

**COMMISSIONERS PREAGENDA  
FOR THE REGULAR MEETING OF  
CLALLAM COUNTY PUBLIC UTILITY DISTRICT #1  
BOARD OF COMMISSIONERS  
AUGUST 9, 2021 at 1:30 PM**

**Join Zoom Meeting:**

<https://us06web.zoom.us/j/87258297130?pwd=bXo4eE9qdWprZ0Jxb0RXbVVNYmhNUT09>

**Meeting ID:** 872 5829 7130 | **Passcode:** 605055

**One tap mobile:** +12532158782,,87258297130#,,, \*605055# US (Tacoma)

**Find your local number:** <https://us06web.zoom.us/j/87258297130?pwd=bXo4eE9qdWprZ0Jxb0RXbVVNYmhNUT09>

- **Consent Agenda Items**

The Commissioners will consider approving Consent Agenda items.

- **Cost of Service Presentation by FCS Group**

FCS Group's Sergey Tarasov will present a review of the District's Cost of Service.

- **RESOLUTION 2206-21 Establishing the Electric System Rate Schedules for 2022-2023**

The Commissioners will consider adopting Resolution 2206-21, which establishes the Electric System Rate Schedules for 2022-2023.

Staff recommendation: Adopt Resolution 2206-21 which establishes the Electric System Rate Schedules for 2022-2023.

- **Acceptance Memo of Completion for Forks Operation Building Contract No. 190804**

The Commissioners will consider authorizing Acceptance Memo of Completion for Forks Operation Building Contract No. 190804.

Staff requests a motion, second, and vote: The Board authorizes Acceptance Memo of Completion for Forks Operation Building Contract No. 190804 with Interwest Construction, Inc for a total cost of \$3,792,389.93 including WSST. The project consisted of construction of a single story operations building of approximately 11,640 square feet located at 241 Industrial Center in Forks, WA.

- **Acceptance Memo of Completion for Pole Inspection Treating, and Reporting Bid No. 211003**

The Commissioners will consider authorizing Acceptance Memo of Completion for Pole Inspection Treating, and Reporting Bid No. 211003.

Staff requests a motion, second, and vote: The Board authorizes Acceptance Memo of Completion for Pole Inspection Treating, and Reporting Bid No. 211003 with Pacific Pole Inspection, LLC. The project consisted of pole inspection, treating, and reporting of an unspecified number of electrical transmission and distribution poles within Clallam County. The total contract cost is \$141,601.02 including WSST.

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*The Commissioners will also consider the customary business matters associated with approval of payments, minutes of the previous meeting, reports from Commissioners and staff, comments from the public, and other items of information or general business. Items may be added to, or removed from, the agenda at the meeting.*

**AGENDA**  
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**1. CALL TO ORDER**

**2. APPROVAL OF CONSENT AGENDA**

- a. Minutes of the July 12, 2021 regular meeting;
- b. Claim vouchers for July 12 through August 2, 2021 for a total of \$4,113,302.26;
- c. Payroll vouchers for the period of July 1 through July 15, 2021; and
- d. Removal of delinquent accounts from August 2021 active accounts receivable totaling \$16,035.93 including a 30% collection fee; and
- e. Contractor prequalification for Michels Power in the amount of \$10,000,000.

**3. AGENDA REVISIONS**

**4. COMMENTS FROM THE PUBLIC**

**5. BUSINESS ITEMS**

- a. Cost of Service presentation by FCS Group Sergey Tarasov
- b. RESOLUTION 2206-21 Establishing the Electric System Rate Schedules for 2022-2023 Sean Worthington
- c. Acceptance Memo of Completion Forks Operation Bldg. Contract No. 190804 Bill Decker
- d. Acceptance Memo of Completion Pole Inspection Treating, and Reporting Bid No. 211003 Bill Decker

**6. CORRESPONDENCE/COMMUNICATIONS**

**7. COMMISSIONER REPORTS**

**8. STAFF REPORTS**

- a. Brief report on the District's Internship Program Colin Young
- b. Presentation on a potential solar PV project designed by our Engineering intern Titan Berson

**9. BOARD ACTIONS FOR STAFF**

**10. EXECUTIVE SESSION**

**11. COMMENTS FROM THE PUBLIC**

**12. ADJOURN**

# CLALLAM COUNTY PUBLIC UTILITY DISTRICT #1

Minutes of the Regular Meeting of the Board of Commissioners

Main Office | 104 Hooker Road | Sequim, WA 98382

July 12, 2021 – This meeting was held remotely via ZOOM

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## Commissioners Present

Will Purser, President

Rick Paschall, Vice President

Jim Waddell, Secretary

## Staff Present

Doug Nass, General Manager

John Purvis, Assistant General Manager

Sean Worthington, Finance Manager/Treasurer

Tom Martin, Water/Wastewater Manager

Mike Hill, Engineering Manager

Lori Carter, Controller/Auditing Officer

Jamie Spence, HR Manager

Nicole Hartman, Communications Manager

Teresa Lyn, Executive Assistant

## Others Present as Identified

Paula Barnes

Janet Marx

Patti Morris

The meeting commenced at 1:31 PM.

## CONSENT AGENDA

Upon recommendation of staff, and upon motion of Commissioner Paschall seconded by Commissioner Waddell and carried, the Commissioners approved the following consent agenda items:

- a. Minutes of the June 21, 2021 special meeting;
- b. Minutes of the June 28, 2021 regular meeting;
- c. Claim vouchers for June 28 through July 6, 2021 for a total of \$919,256.00;
- d. Payroll vouchers for the period of June 16 through June 30, 2021; and
- e. Removal of delinquent accounts from the July 2021 active accounts receivable totaling \$6,880.33 including a 30% collection fee.

## AGENDA REVISIONS

General Manager recommended that today's staff reports be added to the business items, due to Commissioner Purser's need to drive to Richland directly after the meeting. Additionally, a new item was added: Update on District's meeting last week with the County.

## COMMENTS FROM THE PUBLIC

None.

## BUSINESS ITEMS

General Manager Doug Nass initiated a conversation about appointing District delegates to NW RiverPartners. He recommended that Commissioner Paschall be appointed as the delegate and Communications Manager Nicole Hartman appointed as the alternate delegate. Upon recommendation of staff, and upon motion of Commissioner Paschall, seconded by Commissioner Purser and carried, the Board approved that Commissioner Paschall shall be appointed as the delegate to NW RiverPartners with Communications Manager Nicole Hartman appointed as the alternate delegate.

General Manager Doug Nass advised the Board of PUD's tentative plans to reopen District facilities to the public. At present, the plan is to reopen from September 1 through October 31 only to delinquent ratepayers for one-on-one meetings with PUD staff about accounts in arrears due to the pandemic. These meetings will take place in the boardroom where social distancing requirements can be followed. We tentatively plan to resume in-person Commissioners meetings on November 8 and staff is looking into the possibility of holding hybrid meetings.

Finance Manager/Treasurer Sean Worthington provided the Board with an update on the possible impact of the Governor's decision to extend the utility disconnection moratorium deadline from July 31 to September 30, 2021. He advised that at the end of June current arrearages were at about \$700,000 which is a 13,000% increase in the 90+ days arrear customers. He predicts that arrearages will reach nearly a million dollars by the new moratorium deadline of September 30<sup>th</sup>. Despite a letter-writing campaign by Washington Public Utility Districts Association (WPUDA) and Washington PUD's urging the Governor to not extend the moratorium due to the financial impact to utilities, there has been no response from the Governor's office.

At a recent Clallam County Commissioners' meeting, PUD was approved to receive a requested \$350,000 in American Rescue Plan Act (ARPA) funding in order to address our ratepayer's current pandemic-related arrearages. We expect to receive a sub-recipient agreement from the County this week and at that point we will start setting up private appointments with our past-due customers to guide them in applying for assistance. He did also advise that the City of Sequim recently received \$56,000 in Community Development Block Grant (CDBG) funding, which will be utilized to assist low-income residents pay their utility bills.

Engineering Manager Mike Hill provided the Board with an update on the avian (swan) and power line mitigation efforts taking place on the pond adjacent to Kirner Road in Sequim. PUD and Wave cable will start work in August to bury the power lines near the pond, which will prevent the swan injuries and death which are currently occurring when the swans fly into the lines. The work is scheduled to be completed prior to the swan's November migration period. Several local organizations raised the nearly \$65,000 in funds to pay for the work.

The Bonneville Power Administration's (BPA)'s post-2028 contract is at this point a standing agenda item. There was no new information shared on this issue and thus no discussion.

## **CORRESPONDENCE/COMMUNICATIONS**

None.

## **COMMISSIONER REPORTS**

Commissioner Paschall met with Commissioner Collins of Jefferson PUD, who noted that there was quite a bit of staff interaction between the two PUDs but not so much between Commissioners of each District. Commissioner Purser advised that at one time Clallam and Jefferson PUD held joint commissioner meetings and suggested that starting up meetings in the future something we might want to look at.

Commissioner Waddell attended a NW RiverPartners meeting. Topic was a request to increase dues to cover reductions in revenue. He also attended a Northwest Power Council Meeting at which the topic was the heat wave in eastern Washington and related power distribution issues.

