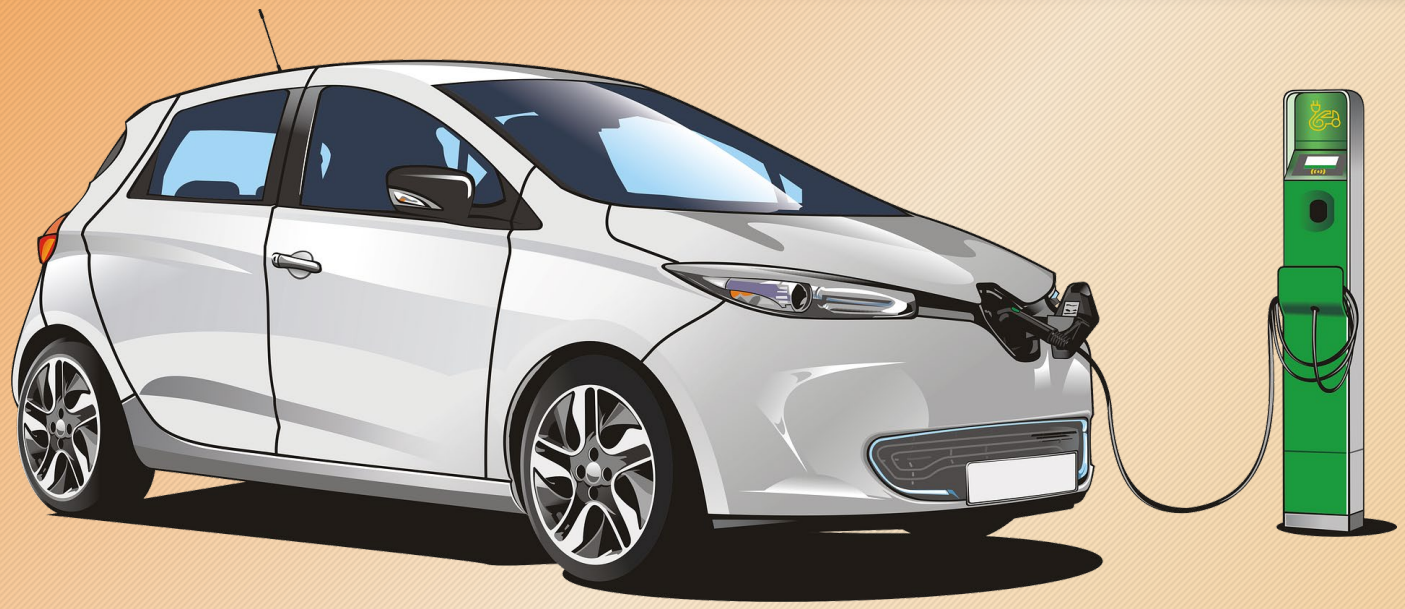
Wage Range:

$30.00/hour-$60.00/hour

Proposal to Los Alamos County by
Tibbar Plasma Technologies, Inc.
October 2020

Electric Vehicle to Grid

TIBBAR PLASMA technologies



Tibbar Plasma Technologies, Inc.

Team Members

Dr. Richard Nebel
President

Keith Moser
Tech to Market Coordinator

Buddy Laird
Preventech Automotive

Anthony Belletete
Certified Public Accountant

Wendi Dunn
Executive Assistant

Greg Mechels
Select Solar LLC

Pilot Study of 100 Electric Vehicles

- Solar energy and wind energy have capacity factors of about 25%, requiring energy storage.
- We are proposing to solve this problem in a novel way using electric vehicles to provide this energy storage.

Electric Car Energy Storage Capabilities

- A Tesla automobile stores about 80 kW-hrs of energy.
- Why not develop a standardized hookup that would allow customers to hookup their electric cars to their homes and avoid peak time of use rates?

Required Equipment for Hookups

TIBBAR PLASMA technologies

- Electrical hookup on the automobile
- Electric hookup on the house
- DC-AC invertor
- Production meter (like the one presently used on solar systems)
- Power switch
- Smart metering device (to limit the current)
- Estimated Cost: less than $3000 per hookup

Developing the New System

- Tibbar Plasma Technologies, Inc. will obtain a grant to finance the project.
- We will design and certify the components (or select and use off-the-shelf equipment).
- We will test a system using 2 24kW-hr Nissan Leaf battery banks and a 20kWe solar array at Tibbar Plasma Technologies.
- We will procure and install the components for anyone in Los Alamos County requesting them.

Questions for the Pilot Study

- How much incentive will be required to entice electric car owners to use their vehicles?
- Can this be done with minimal battery lifetime degradation?
- What is required to manage a grid with distributed energy storage devices?
- What is the best way to extract energy from these batteries?
- Is it cost effective?

Incentives for Customers

- A higher nighttime rate would encourage people to recharge their cars during the daytime and then use this stored power from their vehicle to power their homes during peak power rates.
- Customers would save money on the rate difference which would be compensation for the wear and tear on the batteries in their electric vehicles.

Advantages for the County

- It can provide a large amount of energy storage which requires no investment in batteries by the utility.
- It would shed peak loads in the evening.
- No battery maintenance is required by the utility. This is provided by the consumer.
- The technology would be updated free of charge (by the car owners) as the battery storage technology improves.

In-kind Contributions

- Tibbar Plasma Technologies will provide an existing commercial 20 kW solar PV array.
- We are presently constructing a 10kW residential array which will also be made available in order to show how this technology interfaces with solar PV energy on a real grid.
- Tibbar Plasma Technologies will provide building space to house the testing facility

In-Kind Contributions

- Los Alamos County will provide 2 24kw-hr Nissan Leaf battery banks and equipment for a lease rate of $1.00/year.
- Los Alamos County will write a letter of support for the project and offer the in-kind Nissan Leaf battery storage for the grant request.
- Los Alamos County will participate in the data acquisition and analysis using their Smart-Meters.

Value of Project

- This project is a paradigm change, and it could flourish into a new type of business.
- The major goal of this program is to see if this approach is viable.

Questions?

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County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	7.B
Index (Council Goals):	DPU FY2021 - 1.0 Provide Safe and Reliable Utility Services
Presenters:	Philo Shelton, Utilities Manager
Legislative File:	**13161-20**

Title

Approval of Department of Public Utilities Mission, Vision and Values, Strategic Goals and Objectives

Recommended Action

I move that the Board of Public Utilities approve the Mission, Vision and Values statements and the FY2022 Strategic Goals and Objectives as presented.

Staff Recommendation

Staff recommends approval of the Mission, Vision and Values statements and the FY2022 Strategic Goals and Objectives as presented.

Body

The Utilities Manager is expected to annually develop strategic objectives and long-term goals and present them to the Board for approval. At a special meeting on October 9th, the Board was asked to provide input to incorporate into the Department's planning efforts to ensure alignment of focus areas, strategic objectives and goals while considering County Council's priorities in their 2020 Strategic Leadership Plan. The changes suggested by the Board are included in the attached documents for approval.

DPU senior staff will hold their annual strategic planning meeting on October 23rd. The Board's direction and input will be used for the Department's action planning and budget preparations for FY2022.

Alternatives

The Board can approve the documents as presented or request changes.

Fiscal and Staff Impact

None

Attachments

A - Revised Mission, Vision and Values Statements
B - Revised Strategic Goals & Objectives (Showing Prioritization)

DEPARTMENT OF PUBLIC UTILITIES
MISSION/VISION/VALUES STATEMENTS
Proposed Revisions for Board of Public Utilities
FOR APPROVAL – October 21st, 2020

MISSION

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

VISION

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

VALUES

We value our:

- CUSTOMERS by being service oriented and fiscally responsible;
- EMPLOYEES AND PARTNERSHIPS by being a safe, ethical and professional organization that encourages continuous learning;
- ~~ENVIRONMENT~~ ENVIRONMENT & NATURAL RESOURCES through innovative ~~and progressive~~ solutions;
- COMMUNITY by being communicative, organized and transparent.

DEPARTMENT OF PUBLIC UTILITIES
FY2022 STRATEGIC GOALS & OBJECTIVES
WITH BOARD OF PUBLIC UTILITIES SUGGESTED CHANGES & PRIORITIZATION
For Board Approval – October 21, 2020

● ***Priority indicated by number of "dots" allotted by each member (8 dots per member - nominal group technique).***
-- *2 members allotted 1 dot equally between 5 objectives.*

FOCUS AREA - OPERATIONS & PERFORMANCE

GOAL - 1.0 Provide safe and reliable utility services.

--	.4	1.1 OBJECTIVE - WATER (WP/NP/DW) - Efficiently deliver safe and reliable water utility services.
--	.4	1.2 OBJECTIVE - GAS - Efficiently deliver safe and reliable gas utility services.
--	.4	1.3 OBJECTIVE - SEWER (WC & WT) - Efficiently deliver safe and reliable sewer utility services.
--	.4	1.4 OBJECTIVE - ELECTRIC (EP) - Efficiently deliver safe and reliable electric production utility services.
--	.4	1.5 OBJECTIVE - ELECTRIC (ED) - Efficiently deliver safe and reliable electric distribution utility services.
●●	2	1.6 OBJECTIVE - BUSINESS SYSTEMS - Efficiently implement and maintain secure and reliable business systems.
	0	1.7 OBJECTIVE - Utility control and mapping systems and processes are accurate, safe and secure.
●	1	1.8 OBJECTIVE - Develop a culture of continuous improvement.

FOCUS AREA - FINANCIAL PERFORMANCE

GOAL - 2.0 Achieve and maintain excellence in financial performance.

●●●●	4	2.1 OBJECTIVE - Utilize revenues to provide a high level of service while keeping rates competitive with similar utilities.
●	1	2.2 OBJECTIVE - Conduct cost of service studies for each utility at least every 5 years.
	0	2.3 OBJECTIVE - Meet financial plan targets by 2025, water by 2028.
●	1	2.4 OBJECTIVE – Achieve workplans while operating within budget.

FOCUS AREA - CUSTOMERS & COMMUNITY

GOAL - 3.0 Be a customer service-oriented organization that is communicative, efficient, and transparent.

●●	2	3.1 OBJECTIVE - Customer service processes and systems are efficient, secure and user-friendly.
●	1	3.2 OBJECTIVE - Stakeholders are engaged in and informed about Utilities operations affecting the community.
●●	2	3.2.1 OBJECTIVE – Conduct a community survey of the new conservation objectives.

DEPARTMENT OF PUBLIC UTILITIES
FY2022 STRATEGIC GOALS & OBJECTIVES
WITH BOARD OF PUBLIC UTILITIES SUGGESTED CHANGES & PRIORITIZATION
For Board Approval – October 21, 2020

FOCUS AREA - WORKFORCE

GOAL - 4.0 Sustain a capable, satisfied, engaged, ethical and safe workforce focused on customer service.

●	1	4.1 OBJECTIVE - Leaders invest in employee training and professional development.
●●	2	4.2 OBJECTIVE - Employees promote a culture of safe, ~~and~~ ethical and customer focused behavior.
●	1	4.3 OBJECTIVE - Employees are engaged, satisfied and fairly compensated.

FOCUS AREA - ENVIRONMENTAL SUSTAINABILITY

GOAL - 5.0 Achieve environmental sustainability.

●●●●●●●	7	5.1 OBJECTIVE - ELECTRIC (EP & ED) Be a carbon neutral electric provider by 2040.
●●●●	4	5.2 OBJECTIVE - Electric efficiency is promoted through targeted electric conservation programs. Increase local solar peak production to 6 MW by 2040. (This is 30% of local solar produced based on LAC peak load of 18 MW)
●	1	5.3 OBJECTIVE - WATER (DW) – Reduce potable water use by 12% per capita per day by 2030 using a 2020 calendar year-end baseline.
●●●●●	5	5.4 OBJECTIVE - GAS – Reduce natural gas usage by 5% per capita per heating degree day by 2030 using a 2020 calendar year-end baseline and support elimination of natural gas usage by 2070.
●●	2	5.5 OBJECTIVE - SEWER (WT) – Provide ~~C~~class 1A effluent water in LAC. ~~is provided in White Rock.~~

FOCUS AREA - PARTNERSHIPS

GOAL - 6.0 Develop and strengthen partnerships with stakeholders.

●	1	6.1 OBJECTIVE - Communicate with stakeholders to strengthen existing partnerships and identify new potential mutually beneficial partnering opportunities.

County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	7.C
Index (Council Goals):	DPU FY2021 - 4.0 Sustain a Capable, Satisfied, Engaged, Ethical and Safe Workforce Focused on Customer Service
Presenters:	Julie Williams-Hill, Public Relations Manager
Legislative File:	**13430-20**

Title

Presentation of the 2020 Employee Survey Results

Recommended Action

None

Staff Recommendation

Senior Management Staff will use survey results to focus on how to improve employee engagement and satisfaction.

Body

Los Alamos Department of Public Utilities conducted a survey last May to gauge satisfaction and engagement of its employees. Prior to 2016, DPU surveyed its employees every two years to measure satisfaction only. Due to a 2014 opportunity for improvement (OFI) finding from the Quality New Mexico examiners on a DPU Zia application, DPU changed its survey instrument to the Gallup Q12 survey. Using a five-point scale (1 signifies that an employee strongly disagrees and 5 signifies that an employee strongly agrees) Gallup incorporates 1 satisfaction question and 12 questions that have been researched to assess engagement. These results are then compared to other organizations to arrive at the department's percentile ranking within the Gallup database.

DPU established a goal in 2012 to realize an employee mean satisfaction and then later an engagement score of higher than 4.0 "Agree" and rank in the top third percentile of other organizations. While DPU achieved these goals for the department overall in 2020, there are still areas that the department senior staff is discussing to improve satisfaction and engagement for DPU employees. Department senior staff will be discussing measures to improve employee engagement and satisfaction as part of the upcoming strategic planning workshop.