Commissioner Purser attended Energy Northwest (EN) meetings. He is participating in candidate interviews for the CEO position at Energy Northwest. There are four internal and one external candidate and the CEO selection is expected to be made by the end of July.

**BOARD ACTION ITEMS FOR STAFF**

None.

**STAFF REPORTS**

Staff reports were covered in Business Items.

**COMMENTS FROM THE PUBLIC**

None.

**ADJOURN**

There being no further business to come before the Commission, the meeting adjourned at 2:00 PM.

**ATTEST:**

\_\_\_\_\_  
President

\_\_\_\_\_  
Vice President

\_\_\_\_\_  
Secretary

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*A detailed transcript of this meeting via audio recording is available to the public on the Commission Meetings page of the PUD website here: <https://clallampud.net/commission-meetings/>.*

July 12, 2021

**SUMMARY VOUCHER APPROVAL**  
**PUBLIC UTILITY DISTRICT #1 OF CLALLAM COUNTY**  
**OPERATING FUND**

We certify, under penalty of perjury, that the materials have been furnished, the services rendered, or the labor performed as described herein, and that the attached list of claims are a just, due and unpaid obligation against Public Utility District No. 1 of Clallam County, and that we are authorized to authenticate and certify said claims.

SIGNED Yoni Carter DATE 8/2/21  
AUDITING OFFICER

[Signature] DATE 8/2/21  
GENERAL MANAGER

Vouchers audited and certified by the Auditing Officer and the General Manager have been recorded on the attached list(s) which has been made available to the Board of Commissioners of Public Utility District No. 1 of Clallam County. We, the undersigned Board of Commissioners of Public Utility District No. 1 of Clallam County, approve for payment those vouchers included on the attached list(s):

Summary for Voucher Lists Dated 7/12/2021–8/2/2021

Checks	\$	1,816,613.44
Wire Transfers		2,255,891.73
E-Payment		40,567.89
Prepays		229,20
Total	\$	4,113,302.26

\_\_\_\_\_  
COMMISSIONER

\_\_\_\_\_  
COMMISSIONER

\_\_\_\_\_  
COMMISSIONER

**PUD#1 OF CLALLAM COUNTY, WASHINGTON**

**AUGUST 2021  
DELINQUENT ACCOUNTS TO BE REMOVED  
FROM ACTIVE ACCOUNTS RECEIVABLE**

Delinquent accounts listed for electricity and water on the attached pages are approved to be removed from the active accounts receivable. All accounts to be removed are grouped and total as follows:

08/02/21	Clallam Bay – Evergreen	\$	1,999.85
08/02/21	Forks – Evergreen	\$	1,406.70
08/02/21	Port Angeles – Evergreen	\$	4,496.29
08/02/21	Sequim – Evergreen	\$	4,432.49
08/02/21	All Area-Direct W/O Bankruptcy	\$	-
08/02/21	All Area-Direct W/O Deceased	\$	-
08/02/21	All Area-Direct W/O Small Balance	\$	-
	<b>SUBTOTAL</b>	\$	<b>12,335.33</b>
08/02/21	30% Collection Fee	\$	3,700.60
	<b>TOTAL</b>	\$	<b>16,035.93</b>
	<b>Previous Debt Collected in July 2021</b>	\$	<b>3,333.68</b>
	<b>Previous Debt Collected Year To Date 2021</b>	\$	<b>13,045.81</b>

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
President

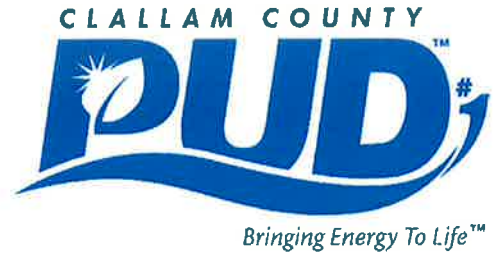
\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Vice-President

SW:kw

Attachments

These lists comply with our CIS software which removes accounts from the active accounts receivable when placed with a collection agency (classifies them as bad debt). The exceptions are bankruptcies, deceased customers and customer accounts with small balances under \$20. These are removed under the categories of All-Area Direct W/O, but not placed with a collection agency.



MEMORANDUM

Date: July 26, 2021  
To: Doug Nass, General Manager  
From: John Purvis, Assistant General Manager  
Re: CONTRACTOR PREQUALIFICATION APPLICATIONS

The contractor on the following list is requesting approval for prequalification for the upcoming calendar year. Sean Worthington, Treasurer/Finance Manager, has examined the financial data submitted with the application as well as the bonding letter from their surety and/or bonding company and has recommended the prequalification amount as indicated:

Contractor	Previously Approved Amount	Recommended Amount
Michels Power	\$5,000,000	\$10,000,000

Approved by Board of Commissioners at meeting of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Doug Nass, General Manager

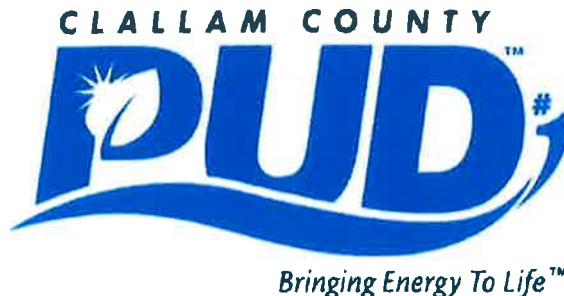


District Use Only: MH  JP  TL  BD  SW  JS

Previous Pre-Qual Amount: \$ 5,000,000 New Pre-Qual Amount: \$10,000,000

References checked by: \_\_\_\_\_ (on new contractors only) Date: \_\_\_\_\_

Date To Board: July 26, 2021



**APPLICATION FOR PREQUALIFICATION TO BID ON  
CONSTRUCTION OR IMPROVEMENT OF ELECTRICAL FACILITY**

Contractors wishing to apply to the PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY for designation as a pre-qualified bidder for construction or improvement of any electrical facility shall complete the following questionnaire and submit all the information requested.

As used herein, the term "construction or improvement of any electrical facility" shall mean the construction, the moving, maintenance, modification, or enlargement of facilities primarily used or to be used for the transmission or distribution of electricity at voltages above seven hundred fifty volts, including structures directly supporting transmission or distribution conductors but not including site preparation, housing, or protective fencing associated with but not included in a contract for such construction, moving, modification, maintenance, or enlargement of such facilities.

1. Name of Business: Michels Pacific Energy, Inc.
2. Address -- Mailing: P.O. Box 15059, Tumwater, WA 98511-5059
- Business: 9433 Dowcor Lane S.W., Tumwater, WA 98512
- Telephone Number: 360 236-0472
- FAX Number: 360 236-0478
- E-Mail Address: mpebids@michels.us
- U.B.I. Number: 604-708-922
- Contractor Registration No: MICHEPE794KC
- WA Employment Security No: 000-243823-00-6
- Dept. of Revenue State Excise Tax No: 604-708-922
- Company Federal Tax ID No: 84-2048754
- Sole Proprietorship  Partnership  Incorporation

3. If Applicant is a corporation:

a. State of incorporation: Delaware

b. Name and address of registered agent: CT Corporation  
505 Union Avenue S.E - Suite 120: Olympia, WA 98501

c. Names and addresses of officers of the corporation and their length of time with corporation. Indicate by an "\*" those authorized to sign contracts:

President, Benjamin G. Nelson\*, 2200 Laurewood Rd.; Santa Clara, CA 95054 Since Sept. 2019

Treasurer, Jill La Ronge\*, 817 Main Street; Brownsville, WI 53006, since Sept. 2019

Secretary, Elizabeth Michels\*, 817 Main Street; Brownsville, WI 53006, since Sept. 2019

Assistant Secretary, Jill La Ronge\*, 817 Main Street; Brownsville, WI 53006, since Sept. 2019

Assistant Secretary, Eric DeGroot\*, 817 Main Street; Brownsville, WI 53006, since Sept. 2019

Assistant Secretary, Ann Geschke\*, 817 Main Street; Brownsville, WI 53006, since Sept. 2019

d. Number of years the corporation has been in business: 61

4. If Applicant is a partnership, state -

a. Names and addresses of all partners:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Length of time partnership has been in business: \_\_\_\_\_

5. If Applicant is a sole proprietorship, how long have you been in business? \_\_\_\_\_

6. Number of years Applicant has performed the type of work for which Applicant is bidding: 61

7. Has the Applicant paid all current license fees to the State of Washington:

(circle one)  YES  NO

License type: Electrical \_\_\_\_\_ Construction \_\_\_\_\_ Both x

License # MICHEPE794KC (Gen Contr) License # MICHEPE792K9 (Elect Contr)

8. Attach a **general résumé** setting forth applicant's experience, technical qualifications, and organization's ability to perform the proposed construction.

9. Attach a **list of your supervisory personnel, their qualifications, and years of experience.** Also list the number and type of craftsmen available, and list equipment available for work.

10. Attach a **list of clients served over the last three (3) years** including their names, addresses, location of the jobs performed, and contract amounts of the larger contracts. Be sure to include all work done with other Washington public utility districts.