Alternatives

Discussion item only

Fiscal and Staff Impact

None

Attachments

A -Employee Survey Results: Power Point Presentations
B - Gallup: DPU Employee Engagement Survey 2020

Employee Survey Results

Department of Public Utilities
October 21, 2020

LOS ALAMOS

Employee Survey

- Gallup Survey Instrument
- Percent of Employees Engaged
- Employee Engagement Score
- Employee Satisfaction Score
- Benchmark Public Administration
- Benchmark Organizations <100 Employees
- Benchmark Summary
- Focus Areas
- Verbatim Comments

Gallup Q12 Survey Instrument

- DPU participated in County employee satisfaction survey since 2002
- 2016 DPU changed survey instruments to Gallup Q12 Survey
- In addition to satisfaction, it includes engagement and benchmarks
- Gallup researched 12 questions to determine engagement
- Uses 5-point scale (1 strongly disagree and 5 strongly agree)
- Provides percentile ranking in the Gallup database
- Gallup database
  - 80+ years
  - 35 million respondents
  - 160 Countries

This presentation focuses on the overall DPU results

DPU Employee Engagement Survey 2020 | Overall

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

ENGAGEMENT INDEX

Engaged

2016 — 36%

2018 — 42%

2020 — 54%

Percent Engaged available when N ≥ 30.
All categories available when N ≥ 30.

2016	2018	2020
3.78	3.91	4.11
GRANDMEAN PERCENTILE RANK: 33	GRANDMEAN PERCENTILE RANK: 53	GRANDMEAN PERCENTILE RANK: 81

		Past Score (Respondents)	Change	Current Score (Respondents)	Change	Current Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	3.99 (77)	▼	3.86 (69)	▲	4.21 (73)	83
Q01	**Know What's Expected** I know what is expected of me at work.	4.36 (77)	▲	4.59 (71)	▲	4.63 (73)	94
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.20 (76)	▲	4.32 (71)	▲	4.41 (73)	93
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.08 (77)	▲	4.20 (71)	▲	4.35 (72)	90
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.34 (73)	▲	3.42 (69)	▲	3.77 (71)	79
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	3.93 (76)	▲	3.96 (71)	▲	4.30 (73)	70
Q06	**Development** There is someone at work who encourages my development.	3.83 (76)	▲	4.07 (71)	▼	4.01 (72)	70
Q07	**Opinions Count** At work, my opinions seem to count.	3.48 (75)	▲	3.68 (71)	▲	4.01 (73)	86
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.01 (77)	▲	4.04 (70)	▲	4.19 (72)	72
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.84 (77)	▲	3.89 (71)	▲	3.99 (73)	38
Q10	**Best Friend** I have a best friend at work.	2.63 (73)	▲	2.71 (62)	▲	3.05 (64)	15
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	3.70 (74)	▲	4.10 (70)	▲	4.33 (73)	92
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	3.93 (75)	▲	4.00 (71)	▲	4.22 (72)	81

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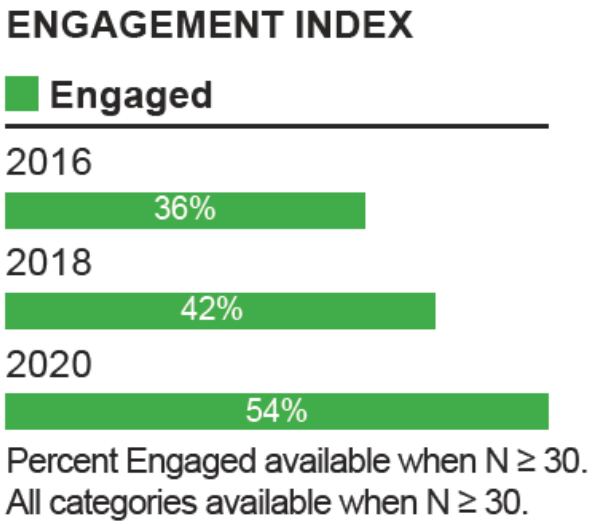
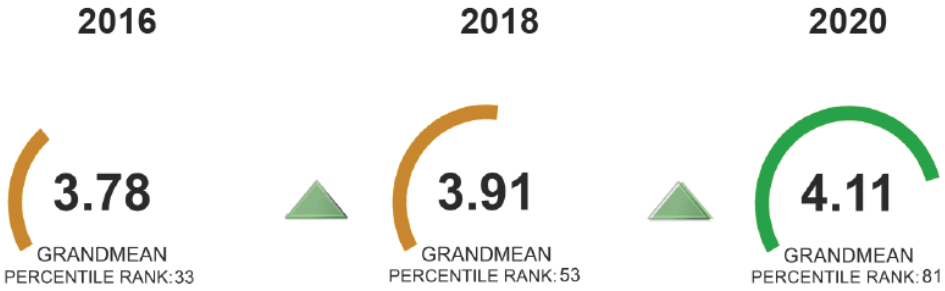
Percent of Employees Engaged

- Average percent of U.S. employees actively engaged at all time high before the Pandemic (May 2020 at 38%)*
- DPU percent of engaged employees steadily increasing since 2016
- May 2020, 54% of DPU employees engaged



*Gallup article, July 2, 2020 by Jim Harter, “May 2020 U.S. employee engagement at an historic high.”

Employee Engagement Score



- Gallup engagement score is an average of questions 1 through 12.
- DPU goals: Achieve mean score of better than 4.0 (Agree) and percentile ranking that is in the top third of the Gallop database
- 2020 Survey results:
  - DPU realized the mean and percentile goals
  - Score: 4.11 mean; Percentile ranking: 81 (top third)

Employee Satisfaction Score

GALLUP POLL NUMBERS

	2016		2018		2020	
	DPU Mean	Percen-tile	DPU Mean	Percen-tile	DPU Mean	Percen-tile
% Employees	84%		77%		79%	
Q00	3.99	61	3.86	41	4.21	83

- Gallup satisfaction score is question 00
- DPU goals: Achieve mean score of better than 4.0 (Agree) and percentile ranking that is in the top third of the Gallop database
- 2020 Survey results:
  - DPU realized the mean and percentile goals
  - Score: 4.21 mean; Percentile ranking: 83 (top third)

Los Alamos Department of Public Utilities

Gallup Q12 Employee Engagement Survey Results

GALLUP POLL NUMBERS

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
%Empl's	84%		77%		79%	
Q00	3.99	61	3.86	41	4.21	83
Engage	3.78	33	3.91	53	4.11	81
Q01	4.36	54	4.59	91	4.63	94
Q02	4.2	77	4.32	87	4.41	93
Q03	4.08	64	4.2	78	4.35	90
Q04	3.34	36	3.42	45	3.77	79
Q05	3.93	25	3.96	26	4.3	70
Q06	3.83	52	4.07	79	4.01	70
Q07	3.48	23	3.68	47	4.01	86
Q08	4.01	50	4.04	53	4.19	72
Q09	3.84	18	3.89	23	3.99	38
Q10	2.63	1	2.71	2	3.05	15
Q11	3.7	41	4.1	79	4.33	92
Q12	3.93	43	4	54	4.22	81

Percentile Range in Gallup Database:

< 33 | 34 - 66 | > 66

PUBLIC ADMINISTRATION

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
%Empl's	84%		77%		79%	
Q00	3.99	73	3.86	68	4.21	78
Engage	3.78	63	3.91	68	4.11	74
Q01	4.36	73	4.59	81	4.63	83
Q02	4.2	75	4.32	78	4.41	81
Q03	4.08	74	4.2	77	4.35	81
Q04	3.34	61	3.42	62	3.77	74
Q05	3.93	44	3.96	33	4.3	73
Q06	3.83	69	4.07	75	4.01	73
Q07	3.48	60	3.68	65	4.01	76
Q08	4.01	68	4.04	66	4.19	72
Q09	3.84	33	3.89	33	3.99	47
Q10	2.63	26	2.71	27	3.05	32
Q11	3.7	59	4.1	75	4.33	82
Q12	3.93	68	4	69	4.22	76

Percentile Range in Subcategory for Public Administration:

< 33 | 34 - 66 | > 66

ORGANIZATIONS WITH <100 EMPLOYEES

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
%Empl's	84%		77%		79%	
Q00	3.99	51	3.86	35	4.21	70
Engage	3.78	33	3.91	42	4.11	66
Q01	4.36	60	4.59	73	4.63	80
Q02	4.2	62	4.32	67	4.41	74
Q03	4.08	64	4.2	66	4.35	75
Q04	3.34	33	3.42	35	3.77	54
Q05	3.93	31	3.96	31	4.3	40
Q06	3.83	44	4.07	60	4.01	48
Q07	3.48	31	3.68	34	4.01	68
Q08	4.01	40	4.04	42	4.19	57
Q09	3.84	31	3.89	32	3.99	32
Q10	2.63	27	2.71	27	3.05	31
Q11	3.7	43	4.1	65	4.33	73
Q12	3.93	36	4	39	4.22	59

Percentile Range in Subcategory for Org. w/< 100 employees:

< 33 | 34 - 66 | > 66

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Benchmark: Public Admin

PUBLIC ADMINISTRATION

	2016		2018		2020	
	DPU Mean	Percen-tile	DPU Mean	Percen-tile	DPU Mean	Percen-tile
% Employees	84%		77%		79%	
Q00	3.99	73	3.86	68	4.21	78
Engage	3.78	63	3.91	68	4.11	74

- Public Administration (Government-type organizations)
- DPU's 2020 Satisfaction score of 4.21 ranks 78th (top third)
- DPU's 2020 Engagement score of 4.11 ranks 74th (top third)

Benchmark: Org.<100 Employees

ORGANIZATIONS WITH <100 EMPLOYEES

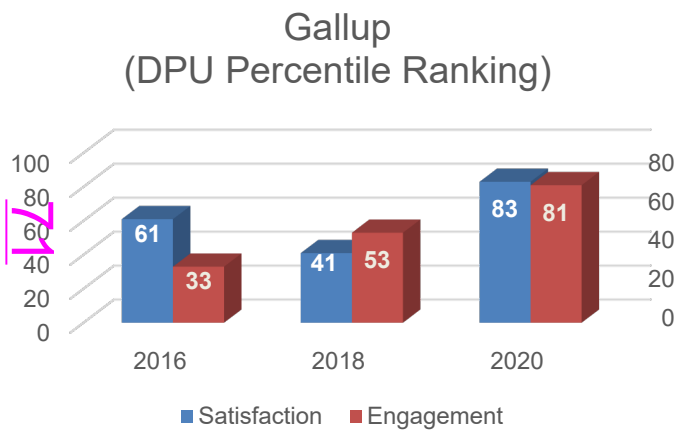
	2016		2018		2020	
	DPU Mean	Percen-tile	DPU Mean	Percen-tile	DPU Mean	Percen-tile
% Employees	84%		77%		79%	
Q00	3.99	51	3.86	35	4.21	70
Engage	3.78	33	3.91	42	4.11	66

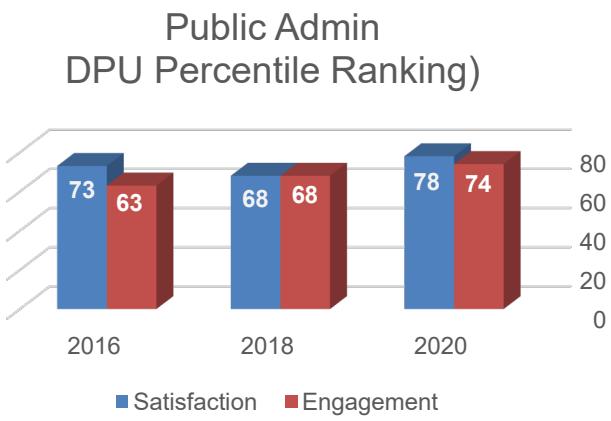
70

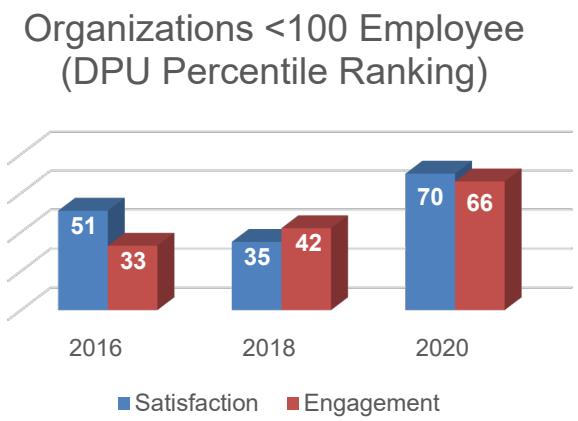
- Organizations with less than 100 employees
- DPU's 2020 Satisfaction score of 4.21 ranks 70th (top third)
- DPU's 2020 Engagement score of 4.11 ranks 66th (middle band)

LOS ALAMOS

Benchmark: Summary



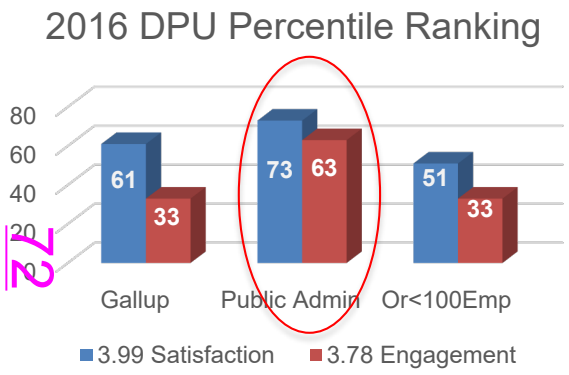


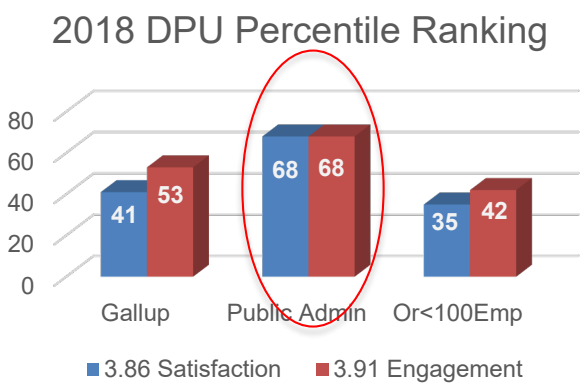


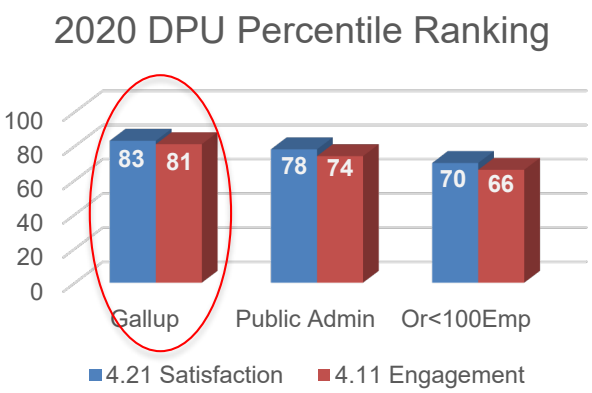
- 2016 Mean Satisfaction = 3.99; 2016 Mean Engagement = 3.78
- 2018 Mean Satisfaction = 3.86; 2018 Mean Engagement = 3.91
- 2020 Mean Satisfaction = 4.21; 2020 Mean Engagement = 4.11

LOS ALAMOS

Benchmark: Summary







- 2016 & 2018 DPU satisfaction & engagement scores - higher percentile ranking in Public Admin. category than overall Gallup database & Organizations <100 employees.
- 2020 DPU satisfaction & engagement scores - higher percentile ranking in the overall Gallup database, when compared to 2020 ranking in Public Admin and Organizations <100 employees.