11. What is the maximum amount of work, expressed in dollars, which you consider you are capable of undertaking? \$ 50,000,000,000

12. Set forth the name and address of Applicant's bank, including the branch and name of the individual in said bank to be contacted for financial reference.

CBIC Bank USA, 120 S. Lasalle Street; Chicago, IL 60603 Jill Welp 312 564-1318

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13. Set forth the names and addresses of three (3) clients who will act as references.

Daniel Luu, Snohomish County PUD No. 1, POB 1107; Everett, WA 98206-1107

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Bryce Foster, PacifiCorp, 825 NE Multnomah St. - Suite 1800; Portland, OR 97232

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Jordan Messinger, Portland General Electric, 121 SW Salmon Street; Portland, OR 97204

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14. Attach your last fiscal year's complete financial statement (**Balance Sheet and Income Statement**). You must also submit a letter from your bonding/surety company that identifies their capacity in aggregate and by project.

**Note: Application for Pre-qualification will not be considered without last fiscal year's complete financial statement.**

15. Affirm that Applicant will pay wages and benefits for craftsmen employed on work that prevail in the locality of the work, as determined by the Department of Labor and Industries. Affirm  
(Please write "affirm", if you agree)

16. Affirm that Applicant will comply with government regulations regarding non-discrimination of employment and employment practices on the basis of sex, race, color, or national origin.  
Affirm (Please write "affirm", if you agree)

17. APPLICANT RECOGNIZES AND AGREES THAT UNDER THE PROVISIONS OF RCW 54.04.085, IF THE DISTRICT COMMISSION DETERMINES THAT A PREQUALIFIED CONTRACTOR NO LONGER MEETS ALL OF THE REQUIREMENTS FOR PREQUALIFICATION STATUS, THE DISTRICT MAY REFUSE TO FURNISH THAT CONTRACTOR WITH A CONTRACT PROPOSAL FORM AND MAY REJECT ANY BID PROPOSAL SUBMITTED BY THAT CONTRACTOR. Affirm  
(Please write "affirm", if you agree)

18. List all OSHA citations received over the past three years including:

- Violation type
- Date
- Outcome and brief description of citation
- Any fatal accidents
- **MUST ATTACH OSHA 300 LOG FOR THE PREVIOUS 3 YEAR PERIOD**

See Attached Safety Information and OSHA Log

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19. Applicant confirms they are not on any State or Federal Suspended/Debarment lists. If for any reason applicant is placed on any State or Federal Suspended/Debarment lists, applicant must inform the District immediately and is banned from bidding on any project until the Suspension/Debarment is lifted and at the discretion of the District.

For which of the following classes of work are you seeking prequalification? Indicate by use of "X" in proper square.

A. DISTRIBUTION

- |    |                         |                                     |
|----|-------------------------|-------------------------------------|
| 1. | Hot Work - Overhead     | <input checked="" type="checkbox"/> |
| 2. | Overhead Construction   | <input checked="" type="checkbox"/> |
| 3. | Underground - Primary   | <input checked="" type="checkbox"/> |
| 4. | Underground - Secondary | <input checked="" type="checkbox"/> |
| 5. | Plowing                 | <input checked="" type="checkbox"/> |
| 6. | Trenching               | <input checked="" type="checkbox"/> |

B. TRANSMISSION

- |    |                                 |                                     |
|----|---------------------------------|-------------------------------------|
| 1. | Wood or Fiberglass Poles        | <input checked="" type="checkbox"/> |
| 2. | Steel Tower                     | <input checked="" type="checkbox"/> |
| 3. | Steel or Concrete Poles         | <input checked="" type="checkbox"/> |
| 4. | Underground                     | <input checked="" type="checkbox"/> |
| 5. | Stringing and Sagging Conductor | <input checked="" type="checkbox"/> |

C. POLE AND WOOD PRODUCT INSPECTION

- |    |  |                          |
|----|--|--------------------------|
| 1. | Inspection and Treatment of Poles in Place | <input type="checkbox"/> |
| 2. | Inspection of New Crossarms and Poles      | <input type="checkbox"/> |

D. SUBSTATION

- |    |                             |                                     |
|----|-----------------------------|-------------------------------------|
| 1. | Complete Installation       | <input checked="" type="checkbox"/> |
| 2. | Control Wiring and Metering | <input checked="" type="checkbox"/> |
| 3. | Maintenance                 | <input checked="" type="checkbox"/> |

E. AREA AND STREET LIGHTING

- |    |              |                                     |
|----|--------------|-------------------------------------|
| 1. | Installation | <input checked="" type="checkbox"/> |
| 2. | Maintenance  | <input checked="" type="checkbox"/> |

F. TREE TRIMMING AND BRUSHING

- |    |                           |                          |
|----|---------------------------|--------------------------|
| 1. | Involving "Hot" Lines     | <input type="checkbox"/> |
| 2. | Not involving "Hot" Lines | <input type="checkbox"/> |

G. RIGHT-OF-WAY CLEARING

H. ENVIRONMENTAL CLEANUP SERVICES

I. MISCELLANEOUS (List any special class not covered above)

Emergency and Restoration Work

\_\_\_\_\_



I certify that information herein and/or attached is correct, true, and complete.

SIGNED this 14th day of July, 2021.

Signature of Applicant

Benjamin Nelson, President

Name and Title (Typed or Printed)

STATE OF WASHINGTON)

) ss.

County of Thurston )

Signed or attested before me on this 14th day of July, 2021, by

Benjamin Nelson



NOTARY PUBLIC in and for the

State of Washington

My Commission Expires: 1/24/2023

A RESOLUTION Establishing Electric System Rate Schedules

WHEREAS, Public Utility District No. 1 of Clallam County, Washington (the “District”), consulted with FCS Group to complete a Cost of Service Analysis (COSA) of its electric system; and

WHEREAS, District staff, in consultation with FCS Group, has carefully analyzed the rate revenue requirements of the District’s electric system based upon the contemplated financial transactions for the year 2020; and

WHEREAS, the District’s electric system rate revenue requirements necessitate an increase in electric system rate revenues; and

WHEREAS, the District’s Financial Policy has been incorporated into the Cost of Service Analysis (COSA); and

WHEREAS, the increases in the Districts’ electric rates by customer class are indicated in the tables attached to this Resolution, and are appropriate; and

WHEREAS, the State has mandated a long-term care (LTC) insurance requirement for employees effective January 1, 2022 that is currently being evaluated; and

WHEREAS, the weighted average electric rate increases in prior projections were 3.50% for years 2022 and 2023 and have been updated based on the COSA in years 2022 and 2023 to 2.25% each year; now, therefore, be it

RESOLVED, That the District’s Electric Rate Schedule shall be revised as set forth in the attached tables, resulting in an average electric rate increase of 2.25% effective April 1, 2022 and

the second increase of 2.25% effective April 1, 2023.

2. That the General Manager is authorized to implement a District LTC insurance program to meet State requirements under the condition this rate increase is not impacted.

PASSED by the Board of Commissioners of Public Utility District No. 1 of Clallam County, Washington, this 9<sup>th</sup> day of August, 2021.

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President

ATTEST:

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Vice President

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Secretary

## 2022 and 2023 Electric Rate Schedules

### Electric Rates Effective April 1, 2022

Basic Customer Charge			
Class	Existing	% Inc	2022
<b>Residential/Farm</b>			
Single Phase	\$39.55	2.40%	\$40.50
Three Phase	\$79.08	2.40%	\$80.98
<b>Small General Service</b>			
Single Phase	\$43.59	6.63%	\$46.48
Three Phase	\$87.19	6.63%	\$92.97
<b>Medium General Service</b>			
	\$72.44	1.12%	\$73.25
<b>Large General Service</b>			
	\$198.06	2.25%	\$202.52
<b>Industrial</b>			
	\$296.72	2.25%	\$303.40
<b>Seasonal Irrigation</b>			
Single Phase	\$26.04	5.68%	\$27.52
Three Phase	\$52.09	5.66%	\$55.04
<b>Area Lighting</b>			
	\$12.01	2.25%	\$12.28
<b>Highway Lighting</b>			
Single Phase	\$41.85	3.73%	\$43.41
Three Phase	\$78.97	3.74%	\$81.92

### Energy Charge (\$/kWh)

Class	Existing	% Inc	2022
<b>Residential/Farm</b>			
Single Phase	\$0.0761	2.23%	\$0.0778
Three Phase	\$0.0761	2.23%	\$0.0778
<b>Small General Service</b>			
Single Phase	\$0.0755	0.40%	\$0.0758
Three Phase	\$0.0755	0.40%	\$0.0758
<b>Medium General Service</b>			
	\$0.0633	2.37%	\$0.0648
<b>Large General Service</b>			
	\$0.0513	2.34%	\$0.0525
<b>Industrial</b>			
	\$0.0491	2.24%	\$0.0502
<b>Seasonal Irrigation</b>			
Single Phase	\$0.0716	0.00%	\$0.0716
Three Phase	\$0.0716	0.00%	\$0.0716
<b>Area Lighting</b>			
	n/a		n/a
<b>Highway Lighting</b>			
Single Phase	\$0.0735	0.54%	\$0.0739
Three Phase	\$0.0735	0.54%	\$0.0739

### Demand Charge (\$/kW)

Class	Existing	% Inc	2022
<b>Residential/Farm</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Small General Service</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Medium General Service</b>			
	\$3.56	2.25%	\$3.64
<b>Large General Service</b>			
	\$5.53	2.17%	\$5.65
<b>Industrial</b>			
	\$6.87	2.18%	\$7.02
<b>Seasonal Irrigation</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Area Lighting</b>			
	n/a		n/a
<b>Highway Lighting</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a

**Total % Increase 2022: 2.25%**

### Electric Rates Effective April 1, 2023

Basic Customer Charge			
Class	2022	% Inc	2023
<b>Residential/Farm</b>			
Single Phase	\$40.50	6.89%	\$43.29
Three Phase	\$80.98	6.89%	\$86.56
<b>Small General Service</b>			
Single Phase	\$46.48	6.28%	\$49.40
Three Phase	\$92.97	6.28%	\$98.81
<b>Medium General Service</b>			
	\$73.25	1.11%	\$74.06
<b>Large General Service</b>			
	\$202.52	2.25%	\$207.07
<b>Industrial</b>			
	\$303.40	2.25%	\$310.22
<b>Seasonal Irrigation</b>			
Single Phase	\$27.52	5.70%	\$29.09
Three Phase	\$55.04	5.72%	\$58.19
<b>Area Lighting</b>			
	\$12.28	2.28%	\$12.56
<b>Highway Lighting</b>			
Single Phase	\$43.41	3.69%	\$45.01
Three Phase	\$81.92	3.67%	\$84.93

### Energy Charge (\$/kWh)

Class	2022	% Inc	2023
<b>Residential/Farm</b>			
Single Phase	\$0.0778	0.26%	\$0.0780
Three Phase	\$0.0778	0.26%	\$0.0780
<b>Small General Service</b>			
Single Phase	\$0.0758	0.40%	\$0.0761
Three Phase	\$0.0758	0.40%	\$0.0761
<b>Medium General Service</b>			
	\$0.0648	2.16%	\$0.0662
<b>Large General Service</b>			
	\$0.0525	2.10%	\$0.0536
<b>Industrial</b>			
	\$0.0502	2.19%	\$0.0513
<b>Seasonal Irrigation</b>			
Single Phase	\$0.0716	0.00%	\$0.0716
Three Phase	\$0.0716	0.00%	\$0.0716
<b>Area Lighting</b>			
	n/a		n/a
<b>Highway Lighting</b>			
Single Phase	\$0.0739	0.68%	\$0.0744
Three Phase	\$0.0739	0.68%	\$0.0744

### Demand Charge (\$/kW)

Class	2022	% Inc	2023
<b>Residential/Farm</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Small General Service</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Medium General Service</b>			
	\$3.64	2.36%	\$3.73
<b>Large General Service</b>			
	\$5.65	2.33%	\$5.78
<b>Industrial</b>			
	\$7.02	2.32%	\$7.18
<b>Seasonal Irrigation</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a
<b>Area Lighting</b>			
	n/a		n/a
<b>Highway Lighting</b>			
Single Phase	n/a		n/a
Three Phase	n/a		n/a

**Total % Increase 2023: 2.25%**





# Cost of Service & Rate Study

Presented by:  
Sergey Tarasov, Project Manager  
Paul Quinn, Project Consultant

August 09, 2021





# Presentation Overview

- **Overview of rate study process**
- **Summary of findings**
  - » Revenue requirement
  - » Cost-of-service
  - » Rate design
- **Next Steps**
- **Questions / discussion**



# Glossary of Terms

- **1P/3P – single phase/three phase**
- **A&G – administration & general**
- **AMI – advanced metering infrastructure**
- **aMW – average megawatt**
- **BPA – Bonneville Power Authority**
- **CETA – clean energy transformation act**
- **CIP – capital improvement program**
- **COSA – cost-of-service analysis**
- **FTE – full time equivalent**
- **FY – fiscal year**
- **kW – kilowatt**
- **kWh – kilowatt hours**
- **O&M – operating & maintenance**
- **PUD – public utility district**



- **RCW 54.24.080**

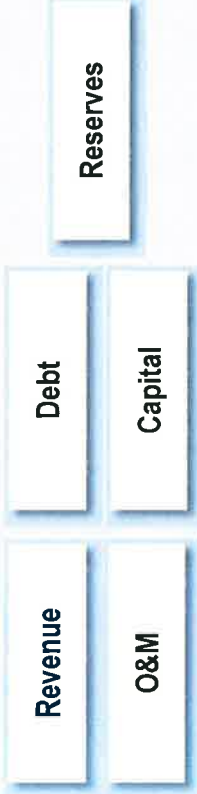
- » (1) The commission of each district which shall have revenue obligations outstanding shall have the power and shall be required to establish, maintain, and collect rates or charges for electric energy and water and other services, facilities, and commodities sold, furnished, or supplied by the district. The rates and charges shall be fair and, except as authorized by RCW 74.38.070 and by subsections (2) and (3) of this section, nondiscriminatory, and shall be adequate to provide revenues sufficient for the payment of the principal of and interest on such revenue obligations for which the payment has not otherwise been provided and all payments which the district is obligated to set aside in any special fund or funds created for such purpose, and for the proper operation and maintenance of the public utility and all necessary repairs, replacements, and renewals thereof.



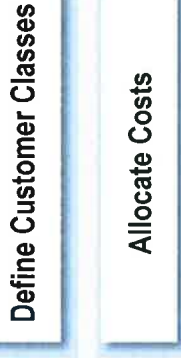
# Overview of Rate Setting Process

## Financial Policies – Set the Management Foundation

**Step 1:**  
**Revenue Requirement**  
(defining overall needs)



**Step 2:**  
**Cost of Service**  
(equity evaluation)



**Step 3:**  
**Design Rates**  
(collect target revenue)



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# REVENUE REQUIREMENT

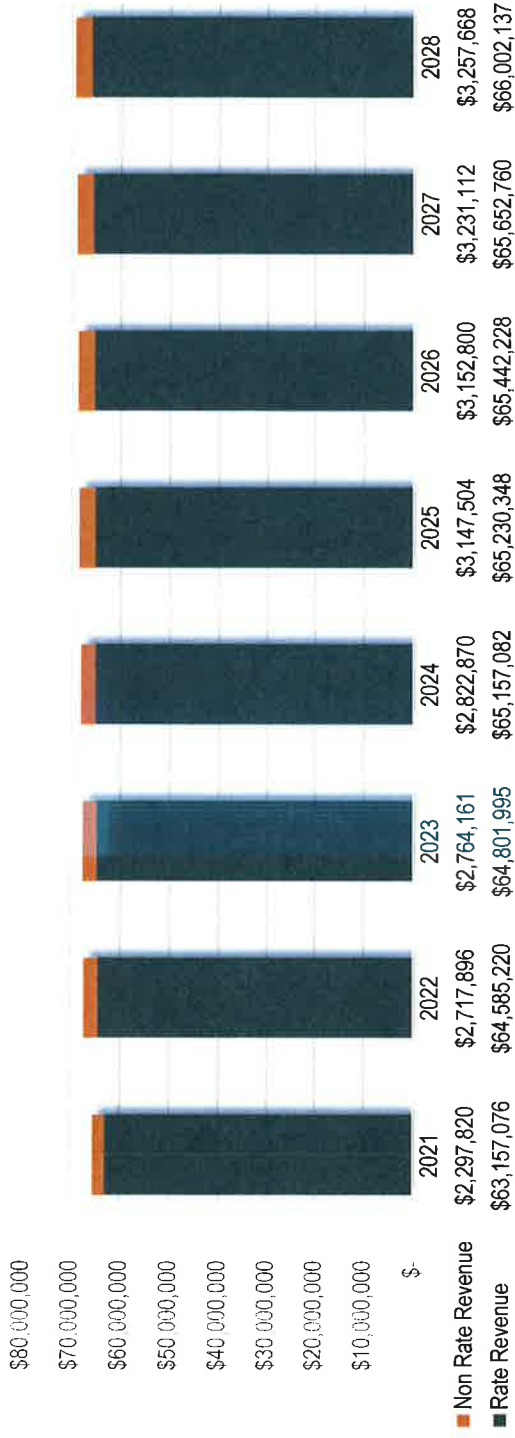


# Revenue Requirement Overview

- **Determine the amount of annual revenue necessary to fund all financial obligations**
  - » Operating & power expenses
  - » Debt service (principal & interest)
  - » Capital costs and funding approach
- **Meet financial parameters and targets**
  - » Target debt service coverage & leverage ratios
  - » Maintain target reserve balances
- **Evaluate revenue sufficiency over multi-year period**
- **Develop rate plan to balance financial needs and minimize customer impacts**

# Key Factors: Existing Revenue

- Focus period: 2021-2028
- Includes non-rate revenue: rental income, interest earnings, broad band revenue, conservation and other miscellaneous revenues (4% of revenue)
- Total existing revenue \$65.5 to \$69.3 million per year (w/o Taxes)