LOS ALAMOS

Focus Areas

2020 Survey Results suggest DPU focus in three areas:

- Q06: “There is someone at work who encourages my development.”
  - DPU score dropped slightly from 4.07 in 2018 to 4.01 “Agree” in 2020
- Q09: “My coworkers are committed to doing quality work.”
  - Improved from 3.89 in 2018 to 3.99 in 2020
  - However, slightly below 4.0 “Agree” and is ranked 38th percentile
- Q10: “I have a best friend at work.”
  - Improved from a 2.71 above “Disagree” in 2018 to a 3.05 “Neutral” in 2020 and ranked in the 15th percentile
  - Why is this important? Employees spend over 2,000 hours a year with coworkers.
  - Studies show that employees that feel connected:
    - Have less work-related accidents,
    - Engage better with customers, and
    - Are more productive

DPU Senior Staff Discussing how to address these three area.

DPU Employee Engagement Survey 2020 | Overall

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

ENGAGEMENT INDEX

Engaged

2016 — 36%

2018 — 42%

2020 — 54%

Percent Engaged available when N ≥ 30.
All categories available when N ≥ 30.

2016	2018	2020
3.78	3.91	4.11
GRANDMEAN PERCENTILE RANK: 33	GRANDMEAN PERCENTILE RANK: 53	GRANDMEAN PERCENTILE RANK: 81

		Past Score (Respondents)	Change	Current Score (Respondents)	Change	Current Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	3.99 (77)	▼	3.86 (69)	▲	4.21 (73)	83
Q01	**Know What's Expected** I know what is expected of me at work.	4.36 (77)	▲	4.59 (71)	▲	4.63 (73)	94
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.20 (76)	▲	4.32 (71)	▲	4.41 (73)	93
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.08 (77)	▲	4.20 (71)	▲	4.35 (72)	90
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.34 (73)	▲	3.42 (69)	▲	3.77 (71)	79
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	3.93 (76)	▲	3.96 (71)	▲	4.30 (73)	70
Q06	**Development** There is someone at work who encourages my development.	3.83 (76)	▲	4.07 (71)	▼	4.01 (72)	70
Q07	**Opinions Count** At work, my opinions seem to count.	3.48 (75)	▲	3.68 (71)	▲	4.01 (73)	86
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.01 (77)	▲	4.04 (70)	▲	4.19 (72)	72
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.84 (77)	▲	3.89 (71)	▲	3.99 (73)	38
Q10	**Best Friend** I have a best friend at work.	2.63 (73)	▲	2.71 (62)	▲	3.05 (64)	15
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	3.70 (74)	▲	4.10 (70)	▲	4.33 (73)	92
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	3.93 (75)	▲	4.00 (71)	▲	4.22 (72)	81

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June 2020

Focus Areas

- Segments of staff that may need additional support:
  - Electric Distribution
  - Water Production
  - Gas, Water and Sewer
  - Administrative/Finance
  - Women
  - Non-exempt

Verbatim Comments

2020 Survey concluded: **“*What one thing gets in the way of you doing your best work at our organization?*”**

Of the 52 responses:

- 40% stated - Question is not applicable, or nothing gets in the way,
- 19% stated - External factors (interruptions, agitated customers, other departments),
- 17% stated - DPU management (micro-managing, not providing sufficient tools or training),
- 17% stated - DPU co-workers (others not working as a team, not pulling their weight or negative attitudes), and
- 7% stated - other.

DPU Employee Engagement Survey 2020 | Overall

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

ENGAGEMENT INDEX

Engaged

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Percent Engaged available when N ≥ 30.
All categories available when N ≥ 30.

2016	2018	2020
3.78	3.91	4.11
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		Past Score (Respondents)	Change	Current Score (Respondents)	Change	Current Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	3.99 (77)	▼	**3.86** (69)	▲	**4.21** (73)	83
Q01	**Know What's Expected** I know what is expected of me at work.	4.36 (77)	▲	**4.59** (71)	▲	**4.63** (73)	94
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.20 (76)	▲	**4.32** (71)	▲	**4.41** (73)	93
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.08 (77)	▲	**4.20** (71)	▲	**4.35** (72)	90
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.34 (73)	▲	**3.42** (69)	▲	**3.77** (71)	79
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	3.93 (76)	▲	**3.96** (71)	▲	**4.30** (73)	70
Q06	**Development** There is someone at work who encourages my development.	3.83 (76)	▲	**4.07** (71)	▼	**4.01** (72)	70
Q07	**Opinions Count** At work, my opinions seem to count.	3.48 (75)	▲	**3.68** (71)	▲	**4.01** (73)	86
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.01 (77)	▲	**4.04** (70)	▲	**4.19** (72)	72
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.84 (77)	▲	**3.89** (71)	▲	**3.99** (73)	38
Q10	**Best Friend** I have a best friend at work.	2.63 (73)	▲	**2.71** (62)	▲	**3.05** (64)	15
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	3.70 (74)	▲	**4.10** (70)	▲	**4.33** (73)	92
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	3.93 (75)	▲	**4.00** (71)	▲	**4.22** (72)	81

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Los Alamos Department of Public Utilities

Gallup Q12 Employee Engagement Survey Results

GALLUP POLL NUMBERS

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
Employe	84%		77%		79%	
Q00	3.99	61	3.86	41	4.21	83
Engage	3.78	33	3.91	53	4.11	81
Q01	4.36	54	4.59	91	4.63	94
Q02	4.2	77	4.32	87	4.41	93
Q03	4.08	64	4.2	78	4.35	90
Q04	3.34	36	3.42	45	3.77	79
Q05	3.93	25	3.96	26	4.3	70
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Q07	3.48	23	3.68	47	4.01	86
Q08	4.01	50	4.04	53	4.19	72
Q09	3.84	18	3.89	23	3.99	38
Q10	2.63	1	2.71	2	3.05	15
Q11	3.7	41	4.1	79	4.33	92
Q12	3.93	43	4	54	4.22	81

Percentile Range in Gallup Database:

< 33 | 34 - 66 | > 66

PUBLIC ADMINISTRATION

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
Employe	84%		77%		79%	
Q00	3.99	73	3.86	68	4.21	78
Engage	3.78	63	3.91	68	4.11	74
Q01	4.36	73	4.59	81	4.63	83
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Q03	4.08	74	4.2	77	4.35	81
Q04	3.34	61	3.42	62	3.77	74
Q05	3.93	44	3.96	33	4.3	73
Q06	3.83	69	4.07	75	4.01	73
Q07	3.48	60	3.68	65	4.01	76
Q08	4.01	68	4.04	66	4.19	72
Q09	3.84	33	3.89	33	3.99	47
Q10	2.63	26	2.71	27	3.05	32
Q11	3.7	59	4.1	75	4.33	82
Q12	3.93	68	4	69	4.22	76

Percentile Range in Subcategory for Public Administration:

< 33 | 34 - 66 | > 66

ORGANIZATIONS WITH <100 EMPLOYEES

	2016 DPU Mean	2016 Percen-tile	2018 DPU Mean	2018 Percen-tile	2020 DPU Mean	2020 Percen-tile
Employe	84%		77%		79%	
Q00	3.99	51	3.86	35	4.21	70
Engage	3.78	33	3.91	42	4.11	66
Q01	4.36	60	4.59	73	4.63	80
Q02	4.2	62	4.32	67	4.41	74
Q03	4.08	64	4.2	66	4.35	75
Q04	3.34	33	3.42	35	3.77	54
Q05	3.93	31	3.96	31	4.3	40
Q06	3.83	44	4.07	60	4.01	48
Q07	3.48	31	3.68	34	4.01	68
Q08	4.01	40	4.04	42	4.19	57
Q09	3.84	31	3.89	32	3.99	32
Q10	2.63	27	2.71	27	3.05	31
Q11	3.7	43	4.1	65	4.33	73
Q12	3.93	36	4	39	4.22	59

Percentile Range in Subcategory for Org. w/< 100 employees:

< 33 | 34 - 66 | > 66

N:\2008-14PublicRelations_jwilliamshill\Customer Surveys-AllFeedback-Kudos\2018

DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	ELECTRIC PRODUCTION	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.16 GRANDMEAN PERCENTILE RANK:86	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.27** (11)	88
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.64** (11)	95
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.45** (11)	95
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.27** (11)	84
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.00** (10)	8
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.73** (11)	99
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.27** (11)	93
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.09** (11)	90
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.30** (10)	83
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.18** (11)	67
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.89** (9)	5
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.73** (11)	99
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.36** (11)	92

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	ELECTRIC DISTRIBUTION	
		4.11 GRANDMEAN PERCENTILE RANK:81	3.81 GRANDMEAN PERCENTILE RANK:35	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.00** (8)	59
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.63** (8)	94
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.25** (8)	80
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.00** (8)	49
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.00** (8)	8
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.00** (8)	28
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.75** (8)	37
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.75** (8)	55
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.00** (8)	48
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.00** (8)	40
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.57** (7)	1
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.25** (8)	88
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**3.50** (8)	7

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

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		OVERALL	WATER PRODUCTION	
		4.11 GRANDMEAN PERCENTILE RANK:81	3.75 GRANDMEAN PERCENTILE RANK:27	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**3.83** (6)	36
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.83** (6)	99
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.00** (6)	45
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.17** (6)	71
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**4.17** (6)	97
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**3.83** (6)	14
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**2.83** (6)	1
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.00** (6)	85
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**3.67** (6)	14
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.00** (6)	40
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.83** (6)	4
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**3.67** (6)	37
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**3.00** (6)	1

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	WASTEWATER	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.50 GRANDMEAN PERCENTILE RANK:99	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.70** (10)	99
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**5.00** (10)	99
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.70** (10)	99
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.80** (10)	99
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**4.20** (10)	97
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.70** (10)	99
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.50** (10)	99
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.50** (10)	99
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.60** (10)	98
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.20** (10)	70
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.22** (9)	30
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.80** (10)	99
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.80** (10)	99

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	GAS, WATER, & SEWER	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.09 GRANDMEAN PERCENTILE RANK:78	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.16** (19)	79
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.74** (19)	98
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.26** (19)	82
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.50** (18)	97
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**4.00** (19)	92
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.21** (19)	56
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.06** (18)	76
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.95** (19)	80
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.21** (19)	74
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.74** (19)	10
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.06** (18)	16
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.11** (19)	79
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.28** (18)	86

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	ADMINISTRATIVE/FINANCE	
		GRANDMEAN 4.11 PERCENTILE RANK:81	GRANDMEAN 3.94 PERCENTILE RANK:56	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**3.92** (12)	47
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.08** (12)	10
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.42** (12)	93
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.08** (12)	59
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.91** (11)	88
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**3.92** (12)	20
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.83** (12)	46
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.58** (12)	31
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**3.83** (12)	27
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.83** (12)	18
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.27** (11)	35
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.08** (12)	77
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.42** (12)	96

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DPU Employee Engagement Survey 2020 | DIVISION

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	ENGINEERING	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.43 GRANDMEAN PERCENTILE RANK:98	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.57** (7)	99
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.57** (7)	89
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.86** (7)	99
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.43** (7)	94
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**4.00** (7)	92
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.71** (7)	99
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.43** (7)	98
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.43** (7)	99
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.71** (7)	99
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.29** (7)	82
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.50** (4)	60
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.71** (7)	99
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.57** (7)	99

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DPU Employee Engagement Survey 2020 | GENDER

Percentile range in Gallup Database < 33 | 33-66 | > 66

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		OVERALL	MALE	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.14 GRANDMEAN PERCENTILE RANK:84	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.24** (59)	86
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.71** (59)	97
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.41** (59)	93
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.38** (58)	92
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.78** (58)	79
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.39** (59)	81
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.07** (58)	77
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.10** (59)	91
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.24** (58)	78
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.00** (59)	40
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.04** (53)	14
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.37** (59)	93
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.19** (58)	78

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DPU Employee Engagement Survey 2020 | GENDER

Percentile range in Gallup Database < 33 | 33-66 | > 66

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		OVERALL	FEMALE	
		4.11 GRANDMEAN PERCENTILE RANK:81	3.96 GRANDMEAN PERCENTILE RANK:58	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.07** (14)	69
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.29** (14)	39
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.43** (14)	94
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.21** (14)	77
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.77** (13)	79
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**3.93** (14)	21
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.79** (14)	41
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.64** (14)	38
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.00** (14)	48
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.93** (14)	29
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.09** (11)	19
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.14** (14)	81
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.36** (14)	92

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DPU Employee Engagement Survey 2020 | JOB TYPE

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	HOURLY POSITION	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.00 GRANDMEAN PERCENTILE RANK:65	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.18** (49)	81
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.67** (49)	96
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.27** (49)	83
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.38** (48)	92
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.68** (47)	70
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.18** (49)	51
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.83** (48)	46
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.92** (49)	77
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.04** (48)	52
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.80** (49)	15
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.84** (44)	4
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.20** (49)	85
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.15** (48)	74