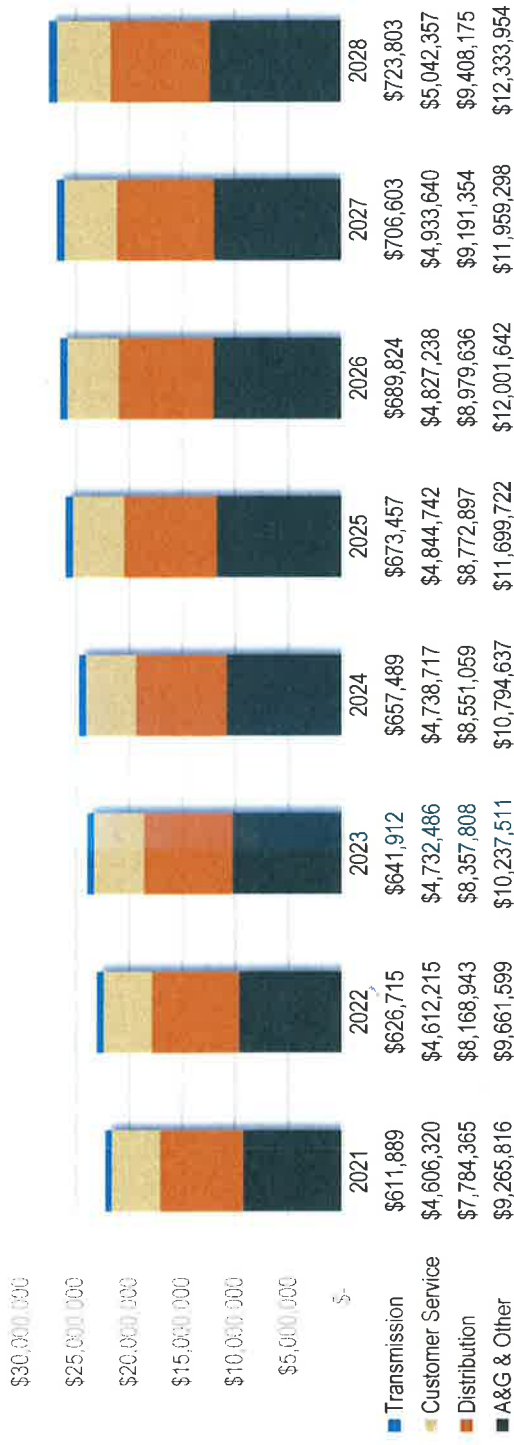




# Key Factors: Operating Expenses

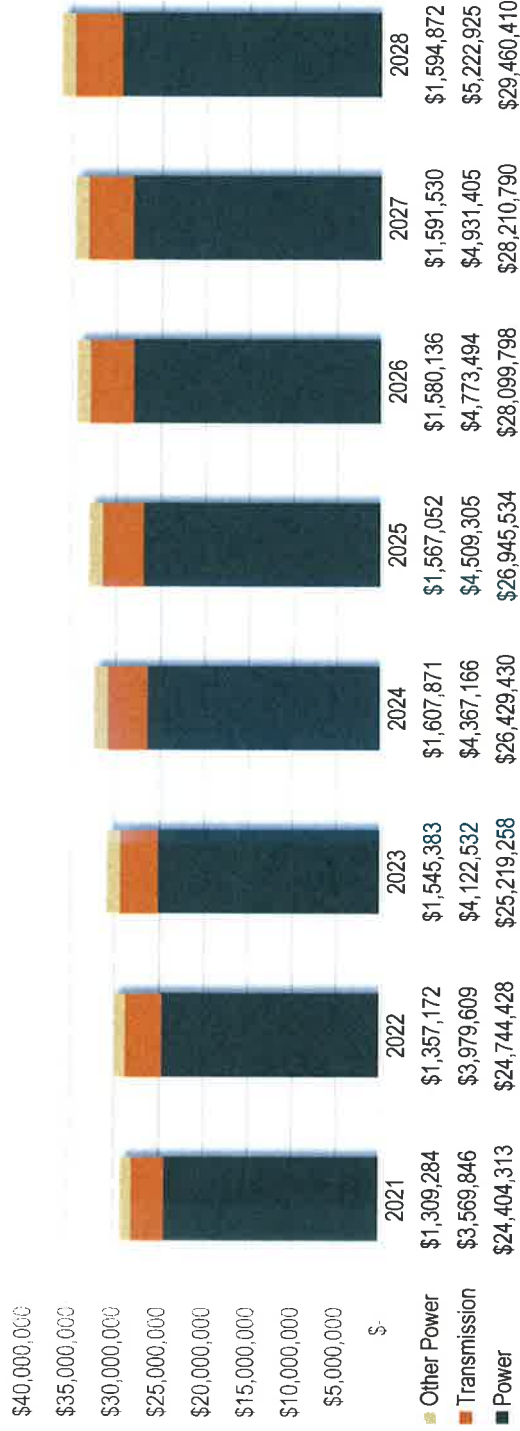
- **2021 budget used as baseline:**
  - » General/Labor/Benefits inflation: 2.3% - 3.5%
  - » Includes adjustments for meter reading due to AMI, retirements, and FTE adjustments
  - » Average annual inflation escalation rate: 3.1% per year
  - » Taxes not included in expenses; assessed on top of the bill

## ● Total O&M expenses \$23.0M to \$28.5M



# Key Factors: Power

- **Power & Transmission based on load and BPA billing determinants**
  - » Includes BPA FY2022 Power & Transmission draft rates
    - Includes financial reserve policy surcharge
  - » Future increases in FY2024, FY2026, FY2028 assume:
    - Power: 5.5% bi-annually | Transmission: 8.0% bi-annually
  - » Assumes above rate high water market purchases of 1.6aMW – 4.1aMW
  - » Total power \$29.3 million - \$36.3 million per year

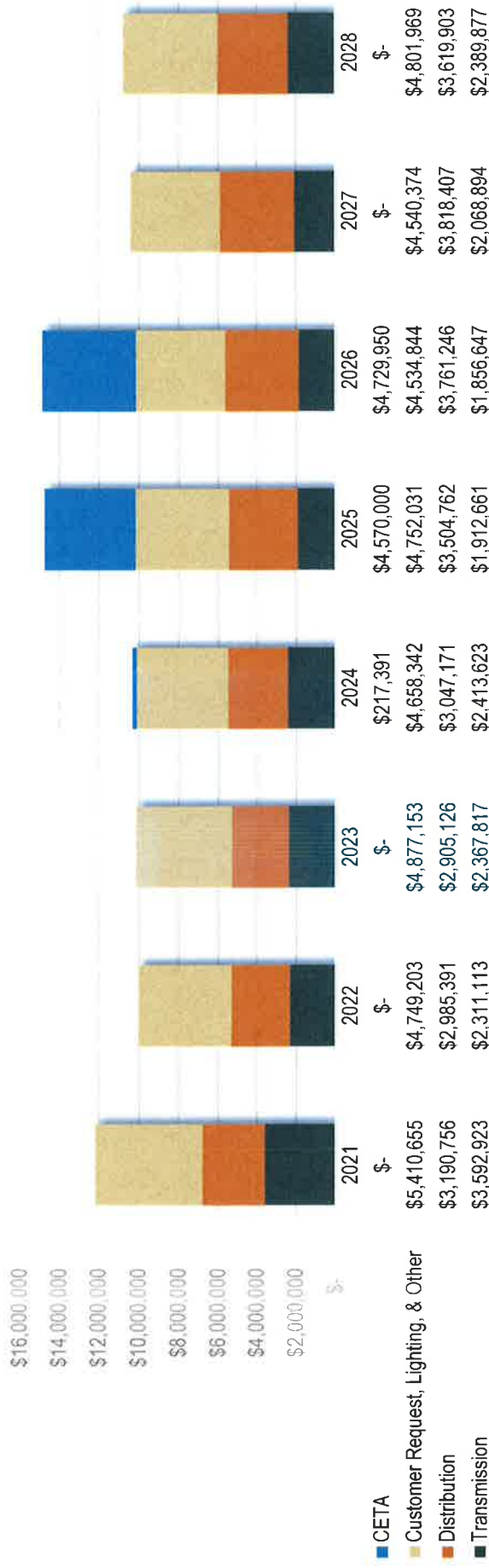


# Key Factors: Capital & Debt

- **\$93.6 million in CIP 2021-2028 funded through:**
  - » 2018 revenue bond proceeds (\$0.9M available in 2021)
  - » Customer contributions
  - » Rate funded capital