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DPU Employee Engagement Survey 2020 | JOB TYPE

Percentile range in Gallup Database < 33 | 33-66 | > 66

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		OVERALL	SALARIED POSITION	
		4.11 GRANDMEAN PERCENTILE RANK:81	4.33 GRANDMEAN PERCENTILE RANK:95	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.25** (24)	87
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.54** (24)	85
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.71** (24)	99
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.29** (24)	86
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.96** (24)	90
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.54** (24)	95
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.38** (24)	97
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.21** (24)	96
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.50** (24)	95
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.38** (24)	91
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.50** (20)	60
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.58** (24)	99
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.38** (24)	94

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DPU Employee Engagement Survey 2020 | TENURE

Percentile range in Gallup Database < 33 | 33-66 | > 66

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		OVERALL	5 YEARS OR LESS	
		GRANDMEAN 4.11 PERCENTILE RANK:81	GRANDMEAN 4.40 PERCENTILE RANK:97	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.41** (29)	95
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.55** (29)	86
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.69** (29)	99
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.48** (29)	96
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**4.17** (29)	97
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.55** (29)	96
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.48** (29)	98
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.34** (29)	99
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.41** (29)	91
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.28** (29)	81
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.44** (25)	55
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.66** (29)	99
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.69** (29)	99

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DPU Employee Engagement Survey 2020 | TENURE

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	6 YEARS TO 10 YEARS	
		GRANDMEAN 4.11 PERCENTILE RANK:81	GRANDMEAN 3.98 PERCENTILE RANK:62	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**3.71** (14)	20
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.50** (14)	78
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.14** (14)	67
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**3.93** (14)	39
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.36** (14)	35
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.36** (14)	78
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**4.14** (14)	85
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.00** (14)	85
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.14** (14)	66
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.64** (14)	5
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**3.14** (14)	23
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.36** (14)	93
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.00** (13)	53

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DPU Employee Engagement Survey 2020 | TENURE

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	11 YEARS TO 15 YEARS	
		4.11 GRANDMEAN PERCENTILE RANK:81	3.90 GRANDMEAN PERCENTILE RANK:50	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.50** (10)	97
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.70** (10)	97
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.20** (10)	75
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.30** (10)	87
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.44** (9)	44
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.10** (10)	40
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.70** (10)	30
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**4.00** (10)	85
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**4.11** (9)	62
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**3.60** (10)	3
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.00** (6)	1
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**4.30** (10)	91
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**4.30** (10)	88

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DPU Employee Engagement Survey 2020 | TENURE

Percentile range in Gallup Database < 33 | 33-66 | > 66

*Item data not shown if sample size is less than 4. Workgroup data not shown to protect confidentiality.

		OVERALL	GREATER THAN 15 YEARS	
		4.11 GRANDMEAN PERCENTILE RANK:81	3.86 GRANDMEAN PERCENTILE RANK:42	
		Score (Respondents)	Score (Respondents)	Gallup Database Percentile Rank
Q00	**Overall Satisfaction** How satisfied are you with your organization as a place to work?	4.21 (73)	**4.10** (20)	72
Q01	**Know What's Expected** I know what is expected of me at work.	4.63 (73)	**4.80** (20)	99
Q02	**Materials and Equipment** I have the materials and equipment I need to do my work right.	4.41 (73)	**4.30** (20)	85
Q03	**Opportunity to do Best** At work, I have the opportunity to do what I do best every day.	4.35 (72)	**4.47** (19)	96
Q04	**Recognition** In the last seven days, I have received recognition or praise for doing good work.	3.77 (71)	**3.63** (19)	65
Q05	**Cares About Me** My supervisor, or someone at work, seems to care about me as a person.	4.30 (73)	**4.00** (20)	28
Q06	**Development** There is someone at work who encourages my development.	4.01 (72)	**3.37** (19)	7
Q07	**Opinions Count** At work, my opinions seem to count.	4.01 (73)	**3.55** (20)	28
Q08	**Mission/Purpose** The mission or purpose of my organization makes me feel my job is important.	4.19 (72)	**3.95** (20)	42
Q09	**Committed to Quality** My coworkers are committed to doing quality work.	3.99 (73)	**4.00** (20)	40
Q10	**Best Friend** I have a best friend at work.	3.05 (64)	**2.79** (19)	3
Q11	**Progress** In the last six months, someone at work has talked to me about my progress.	4.33 (73)	**3.85** (20)	54
Q12	**Learn and Grow** This last year, I have had opportunities at work to learn and grow.	4.22 (72)	**3.65** (20)	14

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County of Los Alamos

Staff Report

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	8.A
Index (Council Goals):	DPU FY2020 - 5.0 Achieve Environmental Sustainability
Presenters:	James Alarid, Deputy Utilities Manager - Engineering
Legislative File:	**12865-20**

Title
Quarterly Conservation Program Update

Recommended Action
None

Staff Recommendation
None

Body
Presentation of the PEEC annual report for 2019 and update on conservation plan revision.

Alternatives
None

Fiscal and Staff Impact
None

Attachments
A - 2019 Annual Report

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

2019 Calendar Year Report
August 27, 2020

Prepared by Elizabeth Watts, Educator
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(505) 662-0460
elizabeth@peecnature.org

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

PEEC
Pajarito Environmental Education Center

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2

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 2019. 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 2019, 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, materials, 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 Elizabeth Watts at elizabeth@peecnature.org.

Cover photo: Los Alamos Fourth Grade students at the 5th Annual Water Festival learn about pumping water from DPU's Clay Moseley. Photo by Rachel Landman.

Year at a Glance

2019 Outreach Summary

• ***5685 connections*** *made with community members about energy and water conservation through interpretive lessons, workshops and events*

• ***4958 visitors*** *learned about solar energy and water-wise gardening through exhibits at the Nature Center*

• ***1770 student contacts*** *allowed Los Alamos Public School students to engage with water and energy in hands-on lessons*

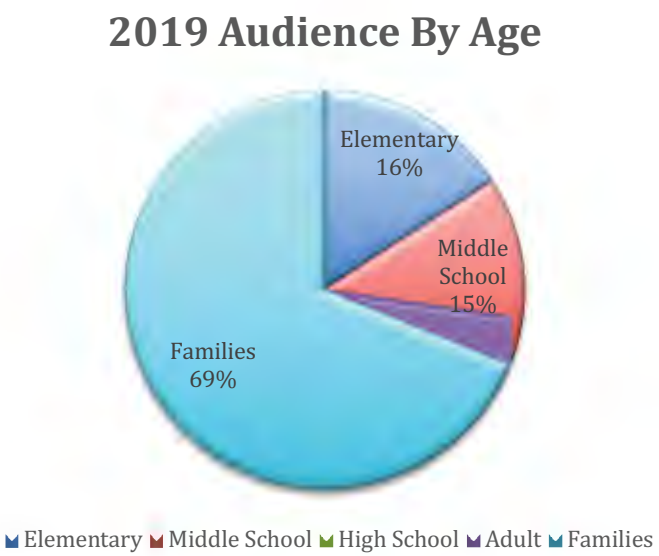
• ***3300 people*** *participated in water and energy conservation activities at the Los Alamos Science Fest, Trick or Treat Main Street, and other community venues*

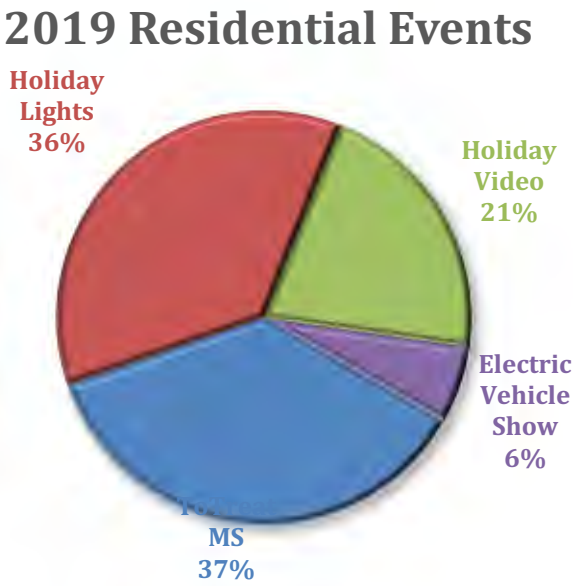
• ***305 4th graders, teachers, and parents*** *took part in interactive demos about water at the 5th annual Los Alamos Water Festival*

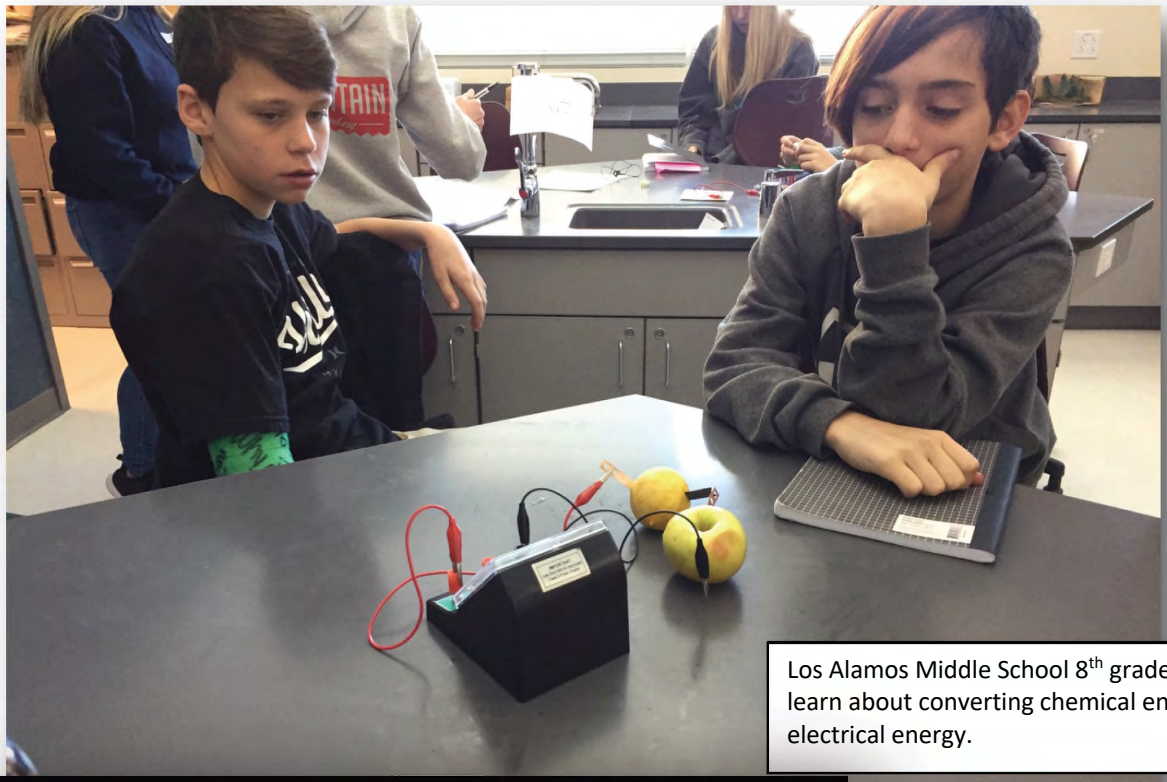
• ***200 visitors*** *attended the Electric Vehicle show to learn and experience all types of electric vehicles*

Above: Visitors learn about the many different types of electric vehicles at the 2019 Electric Vehicle Show that was held in conjunction with Los Alamos County ScienceFest. Photo by Rachel Landman

TOTAL PEOPLE REACHED, BY CONTRACT YEAR
12000
10000
8000
6000
4000
2000
0
3900
3170
4335
5069
4186
4958
5685
2016
2017
2018
2019
Individual Contacts
Solar Energy and Waterwise Exhibits


2019 Audience By Age
Elementary 16%
Middle School 15%
Families 69%
Elementary
Middle School
High School
Adult
Families


2019 Residential Events
Holiday Lights 36%
Holiday Video 21%
Electric Vehicle Show 6%
MS 37%



Los Alamos Middle School 8th grade students learn about converting chemical energy into electrical energy.

A solar powered Tesla in the Holiday Light Parade educated people about solar holiday lights.

Participant Feedback:

This was a perfect lesson for third grade because of all the hands-on activities. All three classes loved it! I heard many children saying things like, "What happens if you do this?" and "Let's try it another way."

- 3rd -grade teacher

Students using energy vocabulary during skit! Awesome!! Always a joy to have you in the classroom to help our students learn!

- 4th-grade teacher

Clay Moseley is awesome - every time!

- 4th-grade teacher at the Water Festival

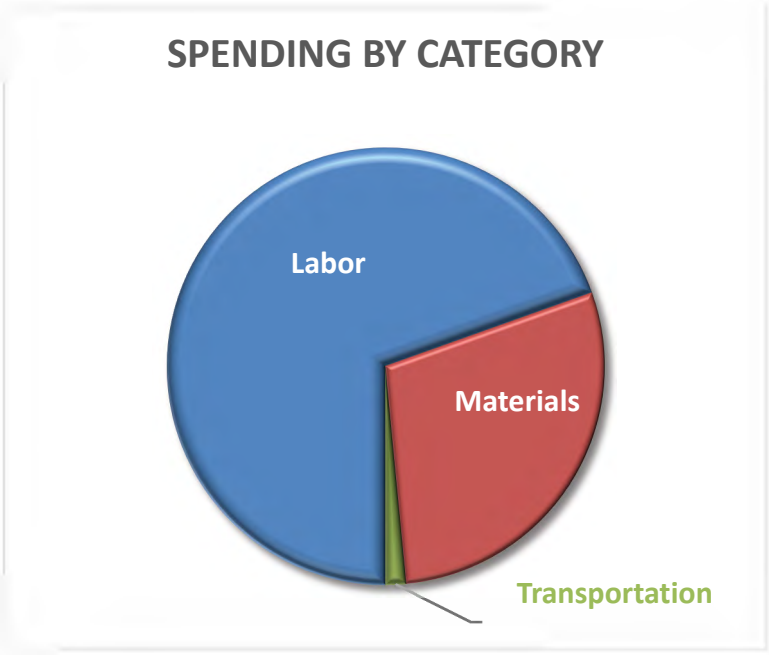
It was great to have Tyler from DPU there to respond to questions about solar collectors, etc. He was very knowledgeable. The materials Sandra prepared really helped us respond to questions.

- Comment on Electric Vehicle Show

Budget Summary

Budget Overview
January – December 2019

Task Order	Visitor Contacts	Hours	Category	Budgeted	Spent
5&7: LAPS & Community	**2385**	**341.25**	Advertising	$500	$0.00
			Labor	$24,000	$14,915.73
			Materials	$11,500	$8,071.85
			Transportation	$2,000	$516.36
			Total	**$38,000**	**$23,503.94**
6&8: Residential E & W	**8262**	**243.25**	Advertising	$1,200	$0.00
			Labor	$7,200	$10,195.10
			Materials	$3,600	$2,060.96
			Transportation	$0	$0.00
			Total	**$12,000**	**$12,256.06**
All Task Orders	**10647**	**584.50**	**Total**	**$50,000**	**$35,760.00**



Invoice Summary
January – December 2019

MONTH	PEOPLE	HOURS	COST
JANUARY	830	50	$2,253.46
FEBRUARY	380	17.50	$910.24
MARCH	597	37.00	$5,815.20
APRIL	559	70.00	$5,253.17
MAY	691	58.25	$3,037.53
JUNE	520	24.50	$1,138.87
JULY	1341	90.50	$4,705.60
AUGUST	458	5.00	$286.55
SEPTEMBER	420	20.25	$1,684.05
OCTOBER	1783	70.50	$3,890.60
NOVEMBER	793	66.50	$3,467.47
DECEMBER	2275	74.50	$3,317.26
TOTAL	10647*	584.5	$35,760.00

* Includes visitors to the water-wise gardening and solar energy exhibits, calculated as a percentage of nature center visitors during 2019.

2019 Task Order Overviews

Los Alamos County Public Schools and Community Outreach

Task Order 5 and Task Order 7

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 brought energy and water conservation lessons to 7th and 8th grade classes at the Los Alamos Middle School.
- We hosted the fifth annual 4th-grade water festival. The festival featured presenters from around the community, and received positive feedback from participating teachers and from students.
- We continued revising lessons, especially for 3rd and 8th grades.
- We brought energy-conservation activities and exhibits to community events, including Los Alamos Science Fest.

2) Plans for future work:

- We will continue offering lessons, especially energy lessons for 8th graders. However, the school situation in the fall is unknown at this time so we will do our best to adapt to teacher needs.
- We would like to work with 7th grade teachers to find out how to help them better meet their learning needs.
- We are planning a Conservation Camp in the summer of 2020 for 4th-6th graders to educate them on conservation and sustainability issues.
- 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 and Task Order 8

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 or other types of exhibits to be displayed at the Los Alamos Nature Center highlighting energy and water conserving features such as photovoltaics, water harvesting and water-wise gardening.

Year-End Comments:

1) Accomplishments:

- We organized and hosted the second electric vehicle show to coincide with the Los Alamos Science Fest. This show featured electric vehicles of all types as well as information about Los Alamos County's electric grid and solar projects.
- We participated in Trick-or-Treat on MainStreet by distributing insulation for electrical outlets and switches and information on winterization.
- We had a Tesla covered in solar lights in the county's Holiday Light Parade to educate county residents about solar-powered holiday lights.
- We continued supporting the solar energy exhibit and the water-wise gardening exhibit at the Los Alamos Nature Center.

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.
- Due to the pandemic restrictions, ScienceFest will be virtual in 2020. However we still hope to provide a Virtual Electric Vehicle Show.
- Install a drip-irrigation system in a new demonstration garden with signage to inform people about the benefits for water conservation at home.

Curriculum Overview

2019 Lesson Summaries

Complete lesson plans are stored at PEEC.
Contact elizabeth@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 to explore human impacts on 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.

2019 Teacher Contact List

(some teachers organize lessons for others at their school)

Teacher	School	Email
Tammy Moore	Aspen	t.moore@laschools.net
Amy Gilbert	Aspen	a.gilbert@laschools.net
Jane Reichman	Aspen	j.reichman@laschools.net
Laura Haynes	Barranca	l.haynes@laschools.net
Angela Lopez	Barranca	an.lopez@laschools.net
Monica Koski	Barranca	m.koski@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
Adrienne Hetrick	LAMS	a.hetrick@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 Collom	LAMS	b.collom@laschools.net
Donna Schaefer	Mountain	d.schaefer@laschools.net
Kim Clayton	Mountain	k.clayton@laschools.net
Fabian Smith	Mountain	f.smith@laschools.net
Lindsay Gibson	Mountain	l.gibson@laschools.net
Barbara Kress	Piñon	b.kress@laschools.net
Herb Siegel	Piñon	h.siegel@laschools.net
Kristen Martines	Piñon	k.martines@laschools.net
Whitney Holland	Piñon	w.holland@laschools.net

Water Festival Information

Water Festival Summary

Date: April 12 and May 3, 2019
Location: UNM-LA
Time: 9 AM – 2 PM

Description

We hosted Los Alamos 4th-grade students at our fifth 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 no homeschool students attended this year. In total 305 students, teachers, IA's and parents/chaperones attended this event.

Post-Event Comments

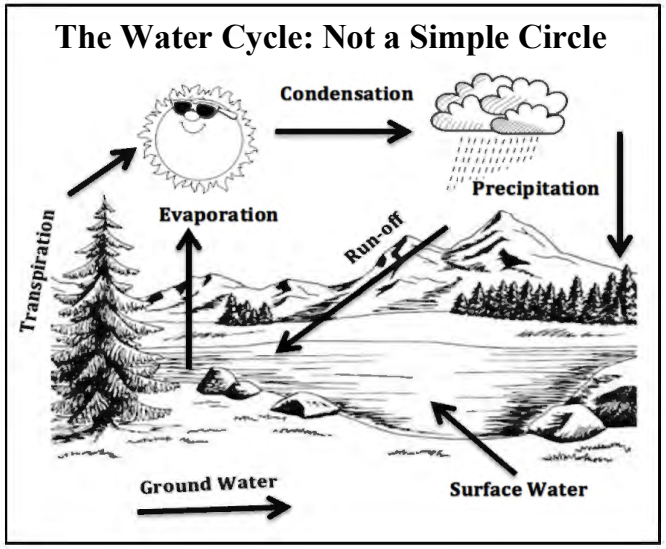
- Almost all of the presenters came back from previous years unless they had a date conflict.
- We had enough presenters to be able to split some classes for a better small-group experience.
- We tried to alternate when classes saw a hands-on presentation and a model.
- Teachers commented that their 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. Betsy was very helpful, especially with last minute problems like snow!
- Teachers, IAs, and presenters appreciated that lunch was provided.
- The April festival did have snow at lunch time. Teachers would prefer both dates in May after testing is completed. However, that is typically a busy time for field trips to the Nature Center. One teacher suggested September instead, when there is less going on at school.

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
NM Environment Department	Megan Green	Megan.green@state.nm.us	Pollution and the Water Cycle
City of Santa Fe	Patricio Pacheco	pmpacheco@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

Water Festival 2019 Schedule

Date: Friday, April 12, 2019
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 12th 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
Cortez	312	230	Snack/Recess Break On Mesa Field 10:40-10:55	624	631	Lunch Break on Mesa Field 12:00-12:40	606
Schaefer	624	312		230	625		610
Ziomek	610	624		312	230		625
Mann	631	610		Kiva/606	312		230
Parsons	625	631		610	Kiva/606		230
Hayes	Kiva/606	625		631	624		631
Siegel	230	Kiva/606		625	610		631

Water Festival 2019 Schedule

April 12th Presentations and Locations

Room Number	Title	Presenter	Organization
312	Water quality: how do we measure it?	Rossana Sallenave	New Mexico State University
624	Pollution in our Watershed	Megan Green and Seva Joseph	New Mexico Environment Department
610	What is groundwater, and why is it so important for New Mexico?	Michelle Bourret	Los Alamos National Lab
631	Process of drinking water and wastewater	Jennifer Baca and Evelyn Maestas	Los Alamos County
625	Plants, water and climate	Sanna Sevanto	LANL
230	Surface Tension	Denise Matthews	PEEC
Kiva/606	All About Pumping Water	Clay Moseley	Los Alamos County DPU

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.

LOS ALAMOS
Department of Public Utilities
Conservation

PEEC
Pajarito Environmental
Education Center

Community Events Overview

2019 Public Event Summaries

Date	Title	Description	Attendees
5/20/19	Nature Playtime: Garden Water Conservation	Families learn techniques for conserving water in their home gardens, including mulching soil and using water-conserving plant nannies.	40
7/13/19	ScienceFest	Visitors of all ages did hands-on activities relating to solar energy.	450
7/13/19	Electric Vehicle Show	Provided an opportunity for people to learn about electric vehicles through direct observation and discussion with electric vehicle owners.	200
10/25/19	Trick-or-Treat on MainStreet	Distributed 1200 foam inserts for insulating electrical outlets and light switches.	1200
12/7/19	WinterFest	Participated in Holiday Light Parade with a focus on solar-powered holiday lights.	1200
12/2019		Video of parade served to educate viewers about availability of solar-powered lights	704

ELECTRIC VEHICLE SHOW

Electric vehicle show. Photo: Rachel Landman

The Electric Vehicle Show showcased various types of electric vehicles owned by people in Los Alamos County. It provided the public with a chance to talk directly to owners of a variety of electric vehicles. It includes both cars and bikes. While most of the vehicles were commercially made, there were a few that were home-built. There was even a report of someone ordering a Tesla after talking with one of the owners at the show! Information was provided about the DPU's LA Green program for renewable energy as well. On the following page is the handout that gave details for all the varied vehicles at the show. In 2019 we were able to move the show from the Nature Center to Central Avenue which resulted in more people being able to participate. Photo above by Rachel Landman.

LOS ALAMOS SCIENCE FeST

2019 Electric Vehicle Show

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

E-Bikes

	Make	Model	Year	Category	Odometer (miles)	Top speed if less than 35 mph	Range on ∞ (miles)	Electricity-powered mpg equivalent	lbs of CO_2 / 100 miles in 2017 electricity-powered	lbs of CO_2 / 100 miles in 2040 electricity-powered	One thing the owner likes about the vehicle	One thing the owner would change about the vehicle	If this vehicle were an animal, it would be a...	The most unique or notable about this vehicle	The most interesting place this vehicle has been	Notes
	Elby		2018	EV	325	20	25 – 70	1497 – 4191	< 2	0	It's fun and it makes riding a bike in hilly Los Alamos something I enjoy. I probably would not ride a bike in Los Alamos, especially on Diamond Drive or up steep Barranca hill, without the extra assist of the electric motor. It gives me a boost of confidence in traffic.	Can't think of anything	Puma	My bike is unique because it was designed from the ground up to be electric, not just a modified standard bike.	Exploring the streets of Los Alamos	
	iZip	E3 Vibe+	2017	EV	666	20	1 – 35	1264 – 2765	< 2	0	Maximum fun!	Needs more storage so I can haul groceries, etc.	Really fast, red bird	She's beautiful! It's amazing how many compliments I get. Green IS the new black. :-)	She has led a pretty sheltered life.	
	Magnum	Cruiser	2017	EV		20	30 – 60	1810 – 3220	< 2	0	The electric motor makes getting around town easy.	Upgrade some of the cheap parts	Meerkat	The cruiser style is more comfortable than a traditional mountain or street bicycle	The very interesting town of Los Alamos	
	Pedego	Stretch	2019	EV		20	25 – 50	1254 – 2507	< 2	0	The Stretch can carry up to 400 pounds and is super zippy while doing so, even going uphill.	The kickstand is a real piece of work. It's hard to flip it up without feeling like you're going to break a toe. I will change the kickstand at some point.	Camel	The side and back racks can be moved around to accommodate different sizes and shapes of cargo.	All over town!	
	Rad Power	RadCity 16"	2018	EV	375	20	25 – 45	1254 – 2257	< 2	0	All electric, five levels of pedal assist, and regen in the hub so it recharges when going downhill	Make it a little less heavy. The frame is also a tad too big for a 5'8" person, but that is how these bikes are built. There is a step-through model, which is better for people <5'6". It also needs a water bottle cage.	Mustang	Designed and assembled in and shipped from Seattle (from parts made in China though). Mention my name (Elizabeth Cooper) if you order one, and we both get a $50 Amazon card.	Smith's	
	Rad Power	RadWagon	2019	EV		20	26 – 68	1404 – 2808	< 2	0	It allows me to commute to work and drop off my two-year-old twins at daycare along the way—without breaking a sweat. This bike can handle up to 350 pounds and makes hauling stuff around town a piece of cake.	The front wheel tends to wobble when going uphill with a full load in back. Mostly, it just takes some getting used to, using the throttle to maintain speed uphill also helps.	Yak	The price. This bike costs $1,500 (although with accessories such as the front rack and child seats, the price increases). If you're not looking to spend a ton on an e-bike, consider RadPower (they make regular e-bikes in addition to cargo e-bikes).	All over town!	
	Tern	GSD S00	2019	EV		20	124	2792	1	0	With the seamless gear twisting, I can dial in the right amount of resistance and never worry about dropping a chain. And, if I need to cover some serious distance, the dual batteries have me covered.	This bike is expensive! $5,800 for the dual-battery option.	Pack mule	The back rack doubles as a stand if you want to store the bike vertically, and the handlebars fold down if you want to fit the bike in a small space such as a car. An integrated lock on the front wheel means you'll always have a way to keep the bike secure. It has 20-inch wheels that accelerate faster than bigger wheels. This lower center of gravity also makes the bike feel more stable with a heavy load in the back.	All over town!	
	Yuba	Spicy Curry Bosch	2018	EV		20	30 – 60	2500 – 5000	< 1	0	It's fun to ride.	None	Arctic Fox	It can carry three kids on the back or up to 300 pounds.	Around Los Alamos	

*These are estimates for charging/fueling in Los Alamos. References: Los Alamos County and USEIA.
**They offer different types of batteries. These calculations used a 10 kWh battery.
As a reference, 1 gallon of gasoline produces 20 lbs of CO_2

Street-Legal Vehicles

Conversion Note:
1 gallon of gasoline produces 20 lbs of CO_2

*These are estimates for charging/ fueling in Los Alamos.
References: Los Alamos County and USEIA.