● **Annual debt service: \$3.8 million – \$3.6 million**

● **No new debt in study period**



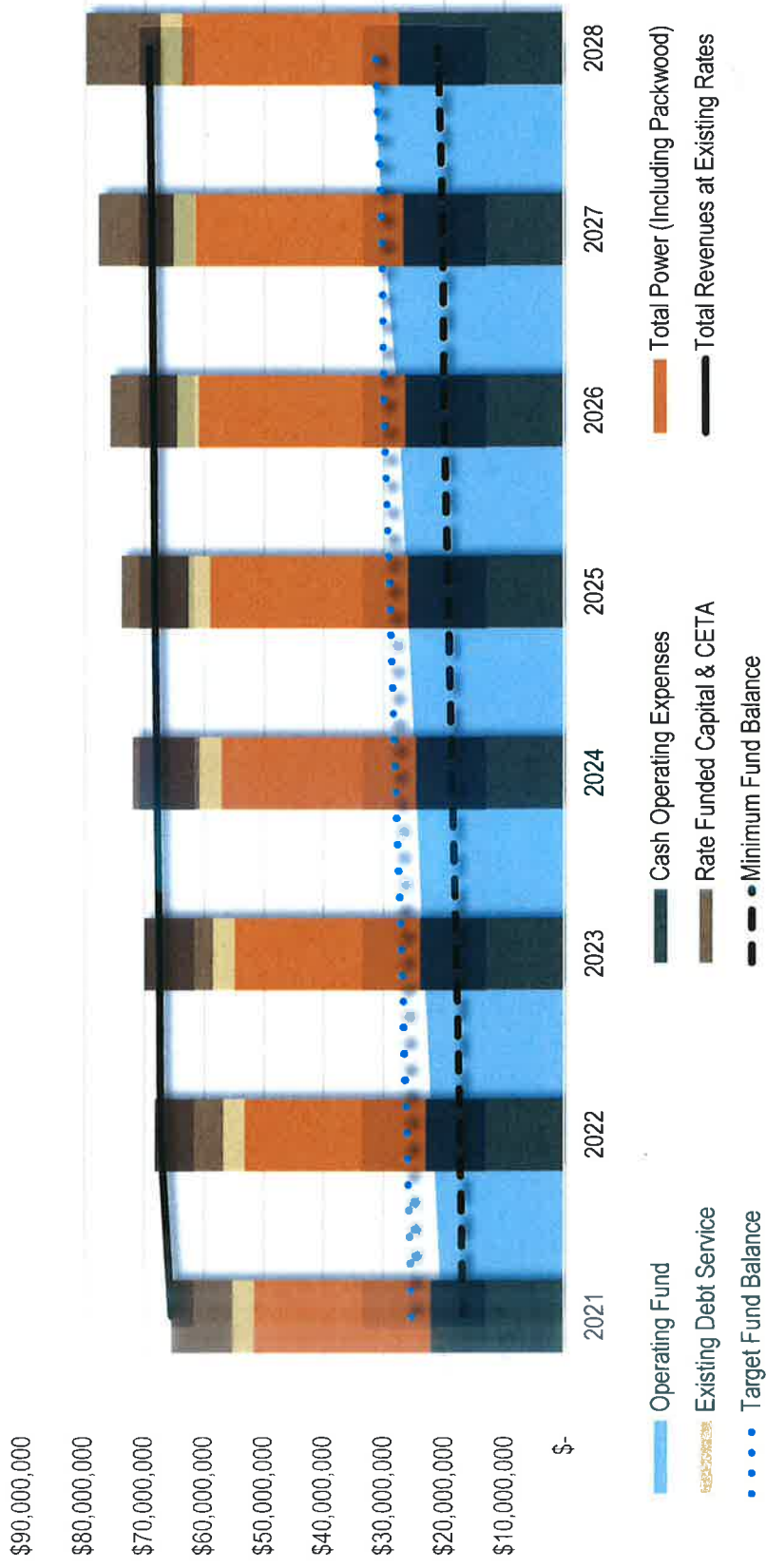


# Financial Policy Targets

Policy	Purpose	Target
<b>Operating Reserve</b>	Liquidity cushion to accommodate cyclical cash flow fluctuations	120 Days O&M & Power to 180 Days O&M & Power (\$25.4 million - \$31.5 million)
<b>Rate Stabilization Reserve</b>	To offset revenue shortfalls, manage utility rate increases, and to meet debt service coverage	6% of rate revenue (\$3.8 million - \$4.6 million)
<b>Debt Service Coverage</b>	Compliance with existing loan/debt covenants and maintain credit worthiness for future debt issuance.	Target: 2.00 Minimum Requirement: 1.25
<b>Leverage (Debt to Asset Ratio)</b>	Measures the amount of assets funded through debt. Higher percentage indicates lower probability an entity will repay debt obligations.	Maximum Percentage: 40%



# Revenue Requirement - Baseline



Description	Existing	2022	2023	2024	2025	2026	2027	2028
Annual Increase		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Avg. Residential Mo. Bill	\$ 142.29	\$ 145.53	\$ 148.59	\$ 151.80	\$ 154.99	\$ 158.32	\$ 161.65	\$ 165.13
\$ per Mo. Difference	\$	\$ 3.24	\$ 3.06	\$ 3.21	\$ 3.19	\$ 3.33	\$ 3.33	\$ 3.47

**Note :** assumes 1,350 kWh per month average usage & does not reflect taxes charged on top of the bill

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# **COST OF SERVICE**

**(Based on 2022 proposed 2.25% increase)**



# What is Cost of Service?

- **An equitable distribution of cost share that considers utility specific data**
  - » Measures of usage and demand
  - » Planning, engineering and design criteria
  - » Facility requirements
- **Cost of Service analysis determines**
  - » Total cost by class (equity)
  - » Unit costs (\$/usage; \$/customer)
- **Fundamental question: Do cost differences exist to serve different rate classes?**



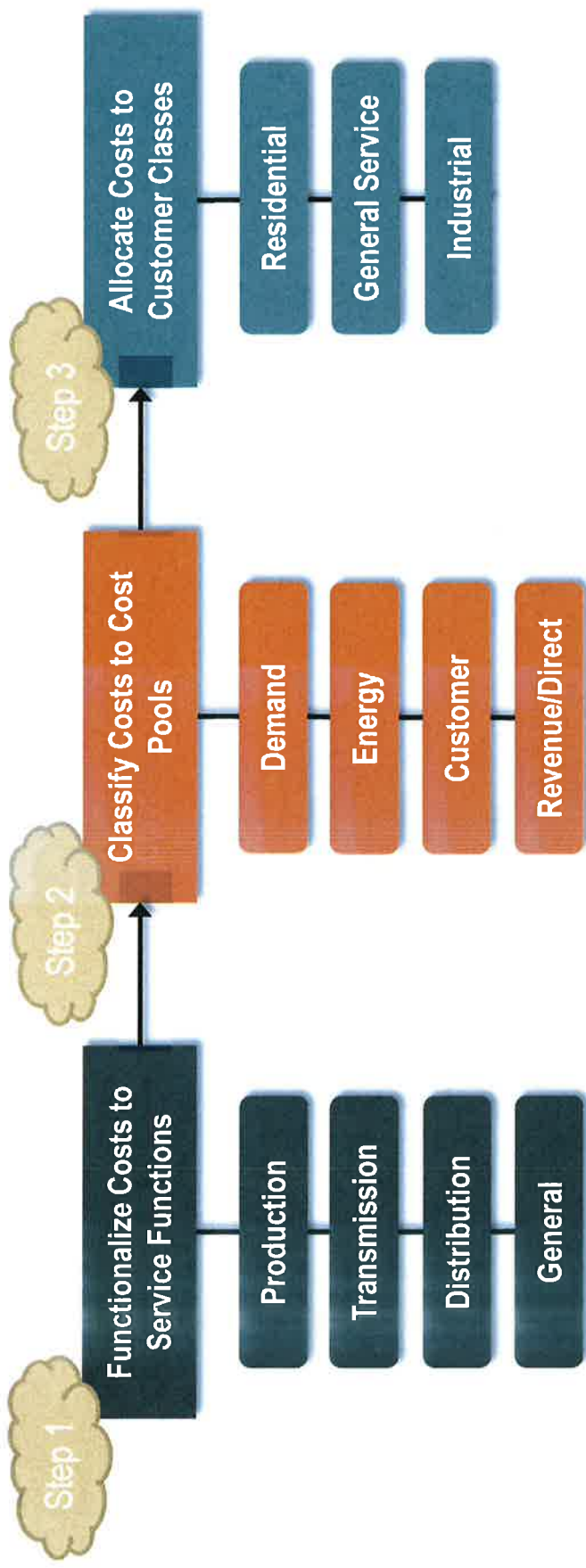
# Why Is Cost of Service Important?

Cost Structure	Benefit Distribution	Service Requirements	Legal & Policy Requirements	Cost Basis for Rate Setting
Costs of operating an electric utility are not accounted for on a rate class by rate class basis	The benefits of some utility services are shared among all rate classes; other benefits are only provided to a single rate class.	Not all customers consume in the same manner (pattern) or require the same facilities to be served	Regulatory and utility policy may require specific costs and/or benefits be allocated to rate classes	Provides a defensible basis for developing customer rates.  Identifies the fixed and variable costs of the utility.