	Make	Model	Year	Category	Odometer (miles)	0-60 (sec)	Top speed if less than 85 mph	Range on e- (miles)	Electricity-powered mpg equivalent	hybrid mpg equivalent	lbs of CO_2 / 100 electricity-powered miles to 2012*	lbs of CO_2 / 100 electricity-powered miles to 2040*	lbs of CO_2 / 100 hybrid-powered miles (USEIA)	One thing the owner loves about this vehicle	One thing the owner would change about this vehicle	If this vehicle were an animal, it would be a...	The most unique or notable about this vehicle	The most interesting place this vehicle has been	Notes
	Chevrolet	Bolt	2017	EV	9,800	6.5		238	128		23	0		The long (238 mile) range and the smooth, quiet ride	The software controlling the display has several faults, requiring too much fiddling and attention.	Deer	With a range between 240 and 300 miles, breathtaking acceleration, and priced at about $40k, the Bolt is a pleasure to drive and to own.	Taos Pueblo	
	Chevrolet	Bolt	2017	EV	22,000	6.5		238	128		23	0		Quiet and great acceleration	Smoother ride	Bobcat	Driving an EV gives an inexpressible pleasure of doing the right thing. Plus, its handling and acceleration are great.	Pajarito Mountain Ski Area	
	Chevrolet	Volt	2018	PHEV	15,000	7.5		62	106	51	27	0	39	The quiet, instant torque combined with surprisingly good handling	Visibility	Python—big and heavy; silent, powerful, and agile	We can get to Rancho de Chimayo and back with battery to spare; no gas needed.	Petroglyph National Monument	
	Ford	C-max energi	2014	PHEV		8.1	85	20	88	38	33	0	53	Its power		Electric Eel	Cannot hear the engine when it is running	Estes Park, CO	
	Honda	Insight	2000	HEV, first	196,500	10.6				73		0	28	Super high mpg	Nothing	Energizer Bunny	First hybrid in USA; still the all-time mileage champ for a non-plug-in car	Solar Fests and Earth Days in Northern and Central NM	
	Jet	ElectraVan	1981	EV	8,480		62	about 20	100		29	0		A very cool and totally impractical vehicle	Parts would be nice. With about 50 of these on the road, there are almost no parts available, so it's a constant project.	Llama	Subaru 600 MicroVan, which was used by Jet to create the ElectraVan, was sold in other parts of the world with a 550 cc gasoline engine. This van never had an engine—it was imported as a "glider". An electric motor was attached to the transmission and 1200 lbs of lead acid batteries provided the energy to drive.	I once took it into a gas station.	
	Kawasaki	454LTD	1986	EV, DIY		not tested	57	30	463		6	0		It is fun and easy to ride.	Have batteries better than the lithium iron phosphate batteries that are installed on it now.	Horse	Easy to drive: just give it "throttle" to go; apply brakes to stop; and there is no transmission.	Downtown Santa Fe	
	Porsche	914 EV	1973	EV, DIY	35,394	not tested		50	100		29	0		Cool factor	Better batteries	Chameleon	Converted to lead acid in 1990; reconverted to Li-ion in 2018	My garage	
	Tesla	3	2017	EV	38,000	4.6	140	325	126		23	0		Revolutionary. The first all-electric vehicle that's perfectly practical and a blast to drive.	Nothing. Software updates are frequent and regular, and each one makes the car even better.	Cheetah	Early model, mostly hand built	Ancient Bristlecone Pine Forest, CA	
	Tesla	3	2018	EV	23,947	4.6		310	116		25	0		Many things, but mostly that it has a long driving range on a single battery charge.	I would give it sportier suspension.	Oh, please	Everything about it is a grand paradigm shift from a conventional, gas-fired automobile.	La Castañeda Hotel, Las Vegas, NM	
	Tesla	3	2018	EV	6,607	4.6	145	310	116		25	0		It drives like a sports car.	Better factory lighting in the trunk	Peregrine Falcon	It's a TESLA!	Santa Fe, NM	
	Tesla	3	2019	EV	6,973	4.6	162	310	126		23	0		Extremely fast, drives itself, costs almost nothing to drive, zero maintenance, all-wheel drive, and improvements made a few times a week via over-the-air software updates	I can't complain. This car has no competition; it's 5 years ahead of anything you might call a competitor.	Human	Frequent over-the-air updates continuously upgrade and improve the car, including the ever-improving Full Self Driving features.	Silverthorne, CO	
	Tesla	S 75D	2017	EV	34,036	4.2		237	103		28	0		It is more environmentally responsible as I can charge it at home with my solar panels. It is also a lot of fun to drive.	I would not change a thing.	Bobcat	The Tesla Supercharger Network allows you to take longer road trips.	San Francisco	
	Tesla	S 85	2014	EV	85,000	5.4		250	101		29	0		Free, clean driving! It is mostly charged at home using solar energy and for free on the Tesla Supercharger network.	Add Full Self Driving capability. Unfortunately, the older models like this one with AutoPilot 1 aren't capable of Full Self Driving.	Moonlit Panther	Not much, it's pretty standard, but it does have the third row, rear-facing child jump seats.	Mars	
	Tesla	X	2018	EV	9,400	2.8		295	87		33	0		It doesn't burn gasoline, very quiet, fantastic acceleration, and the way it picks up speed on curves	I would add conventional knobs/push-buttons for radio and air-conditioning; the touch screen is a distraction while driving.	Jaguar	It is approved to pull a trailer—unique among electrics. That's why I chose it.	Las Cruces, NM	
	Toyota	Prius Prime	2018	PHEV	11,000	10		25	133	54	22	0	37	Only need the all-electric mode for local driving	The controls on the console interface are excessively complicated and difficult to use.		It can be driven in 100%-electric mode while in town (80% of my driving) and gets excellent gas mileage (52 – 63 mpg in hybrid mode) for longer trips.	Several trips to CO and AZ	
	Volvo	XC60 T8 Momentum	2018	PHEV	27,634	5.1		18	59	26	49	0	77	Trips from home to Los Alamos or White Rock don't burn a drop of gas.	A spare tire should've been included; we bought one and have already used the spare.	Reindeer	Named Lars. Bought it through Volvo's Overseas Delivery Program, which gives you the dealer invoice price and includes 2 free round-trip tickets to Sweden to pick it up and drive it for 2 weeks (longer if you pay for extra insurance), then turn it in at the factory to be shipped to the US.	Sweden and Norway	
	ZENN		2007	EV	1,538		25	20	245		12	0		Extreme sustainability	Modify state registration law to classify it as a 25 mph moped rather than a regular car	Monarch Butterfly	It makes you feel like a kid with a new bicycle.	Tulsa, OK	
	Zero	FXS	2017	EV	6,500		85	90	462		6	0		I love the ease of getting through traffic and having available parking anywhere.	I would like slightly more range, although it is improved every year.	Cheetah	It is completely silent, and when riding it you hear everything, including the birds chirping and people talking.	Through arroyos, up rock walls, down stairs, and over logs around Los Alamos; exploring abandoned mines and cabins in Montana	

ScienceFest

In addition to the Electric Vehicle Show, we also had a booth at ScienceFest with hands-on solar energy activities. The most popular was the solar oven that we used to make s'mores!

Photo by Rachel Landman

Trick-or-Treat on MainStreet

At Trick-or-Treat on MainStreet we distributed 1200 outlet insulation kits with instructions on how to reduce energy usage at home.

It's easy to start weatherizing with outlet and light switch draft stoppers!

Drafty outlets can account for up to 20% of the air leakage in your home. Easily installed, these items can reduce drafts and save money!

INSTRUCTIONS:

All you need is a screwdriver! Turn off power to the outlet or switch at the circuit breaker. Remove the cover plate. Punch out pre-cut holes on the gasket. Place the gasket in position and replace cover plate. For best results, install on exterior walls.

SCAN THIS CODE FOR MORE ENERGY SAVING TIPS!

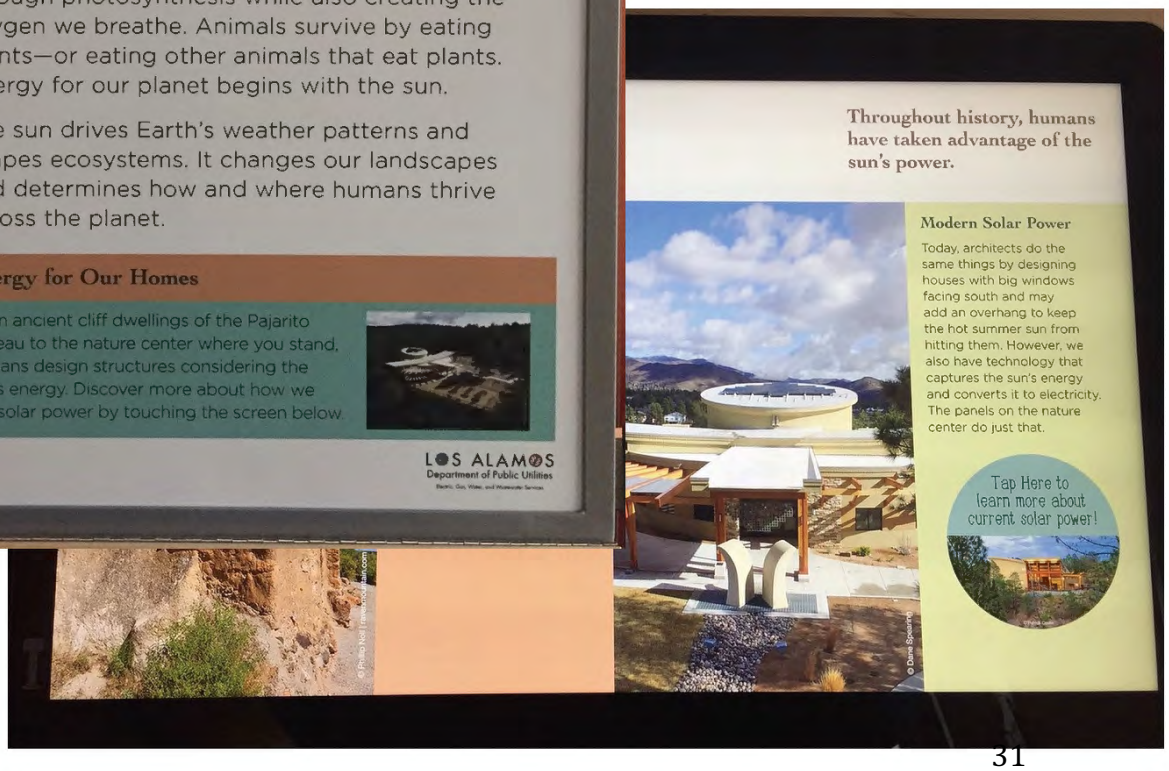
HOLIDAY LIGHT PARADE

We had a solar powered Tesla in the Holiday Light Parade to educate Los Alamos county residents about solar powered holiday lights. All the lights used were solar powered. We also put together a video of the car for people to view online which received more than 700 views.

EXHIBITS

DPU sponsors two conservation exhibits at the Nature Center: one on solar energy, and the other on water-wise gardening.

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



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

Grasses:

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

Perennials:

6. Antelope Sage (*Eriogonum jamesii*)
7. Bitterweed (*Hymenoxys 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 (*Gaillardia aristata*)
14. Hooker's Evening Primrose (*Oenothera elata*)
15. Indian Paint Brush (*Castilleja integra*)
16. James's Penstemon (*Penstemon jamesii*)
17. Little Red Columbine (*Aquilegia triternata*)
18. Mexican Hat (*Ratibida columnifera*)
19. Missouri Evening Primrose (*Oenothera macrocarpa*)
20. Nodding Onion (*Allium cernuum*)
21. Prairie Sagewort (*Artemisia frigida*)
22. Purple Geranium (*Geranium caespitosum*)
23. Perky Sue (*Tetraneuris* or *Hymenoxsys 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 (*Erigeron divergens*)
29. Sun Drops (*Calylophus hartwegii*)
30. Vining Four O'Clock (*Mirabilis oxybaphoides*)
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 scaroparius* 'Burkwoodii')
2. Creeping Sumac (*Rhus trilobata* 'Autumn Amber')
3. Giant Purple Sage (*Salvia pachyphylla*)
4. Hedge Cotoneaster (*Cotoneaster lucidus* 'Peking')
5. Lavender Cotton (*Santolina chamaecyparissus*)
6. Shrubby Cinquefoil (*Dasiphora fruticosa*)
7. Spanish Broom (*Cytisus purgans* 'Spanish Gold')

Perennials:

8. African Daisy (Osteospermum 'Avalanche')
9. Ava's Hummingbird Mint (*Agastache* 'Ava')
10. Baby Tears Stonecrop (*Sedum album chloroticum*)
11. Bearded Iris (*Iris germanica*)
12. Daylily (*Hemerocallis* 'Frans Hals')
13. Daylily (*Hemerocallis* 'Fooled 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* 'Starks's Early Hybrid')
22. Rocky Mountain Penstemon (*Penstemon strictus*)
23. Spreading Fleabane (*Erigeron 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 (*Chamaebatiaria millefolium*)
4. Red Lake Currant (*Ribes rubrum* 'Red Lake')

Grasses:

5. Little Bluestem (*Schizachyrium scoparium*)

Perennials:

6. Bee Balm 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 (*Gaillardia 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 (*Callirhoe involucrata*)
19. Red Salvia (*Salvia greggii* 'Furman'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 elizabeth@peecnature.org to see them)

DATE	GRADE	HOW SATISFIED (1-5)	COMMENTS
3/5/19	3	5	Everyone was engaged! The use of cooperative centers meant that even my learners that didn't fully "get" it were able to participate and feel successful.
4/2/19	3	4	Questioning strategies that got my kids thinking and engaging. Retention of information from visit to visit. Participation from all learners.
4/3/19	3	5	This was a perfect lesson for third grade because of all the hands-on activities. All three classes loved it! I heard many children saying things like, "What happens if you do this?" and "Let's try it another way." They were able to experiment and discover how magnets work (that magnets are not only fun, but useful too!) The worksheet helped them to express their discoveries in words or pictures. Thank you!
4/12/19	4	5	The students' conversation focused on working in the lab. They enjoyed the experiments on acidic and alkali.
4/12/19	4	5	My class was very engaged. They (mostly) listened and had questions and comments to share. May would be so much better. Not only is it cold but we are also preparing for testing.

4/12/19	4	5	Lots of open-ended questions that facilitated great answers!
4/12/19	4	5	The kids were engaged with the different workshops. Program real smooth and transitions from each were pleasant. Would like to see something about how to better save our forest.
4/12/19	4	5	Great job! Awesome program!
4/12/19	4	4	Program went well. My class was engaged. Do it later in the year like May.
5/3/19	4	4	Clay Moseley is awesome - every time! He is great with the kids. My only suggestion or comment is that often times the presenters from LANL are experts in their field, but are not able to communicate that information easily to a 4th grader. Some of the discussions/vocabulary were above their heads.
5/3/19	4	5	
5/3/19	4	5	I liked attending [the water festival] in May. The weather was better and it was a good end of the year field trip.
5/3/19	4	4	Exhibits and activities should be large enough or have enough so students can see/participate.
5/13/19	4	5	I would love having materials (literature) sent via email to our class beforehand so I could prep the kids before coming. It

			would be great to work with PEEC throughout the year through class presentations or field trips. Maybe scaffold the curriculum to complement our common core objectives.
12/1/19	4	5	Students using energy vocabulary during skit! Awesome!! Always a joy to have you in the classroom to help our students learn!

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 electric 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. Maybe 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 [overflow] 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

October 21, 2020

Los Alamos, NM 87544
www.losalamosnm.us

Agenda No.:	8.B
Index (Council Goals):	DPU FY2021 - N/A
Presenters:	Board of Public Utilities
Legislative File:	**13458-20**

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

October 21, 2020

Alan Horton
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
10/2/2019	Utilities	WR1	ANIMAL	17:30	18:30	1:00	6	6:00:00	6:00:00	0:00:02
10/15/2019	Utilities	WR2	URD Failure	20:30	21:15	0:45	3	2:15:00	8:15:00	0:00:03
10/17/2019	Utilities	13	OH Failure	16:45	18:00	1:15	5	6:15:00	14:30:00	0:00:06
10/18/2019	Utilities	WR2	URD Failure	0:30	1:45	1:15	8	10:00:00	24:30:00	0:00:10
10/19/2019	Utilities	17	URD Failure	12:00	18:15	6:15	5	31:15:00	55:45:00	0:00:22
10/29/2019	Utilities	13	UNKNOWN	21:00	22:00	1:00	28	28:00:00	83:45:00	0:00:33
10/29/2019	Utilities	13	UNKNOWN	2:30	3:00	0:30	28	14:00:00	97:45:00	0:00:39
11/17/2019	Utilities	13	LOAD	4:20	5:15	0:55	32	29:20:00	127:05:00	0:00:51
11/18/2019	Utilities	14	URD Failure	12:25	13:45	1:20	24	32:00:00	159:05:00	0:01:03
12/29/2019	Utilities	WR1	UNKNOWN	10:45	15:30	4:45	44	209:00:00	368:05:00	0:02:27
1/11/2020	Utilities	WR1	TREE	14:15	15:15	1:00	11	11:00:00	379:05:00	0:02:31
1/11/2020	Utilities	16	ANIMAL	19:15	20:00	0:45	8	6:00:00	385:05:00	0:02:33
2/12/2020	Utilities	16	URD Failure	15:50	21:30	5:40	13	73:40:00	458:45:00	0:03:03
3/13/2020	Utilities	WR2	URD Failure	15:00	18:45	3:45	3	11:15:00	470:00:00	0:03:07
3/15/2020	Utilities	16	URD Failure	7:00	15:30	8:30	6	51:00:00	521:00:00	0:03:27
5/13/2020	Utilities	16	HUMAN	19:30	20:15	0:45	31	23:15:00	544:15:00	0:03:37
5/30/2020	Utilities	WR2	Weather	20:35	0:00	3:25	951	3249:15:00	3793:30:00	0:25:10
5/31/2020	Utilities	WR2	Weather	0:00	3:28	3:28	951	3296:48:00	7090:18:00	0:47:02
6/7/2020	Utilities	WR1	UNKNOWN	2:40	4:10	1:30	66	99:00:00	7189:18:00	0:47:41
6/8/2020	Utilities	WR2	UNKNOWN	13:20	15:20	2:00	18	36:00:00	7225:18:00	0:47:56
6/11/2020	Utilities	WR2	URD Failure	6:50	7:35	0:45	13	9:45:00	7235:03:00	0:48:00
6/11/2020	Utilities	EA-4	OH Failure	16:30	17:20	0:50	100	83:20:00	7318:23:00	0:48:33
6/14/2020	Utilities	EA-4	UNKNOWN	11:00	13:00	2:00	30	60:00:00	7378:23:00	0:48:57
6/17/2020	Utilities	WR2	UNKNOWN	21:00	23:30	2:30	80	200:00:00	7578:23:00	0:50:16
6/28/2020	Utilities	17	UNKNOWN	11:25	13:00	1:35	2	3:10:00	7581:33:00	0:50:18
7/5/2020	Utilities	WR2	URD Failure	13:00	14:00	1:00	20	20:00:00	7601:33:00	0:50:25
7/11/2020	Utilities	WR1	URD Failure	12:30	13:50	1:20	15	20:00:00	7621:33:00	0:50:33
7/11/2020	Utilities	13	OH Failure	20:30	21:30	1:00	13	13:00:00	7634:33:00	0:50:39
7/12/2020	Utilities	17	UNKNOWN	21:30	23:00	1:30	17	25:30:00	7660:03:00	0:50:49
7/18/2020	Utilities	13	ANIMAL	21:50	22:30	0:40	25	16:40:00	7676:43:00	0:50:55
7/25/2020	Utilities	WR1	ANIMAL	18:30	19:30	1:00	75	75:00:00	7751:43:00	0:51:25
7/27/2020	Utilities	WR2	URD Failure	11:45	18:30	6:45	44	297:00:00	8048:43:00	0:53:23
8/7/2020	Utilities	14	URD Failure	6:20	7:25	1:05	4	4:20:00	8053:03:00	0:53:25
8/9/2020	Utilities	WR2	URD Failure	13:00	13:30	0:30	25	12:30:00	8065:33:00	0:53:30
8/17/2020	Utilities	WR1	URD Failure	0:35	2:00	1:25	59	83:35:00	8149:08:00	0:54:03
8/19/2020	Utilities	13	URD Failure	4:00	4:30	0:30	25	12:30:00	8161:38:00	0:54:08
9/4/2020	Utilities	16	UNKNOWN	16:00	17:00	1:00	11	11:00:00	8172:38:00	0:54:13
9/4/2020	Utilities	WR1	UNKNOWN	17:00	18:00	1:00	2	2:00:00	8174:38:00	0:54:14
9/5/2020	Utilities	13	UNKNOWN	18:00	19:00	1:00	1	1:00:00	8175:38:00	0:54:14

CIRCUIT SAIDI IS CALCULATED ACCORDING TO THE NUMBER OF CUSTOMERS IN EACH CIRCUIT RESPECTIVELY

Running SAIDI Circuit 13	Running SAIDI Circuit 14	Running SAIDI Circuit 15	Running SAIDI Circuit 16	Running SAIDI Circuit 17	Running SAIDI Circuit 18	Running SAIDI Circuit EA4 & Royal Crest	Running SAIDI Circuit WR1	Running SAIDI Circuit WR2	Monthly SAIDI		Monthly Customer Minutes out of service	WEATHER SAIDI
							0:00:14					
								0:00:08				
0:00:14												
								0:00:37				
				0:08:58								
0:01:01												
0:01:31									OCTOBER	0:00:39	97:45:00	
0:02:35												
	0:03:34								NOVEMBER	0:00:24	61:20:00	
							0:08:08		DECEMBER	0:01:23	209:00:00	
							0:08:33					
			0:00:12						JANUARY	0:00:07	17:00:00	
			0:02:36						FEBRUARY	0:00:29	73:40:00	
								0:00:42				
			0:04:15						MARCH	0:00:25	62:15:00	
			0:05:01									
								3:23:34				0:21:33
								6:49:24	MAY	0:43:35	6620:18:00	0:21:52
							0:12:18					
								6:51:39				
								6:52:16				
						0:00:03						
						0:00:11						
								7:04:45				
				0:09:53					JUNE	0:03:16	491:15:00	
								7:06:00				
							0:13:03					
0:03:03												
				0:17:12								
0:03:40												
							0:15:53					
								7:24:32	JULY	0:03:06	467:10:00	
	0:04:03											
								7:25:19				
							0:18:44					
0:04:07									AUG	0:00:45	112:55:00	
			0:05:22									
							0:18:48					
0:04:09									SEP	0:00:11		
Circ 13	**Circ 14**	**Circ 15**	**Circ 16**	**Circ 17**	**Circ 18**	**Circ EA4**	**Circ WR1**	**Circ WR2**	**Total**	**0:53:23**		**0:43:25**
1655	**539**	**1875**	**1842**	**209**	**213**	**165**	**1586**	**961**	**9045**			

Twelve Month History	SEPT 2020	-
Total # Accounts	9045	-
Total # Interruptions	39	-
Sum Customer Interruption Durations	8175:38:00	hours:min:sec
# Customers Interrupted	2802	
SAIFI (APPA AVG. = 1.0)	0.31	int./cust.
SAIDI (APPA AVG. = 1:00)	0:54	hours:min
CAIDI	2.55	hours:min/INT
ASAI	99.9996%	% available

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

  SAIFI= (Total number of customer interruptions) / (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)

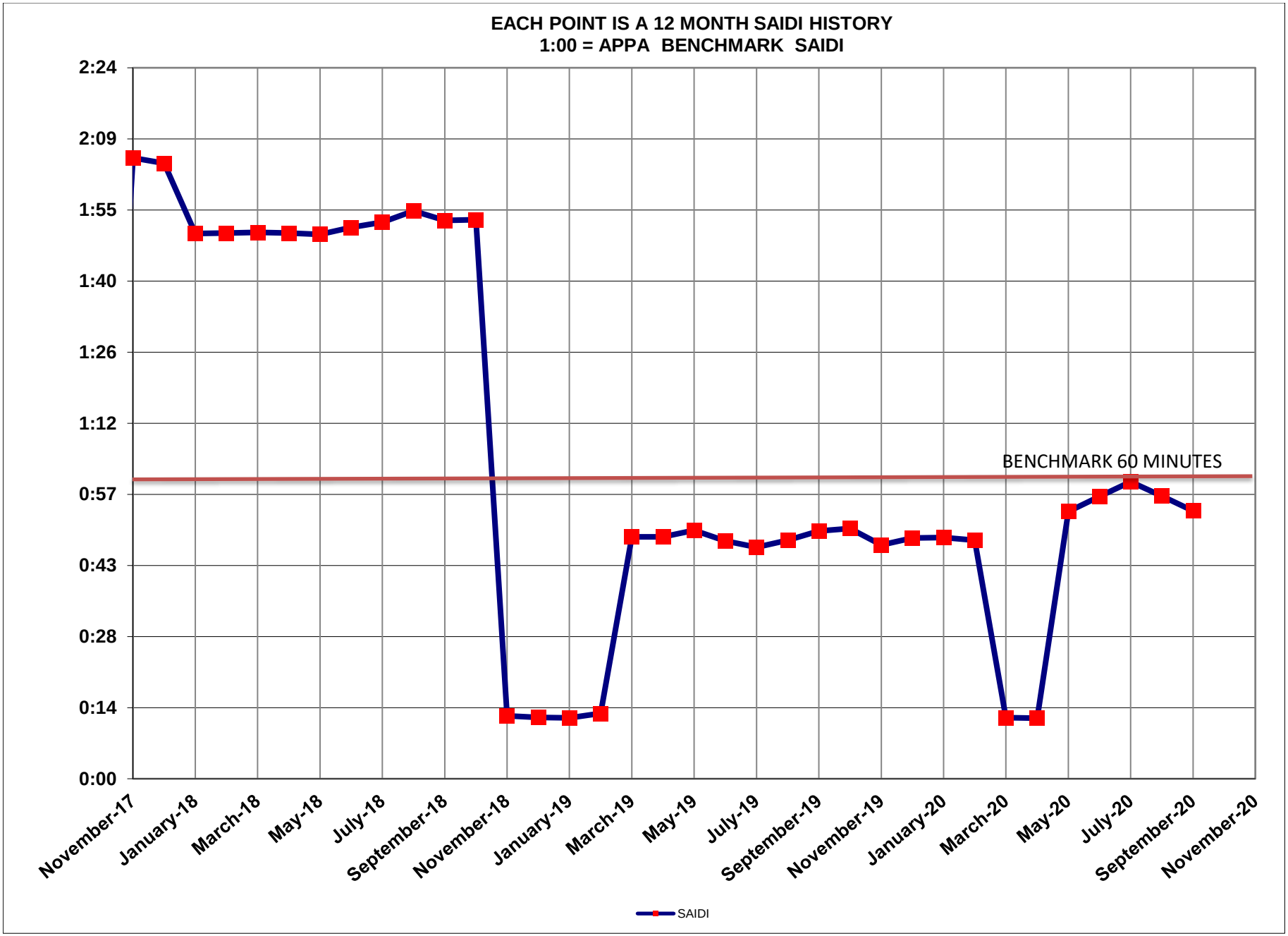
  SAIDI= (Sum of all customer outage durations) / (Total number of customers served)

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

  CAIDI= (Sum of all customer outage durations) / (Total number of customer interruptions) = SAIDI / SAIFI