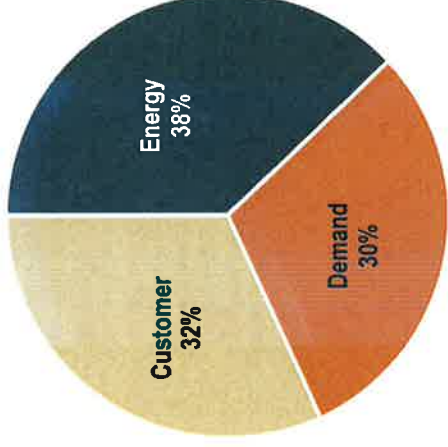


# Cost of Service Process





# Summary of Cost Classification



**Energy**

**Demand**

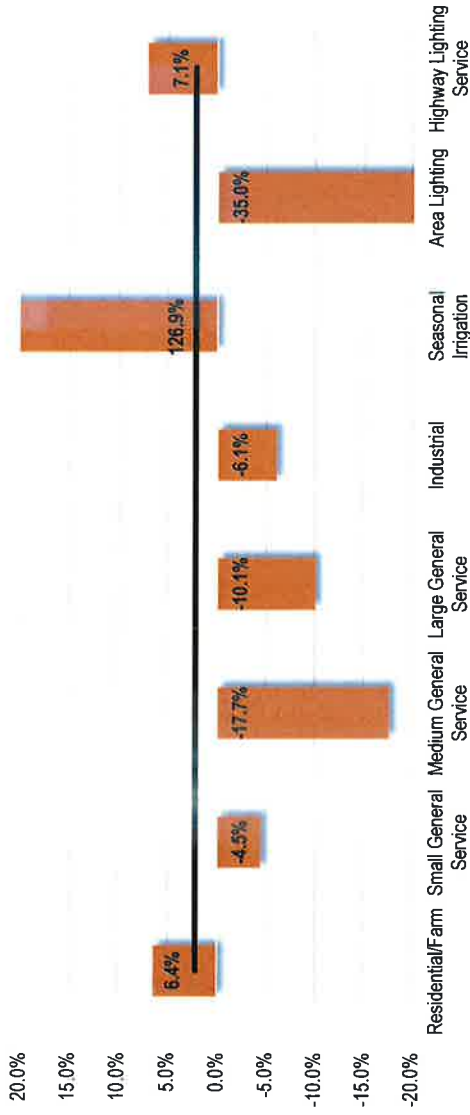
**Customer**

Costs that vary with the total consumption (flow) of the electricity over a specified period of time. Measured in kilowatt-hours (kWh's)

Costs predicated upon the maximum rate of use required at one point in time. Demand may be coincident or non-coincident to the system peak demand. Demand is measured in kilowatts (kW's)

Fixed costs associated with having a customer on the system. These costs vary with the addition or deletion of customers, and not consumptive use – metering/billing/ account services

# Cost of Service Results



- **±5.0% of average is within Cost of Service (industry standard)**
  - » Residential within COSA
  - » Gen. Service & Industrial classes can decrease towards COSA
  - » Seasonal irrigation most unaligned with COSA
  - » Findings are consistent with the original study

Class	2022			Difference	%
	Existing	COSA	\$		
Residential/Farm	\$ 48,334,488	\$ 51,441,143	\$ 3,106,655		6.4%
Small General Service	6,289,682	6,007,770	(281,912)		-4.5%
Medium General Service	5,776,756	4,755,290	(1,021,466)		-17.7%
Large General Service	2,389,606	2,148,772	(240,834)		-10.1%
Industrial	1,332,447	1,251,449	(80,997)		-6.1%
Seasonal Irrigation	61,668	139,911	78,243		126.9%
Area Lighting	320,464	208,271	(112,193)		-35.0%
Highway Lighting Service	80,109	85,780	5,672		7.1%
<b>Total</b>	<b>\$ 64,585,220</b>	<b>\$ 66,038,387</b>	<b>\$ 1,453,167</b>		<b>2.3%</b>

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# RATE DESIGN



# Rate Design Overview

- Produce sufficient revenue to meet the overall financial requirements of the utility
- Collect target revenue level for each class of service
- Cost-based and equitable
- Convey the price signals facing the utility
- Meet the goals and objectives of the utility
  - » Across the board rate increases for all classes
  - » Align fixed charges with cost of service-based rates
  - » Conforms to district's strategic plan



# Existing Rates

Class	Existing Rates				kW
	Basic - 1P	Basic - 3P	kWh		
Residential/Farm	\$ 39.55	\$ 79.08	0.0761		n/a
Small General Service	43.59	87.19	0.0755		n/a
Medium General Service	72.44	72.44	0.0633		3.56
Large General Service	n/a	198.06	0.0513		5.53
Industrial	n/a	296.72	0.0491		6.87
Seasonal Irrigation	26.04	52.09	0.0716		n/a

**Notes:**

1. Area Lighting and Highway Lighting rates available.
2. Low Income Rate available through 2022
3. State and Privilege taxes are added on top of the bill.



# Cost of Service 2022 Unit Costs

## COSA Unit Costs

Description	Residential /	Small	Medium	Large	Industrial	Seasonal
	Farm	General	General	General		Irrigation
Energy - \$/kWh	\$ 0.0392	\$ 0.0389	\$ 0.0387	\$ 0.0386	\$ 0.0386	\$ 0.0386
Demand - \$/kW	\$ 4.52	\$ 5.85	\$ 6.42	\$ 8.26	\$ 8.53	\$ 14.91
Customer - \$/Mo.	\$ 52.95	\$ 60.49	\$ 71.74	\$ 71.74	\$ 3,299.73	\$ 70.53



# Residential – Single Phase

- **Proposed adjustments**
  - » Phase-in basic customer charges towards COSA

Residential - Single Phase	Existing	Proposed Rates						
		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 39.55	\$ 40.50	\$ 43.29	\$ 46.09	\$ 48.88	\$ 51.67	\$ 54.46	\$ 57.26
Energy Charge - \$/kWh	\$ 0.0761	\$ 0.0778	\$ 0.0780	\$ 0.0783	\$ 0.0786	\$ 0.0790	\$ 0.0794	\$ 0.0799
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kWh	Existing	Monthly Bills						
		2022	2023	2024	2025	2026	2027	2028
600	\$ 85.21	\$ 87.18	\$ 90.09	\$ 93.07	\$ 96.04	\$ 99.07	\$ 102.10	\$ 105.20
800	100.43	102.74	105.69	108.73	111.76	114.87	117.98	121.18
1,200	130.87	133.86	136.89	140.05	143.20	146.47	149.74	153.14
1,350	142.29	145.53	148.59	151.80	154.99	158.32	161.65	165.13
1,500	153.70	157.20	160.29	163.54	166.78	170.17	173.56	177.11
2,000	191.75	196.10	199.29	202.69	206.08	209.67	213.26	217.06
3,000	267.85	273.90	277.29	280.99	284.68	288.67	292.66	296.96

kWh		\$ Difference						
		2022	2023	2024	2025	2026	2027	2028
600	\$	1.97	\$ 2.91	\$ 2.98	\$ 2.97	\$ 3.03	\$ 3.03	\$ 3.10
800		2.31	2.95	3.04	3.03	3.11	3.11	3.20
1,200		2.99	3.03	3.16	3.15	3.27	3.27	3.40
1,350		3.24	3.06	3.21	3.19	3.33	3.33	3.47
1,500		3.50	3.09	3.25	3.24	3.39	3.39	3.55
2,000		4.35	3.19	3.40	3.39	3.59	3.59	3.80
3,000		6.05	3.39	3.70	3.69	3.99	3.99	4.30



# Small General Service – Single Phase

- Proposed adjustments
  - » Phase-in basic customer charges towards COSA

Small General Service - Single Phase		Existing		Proposed Rates				
		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 43.59	\$ 46.48	\$ 49.40	\$ 52.35	\$ 55.33	\$ 58.36	\$ 61.41	\$ 64.60
Energy Charge - \$/kWh	\$ 0.0755	\$ 0.0758	\$ 0.0761	\$ 0.0764	\$ 0.0767	\$ 0.0770	\$ 0.0773	\$ 0.0777
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kWh	Existing	Monthly Bills						
		2022	2023	2024	2025	2026	2027	2028
200	\$ 58.69	\$ 61.64	\$ 64.62	\$ 67.63	\$ 70.67	\$ 73.76	\$ 76.87	\$ 80.14
800	103.99	107.12	110.28	113.47	116.69	119.96	123.25	126.76
1,300	141.74	145.02	148.33	151.67	155.04	158.46	161.90	165.61
1,625	166.28	169.66	173.06	176.50	179.97	183.49	187.02	190.86
2,200	209.69	213.24	216.82	220.43	224.07	227.76	231.47	235.54
3,000	270.09	273.88	277.70	281.55	285.43	289.36	293.31	297.70
5,000	421.09	425.48	429.90	434.35	438.83	443.36	447.91	453.10

kWh	2022		2023		\$ Difference				
	2022	2023	2022	2023	2024	2025	2026	2027	2028
200	\$ 2.95	\$ 2.98	\$ 3.01	\$ 3.04	\$ 3.04	\$ 3.09	\$ 3.11	\$ 3.27	
800	3.13	3.16	3.19	3.22	3.22	3.27	3.29	3.51	
1,300	3.28	3.31	3.34	3.37	3.34	3.42	3.44	3.71	
1,625	3.38	3.41	3.44	3.47	3.44	3.52	3.54	3.84	
2,200	3.55	3.58	3.61	3.64	3.61	3.69	3.71	4.07	
3,000	3.79	3.82	3.85	3.88	3.85	3.93	3.95	4.39	
5,000	4.39	4.42	4.45	4.48	4.45	4.53	4.55	5.19	