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

  ASAI= (Service hours available) / (Customer demand hours) = 8760-SAIDI / 8760


EACH POINT IS A 12 MONTH SAIDI HISTORY
1:00 = APPA BENCHMARK SAIDI
2:24
2:09
1:55
1:40
1:26
1:12
0:57
0:43
0:28
0:14
0:00
BENCHMARK 60 MINUTES
November-17
January-18
March-18
May-18
July-18
September-18
November-18
January-19
March-19
May-19
July-19
September-19
November-19
January-20
March-20
May-20
July-20
September-20
November-20
SAIDI

STATUS REPORTS

ACCOUNTS RECEIVABLES

Los Alamos County Utilities Department
Active Receivables Over 90 Days Past Due
October 1, 2020

Account	Customer ID	Acct Type	Comments	90 - 119	120 +
3009699	2214764	RS	Paid $25.00 on 10/9/2020	$ 50.12	$ -
3008795	2215540	RS	Unable to leave voicemail	$ 52.42	$ -
3002779	2200059	RS	Paid $358.59 on 10/9/2020	$ 53.84	$ -
3004947	2015985	RS	Called left voicemail to call DPU	$ 56.86	$ -
3002802	2092078	RS	Will pay $283.12 on 10/16/2020.	$ 60.06	$ -
3002470	2008602	RS	Paid $400 on 10/9/2020	$ 61.72	$ -
3002367	2137648	RS	Unable to leave voicemail	$ 63.51	$ -
3000666	2002399	CM	Paid $500 on 10/8/2020	$ 64.88	$ -
3000208	2215839	RS	Paid $196.41 on 10/6/2020	$ 69.23	$ -
3004204	2131208	RS	Called left voicemail to call DPU	$ 72.08	$ -
3007410	2020433	RS	Called left voicemail to call DPU	$ 86.79	$ -
3003438	2208183	RS	Paid $634.65 on 10/07/2020	$ 100.00	$ -
3004217	2013317	RS	Unable to leave voicemail	$ 109.36	$ -
3002424	2032538	RS	Applied for CARES, promised to make payment on 10/9, no payment made	$ 111.54	$ -
3008024	2020168	RS	Paid $150 on 10/5/2020 and $100 on 10/9/2020	$ 117.73	$ -
3004257	2009984	RS	Promise to make payment 10/16 and make payment arrangement	$ 121.39	$ -
3002452	2205589	RS	Applied for assistance, waiting to hear back	$ 123.58	$ -
3002375	2127058	RS	Paid $600 on 10/9/2020	$ 135.97	$ -
3002505	2215041	RS	Called left voicemail to call DPU	$ 157.62	$ -
3002364	2082108	RS	Called left voicemail to call DPU	$ 163.17	$ -
3007343	2022445	RS	Called left voicemail to call DPU	$ 172.75	$ -
3004327	2087778	RS	Unable to leave voicemail	$ 173.07	$ -
3007537	2214967	RS	Called left voicemail to call DPU	$ 174.99	$ -
3005174	2215050	RS	Called left voicemail to call DPU	$ 206.61	$ -
3008040	2023776	RS	Customer to bring in $1,000 10/8, no payment made	$ 293.14	$ -
3009813	2108138	RS	Paid $233.31 on 10/12/2020	$ 233.00	$ 0.31
3002911	2030608	RS	CUSTOMER PROMISED TO PAY $500 ON 10/16/2020	$ 143.51	$ 4.93
3007810	2014855	RS	Called left voicemail to call DPU	$ 233.44	$ 7.60
3002814	2052048	RS	Called left voicemail to call DPU	$ 124.96	$ 12.00
3000184	2137888	RS	Called left voicemail to call DPU	$ 110.16	$ 22.49
3004737	2119798	RS	Paid $500 on 10/8/2020	$ 305.77	$ 34.01
3000751	2002516	CM	Called left voicemail to call DPU	$ 130.45	$ 40.04
3005810	2132968	RS	CUSTOMER WAS MAKING PAYMENTS TO OLD ACCOUNT.	$ 187.30	$ 46.21
3002277	2137728	RS	Called left voicemail to call DPU	$ 40.32	$ 47.99
3002295	2113348	RS	Called left voicemail to call DPU	$ 29.20	$ 50.79
3005368	2029278	RS	Called left voicemail to call DPU	$ 222.00	$ 56.00
3005769	2018418	RS	Unable to leave voicemail	$ 134.39	$ 61.55
3003962	2200279	RS	Paid $420.95 on 10/9/2020	$ 138.13	$ 61.87
3002334	2126448	RS	Unable to leave voicemail	$ 252.70	$ 68.04
3002323	2208833	RS	Unable to leave voicemail	$ 39.46	$ 86.01
3000230	2032358	RS	Phone number on file is not correct	$ 161.45	$ 94.56
3007360	2015299	RS	Called left voicemail to call DPU	$ 372.98	$ 94.87
3000229	2030188	RS	Phone number on file is not correct	$ 106.72	$ 102.97
3010128	2114898	RS	Spoke with customer, applying for assistance	$ 13.50	$ 105.42
3007049	2021703	CM	PROMISED TO PAY FULL AMOUNT ON 10/13/2020	$ 166.96	$ 109.12
3002285	2215330	RS	Called left voicemail to call DPU	$ 35.13	$ 130.75
3008792	2121088	RS	Called left voicemail to call DPU	$ 36.33	$ 134.46
3002279	2103128	RS	Paid $100 10/5/2020	$ 33.40	$ 136.38
3000479	2200339	RS	Paid $793.95 on 10/7/2020	$ 128.14	$ 147.89
3002308	2098078	RS	Called left voicemail to call DPU	$ 38.72	$ 157.04
3007442	2133538	RS	Paid $159.56 on 10/9/2020	$ -	$ 159.56
3000153	2135978	RS	No phone number on file	$ 97.29	$ 163.34
3005246	2000373	RS	Unable to leave voicemail	$ 172.10	$ 172.27
3002756	2135128	RS	Applied for CARES	$ 112.69	$ 184.95

3003990	2069638	RS	Called left voicemail to call DPU	$	215.50	$	194.81
3009794	2084728	RS	Called left voicemail to call DPU	$	72.26	$	209.68
3004278	2044978	RS	Paid $700 on 10/2/2020 and $300 on 10/09/2020	$	160.30	$	223.90
3000189	2131678	RS	Phone number on file is not correct	$	152.37	$	232.02
3000068	2113668	RS	Spoke with customer, no payment or payment arrangement	$	107.86	$	233.60
3003818	2066808	RS	Called left voicemail to call DPU	$	177.78	$	239.26
3003169	2215149	RS	Payment arrangement on file	$	240.10	$	245.69
3000673	2002547	CM	Unable to leave voicemail	$	329.65	$	251.44
3010216	2136238	HY	Hydrant	$	-	$	268.72
3004025	2094558	RS	Paid $200 on 10/7/2020	$	181.12	$	271.68
3007007	2215166	CM	Called left voicemail to call DPU	$	83.82	$	295.10
3002389	2135428	RS	Called left voicemail to call DPU	$	174.67	$	296.04
3008958	2034248	RS	CALLED 505-672-9271 ON 10/8/20, RANG 5 TIMES AND HUNG UP. CALLED T	$	196.07	$	299.38
3004207	2012492	RS	Applied for CARES	$	166.97	$	364.23
3007272	2074278	RS	Called left voicemail to call DPU	$	-	$	364.39
3008287	2016070	RS	Paid $300 on 10/12/2020	$	284.59	$	369.26
3008959	2127588	RS	Called left voicemail to call DPU	$	218.55	$	382.88
3002328	2139618	RS	Called left voicemail to call DPU	$	52.56	$	383.42
3004119	2215647	RS	Unable to leave voicemail	$	238.42	$	426.02
3006934	2134408	RS	Paid $600 on 10/5/2020	$	106.34	$	440.25
3005372	2215225	RS	Called left voicemail to call DPU	$	133.75	$	445.01
3002803	2098438	RS	Called left voicemail to call DPU	$	78.28	$	449.40
3003508	2124208	RS	Paid $677.23 on 10/5/2020	$	204.54	$	472.69
3002412	2003472	RS	Called left voicemail to call DPU	$	132.73	$	524.10
3004329	2069558	RS	Unable to leave voicemail	$	177.00	$	525.34
3006107	2026961	RS	Paid $350.00 on 10/9/2020	$	216.91	$	560.34
3007047	2021698	CM	Customer to make payment arrangement on 10//	$	161.36	$	583.11
3002428	2089728	RS	Paid $500 on 10/2/2020	$	232.96	$	592.34
3000633	2106478	CM	Unable to leave voicemail	$	67.07	$	599.22
3001538	2005414	CM	Paid $1,400.11 on 10/5/2020	$	102.93	$	604.36
3005573	2017544	RS	Appling for financial assistance, will let us know if something come through	$	316.87	$	614.74
3004032	2126238	RS	Called left voicemail to call DPU	$	159.86	$	657.07
3004702	2083378	RS	Called left voicemail to call DPU	$	148.97	$	685.67
3003969	2012357	RS	Unable to leave voicemail	$	175.78	$	736.77
3004459	2063338	RS	Called left voicemail to call DPU	$	277.67	$	818.39
3002768	2207065	RS	Unable to leave voicemail	$	136.66	$	869.02
3009005	2039248	RS	Called, customer will be in 10/13 to make payment and set up for auto pay	$	288.92	$	882.62
3005470	2017719	RS	Paid $600 on 10/6/2020	$	256.42	$	925.81
3002362	2008831	RS	Unable to leave voicemail	$	294.39	$	935.99
3004060	2085918	RS	Unable to leave voicemail	$	164.86	$	1,113.65
3007663	2008610	RS	Called left voicemail to call DPU	$	276.72	$	1,126.40
3004024	2004969	RS	Paid $500 on 10/9/2020	$	323.68	$	1,222.57
3009369	2026665	RS	Unable to leave voicemail	$	251.05	$	1,294.72
3002379	2115288	RS	Applied for CARES	$	191.61	$	1,313.21
3005342	2069488	RS	Unable to leave voicemail	$	166.24	$	1,348.80
3005523	2013427	RS	Paid $320 on 10/5/2020, Applied for UAP	$	167.82	$	1,427.11
3004423	2130778	RS	Called left voicemail to call DPU	$	206.35	$	1,428.53
3008505	2121958	RS	Called left voicemail to call DPU	$	190.68	$	1,482.41
3005737	2028518	RS	Customer will make some payment on 10/13/2020	$	261.93	$	1,517.08
3006238	2072868	RS	Unable to leave voicemail	$	124.28	$	1,599.55
3006953	2053328	CM	Called left voicemail to call DPU	$	207.37	$	1,676.88
3002769	2009914	RS	Paid $500 on 10/9/2020	$	125.90	$	1,794.28
3008846	2025446	RS	Unable to leave voicemail	$	161.13	$	1,837.52
3002482	2068968	RS	Customer mailing check for $2,500	$	186.41	$	1,862.99
3006881	2072868	RS	Update lien on file	$	149.16	$	1,915.51
3006513	2036208	RS	Phone number on file is not correct	$	270.09	$	2,095.42
3004678	2014731	RS	Called left voicemail to call DPU	$	198.65	$	2,192.70
				$	**16,998.56**	**$**	**49,216.51**
111	**Accounts**					**$**	**66,215.07**

Los Alamos County Utilities Department
Receivables More than 60 Days Inactive Accounts
October 1, 2020

YEAR	*OUTSTANDING 10/1*	*# OF ACCOUNTS*	*OUTSTANDING 9/1*	*# OF ACCOUNTS*
FY16	$ 24,483.69	67	$ 25,214.87	69
FY17	$ 14,813.55	63	$ 14,813.55	69
FY18	$ 26,010.27	85	$ 26,360.27	85
FY19	$ 54,480.09	205	$ 54,553.46	207
FY20	$ 54,331.17	220	$ 54,804.62	225
FY21	$ 4,338.00	31		
TOTAL	**$ 178,456.77**	**671**	**$ 175,746.77**	**655**

STATUS REPORTS

SAFETY

DEPARTMENT OF PUBLIC UTILITIES CLAIMS

September 2020

(Information provided by the County Risk Department)

TORT CLAIMS

None

WORKERS COMPENSATION

1. A lineman fractured/lacerated his right middle finger when removing a heavy manhole cover; returned to duty same day.

COUNTY PROPERTY DAMAGE

None

OSHA INCIDENT REPORT

Attached

	Hours Worked	Hours Worked	Hours Worked	Hours Worked	Hours Worked	Hours Worked
	ADMIN	**EL DIST**	**EL PROD**	**GWS**	**WA PROD**	**WWTP**
MONTH						
Jan - 2020	4108.0	2219.0	2374.0	5239.0	1692.0	1731.0
Feb - 2020	2956.0	1663.0	1723.0	3796.0	1272.0	1373.0
Mar - 2020	3216.0	1778.0	1881.0	4013.0	1333.0	1424.0
Apr - 2020	3481.0	2016.0	1824.0	4464.0	1446.0	1468.0
May - 2020	3441.0	2121.0	1780.0	4661.0	1353.0	1415.0
June - 2020	3208.0	1979.0	1594.0	4002.0	1189.0	1372.0
July - 2020	4877.0	2789.0	2471.0	6170.0	2026.0	1996.0
Aug - 2020	3552.0	1897.0	1927.0	4080.0	1247.0	1355.0
Sept - 2020	3150.0	1502.0	1929.0	3547.0	1189.0	1356.0
Oct - 2019	3390.0	1666.0	1704.0	3800.0	1304.0	1326.0
Nov - 2019	3065.0	1689.0	1700.0	3735.0	1242.0	1040.0
Dec - 2019	2717.0	1631.0	1595.0	3935.0	1104.0	1276.0
Total Hrs Worked ->	41161.0	22950.0	22502.0	51442.0	16397.0	17132.0
Number of Recordable Injury and Illness Cases	0	2	0	1	0	0
OSHA Recordable Injury & Illness Incidence Rate	0.00	17.43	0.00	3.89	0.00	0.00
Number of OSHA Days Away Days Restricted (DART) cases	0	0	0	0	0	0
OSHA Days Away Days Restricted (DART) Rate	0.00	0.00	0.00	0.00	0.00	0.00