# Medium General Service

- **Proposed adjustments**
  - » Phase-in basic customer charges towards COSA
  - » Energy and demand charges increase by the same percentage each year

Medium General Service	Existing	Proposed Rates						
		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 72.44	\$ 73.25	\$ 74.06	\$ 74.88	\$ 75.69	\$ 76.50	\$ 77.31	\$ 78.12
Energy Charge - \$/kWh	\$ 0.0633	\$ 0.0648	\$ 0.0662	\$ 0.0678	\$ 0.0693	\$ 0.0709	\$ 0.0726	\$ 0.0742
Demand Charge - \$/kW	\$ 3.56	\$ 3.64	\$ 3.73	\$ 3.81	\$ 3.90	\$ 3.99	\$ 4.08	\$ 4.18
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kW	kWh	Existing	Monthly Bills						
			2022	2023	2024	2025	2026	2027	2028
51	13,000	\$ 1,076.90	\$ 1,101.29	\$ 1,124.89	\$ 1,150.59	\$ 1,175.49	\$ 1,201.69	\$ 1,229.19	\$ 1,255.90
59	15,000	1,231.98	1,260.01	1,287.13	1,316.67	1,345.29	1,375.41	1,407.03	1,437.74
69	17,500	1,425.83	1,458.41	1,489.93	1,524.27	1,557.54	1,592.56	1,629.33	1,665.04
84	21,250	1,716.61	1,756.01	1,794.13	1,835.67	1,875.92	1,918.29	1,962.78	2,005.99
138	35,000	2,779.22	2,843.57	2,905.80	2,973.66	3,039.39	3,108.62	3,181.35	3,251.96
198	50,000	3,942.32	4,033.97	4,122.60	4,219.26	4,312.89	4,411.52	4,515.15	4,615.76
297	75,000	5,877.26	6,014.33	6,146.87	6,291.45	6,431.49	6,579.03	6,734.07	6,884.58

kW	kWh	\$ Difference						
		2022	2023	2024	2025	2026	2027	2028
51	13,000	\$ 24.39	\$ 23.60	\$ 25.70	\$ 24.90	\$ 26.20	\$ 27.50	\$ 26.71
59	15,000	28.03	27.12	29.54	28.62	30.12	31.62	30.71
69	17,500	32.58	31.52	34.34	33.27	35.02	36.77	35.71
84	21,250	39.41	38.12	41.54	40.24	42.37	44.49	43.21
138	35,000	64.35	62.23	67.86	65.73	69.23	72.73	70.61
198	50,000	91.65	88.63	96.66	93.63	98.63	103.63	100.61
297	75,000	137.07	132.54	144.58	140.04	147.54	155.04	150.51



- Proposed adjustments
  - » Across the board increases

Large General Service	Existing	Proposed Rates						
		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 198.06	\$ 202.52	\$ 207.07	\$ 211.73	\$ 216.50	\$ 221.37	\$ 226.35	\$ 231.44
Energy Charge - \$/kWh	\$ 0.0513	\$ 0.0525	\$ 0.0536	\$ 0.0548	\$ 0.0561	\$ 0.0573	\$ 0.0586	\$ 0.0599
Demand Charge - \$/kW	\$ 5.53	\$ 5.65	\$ 5.78	\$ 5.91	\$ 6.04	\$ 6.18	\$ 6.32	\$ 6.46
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kW	Existing	Monthly Bills							
		2022	2023	2024	2025	2026	2027	2028	
310	120,000	\$ 8,068.36	\$ 8,254.02	\$ 8,430.87	\$ 8,619.83	\$ 8,820.90	\$ 9,013.17	\$ 9,217.55	\$ 9,422.04
323	125,000	8,396.75	8,589.97	8,774.01	8,970.66	9,179.92	9,380.01	9,592.71	9,805.52
348	135,000	9,048.00	9,256.22	9,454.51	9,666.41	9,891.92	10,107.51	10,336.71	10,566.02
413	160,000	10,689.95	10,935.97	11,170.21	11,420.56	11,687.02	11,941.71	12,212.51	12,483.42
452	175,000	11,675.12	11,943.82	12,199.63	12,473.05	12,764.08	13,042.23	13,337.99	13,633.86
645	250,000	16,589.91	16,971.77	17,335.17	17,723.68	18,137.30	18,532.47	18,952.75	19,373.14
968	375,000	24,788.60	25,359.22	25,902.11	26,482.61	27,100.72	27,691.11	28,319.11	28,947.22

kW	kWh	\$ Difference						
		2022	2023	2024	2025	2026	2027	2028
310	120,000	\$ 185.66	\$ 176.85	\$ 188.96	\$ 201.07	\$ 192.27	\$ 204.38	\$ 204.49
323	125,000	193.22	184.04	196.65	209.26	200.09	212.70	212.81
348	135,000	208.22	198.29	211.90	225.51	215.59	229.20	229.31
413	160,000	246.02	234.24	250.35	266.46	254.69	270.80	270.91
452	175,000	268.70	255.81	273.42	291.03	278.15	295.76	295.87
645	250,000	381.86	363.40	388.51	413.62	395.17	420.28	420.39
968	375,000	570.62	542.89	580.50	618.11	590.39	628.00	628.11



- Proposed adjustments
  - » Across the board increases

Industrial	Existing	Proposed Rates						
		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 296.72	\$ 303.40	\$ 310.22	\$ 317.20	\$ 324.34	\$ 331.64	\$ 339.10	\$ 346.73
Energy Charge - \$/kWh	\$ 0.0491	\$ 0.0502	\$ 0.0513	\$ 0.0525	\$ 0.0537	\$ 0.0549	\$ 0.0561	\$ 0.0574
Demand Charge - \$/kW	\$ 6.87	\$ 7.02	\$ 7.18	\$ 7.34	\$ 7.51	\$ 7.68	\$ 7.85	\$ 8.03
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kW	kWh	Existing	Monthly Bills						
			2022	2023	2024	2025	2026	2027	2028
1,008	450,000	\$ 29,317	\$ 29,970	\$ 30,633	\$ 31,341	\$ 32,059	\$ 32,778	\$ 33,497	\$ 34,271
2,239	1,000,000	64,779	66,221	67,686	69,251	70,839	72,427	74,015	75,726
3,135	1,400,000	90,574	92,591	94,640	96,828	99,048	101,268	103,489	105,881
3,806	1,700,000	109,914	112,362	114,847	117,503	120,197	122,892	125,586	128,489
4,030	1,800,000	116,363	118,954	121,586	124,397	127,250	130,102	132,955	136,028
4,254	1,900,000	122,812	125,546	128,324	131,292	134,302	137,312	140,323	143,566
4,478	2,000,000	129,261	132,139	135,062	138,186	141,354	144,523	147,691	151,105

kW	kWh	\$ Difference						
		2022	2023	2024	2025	2026	2027	2028
1,008	450,000	\$ 653	\$ 663	\$ 708	\$ 718	\$ 719	\$ 719	\$ 774
2,239	1,000,000	1,443	1,465	1,565	1,588	1,588	1,588	1,711
3,135	1,400,000	2,017	2,048	2,189	2,220	2,220	2,220	2,392
3,806	1,700,000	2,448	2,486	2,656	2,694	2,694	2,694	2,903
4,030	1,800,000	2,591	2,632	2,812	2,852	2,852	2,852	3,073
4,254	1,900,000	2,735	2,777	2,968	3,010	3,010	3,010	3,243
4,478	2,000,000	2,878	2,923	3,123	3,168	3,169	3,169	3,414



# Irrigation - Single Phase

- Proposed adjustments
  - » Increase basic customer charge towards cost-of-service while leaving energy charge flat

Irrigation - Single Phase		Proposed Rates						
Existing		2022	2023	2024	2025	2026	2027	2028
Mo. Basic Charge - \$/Mo.	\$ 26.04	\$ 27.52	\$ 29.09	\$ 30.71	\$ 32.36	\$ 34.06	\$ 35.80	\$ 37.58
Energy Charge - \$/kWh	\$ 0.0716	\$ 0.0716	\$ 0.0716	\$ 0.0716	\$ 0.0716	\$ 0.0716	\$ 0.0716	\$ 0.0716
Average Rate Increase %		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

kWh	Existing	Monthly Bills						
		2022	2023	2024	2025	2026	2027	2028
250	\$ 43.94	\$ 45.42	\$ 46.99	\$ 48.61	\$ 50.26	\$ 51.96	\$ 53.70	\$ 55.48
500	61.84	63.32	64.89	66.51	68.16	69.86	71.60	73.38
750	79.74	81.22	82.79	84.41	86.06	87.76	89.50	91.28
1,000	97.64	99.12	100.69	102.31	103.96	105.66	107.40	109.18
1,250	115.54	117.02	118.59	120.21	121.86	123.56	125.30	127.08
1,500	133.44	134.92	136.49	138.11	139.76	141.46	143.20	144.98
2,500	205.04	206.52	208.09	209.71	211.36	213.06	214.80	216.58

kWh		\$ Difference					
		2022	2023	2024	2025	2026	2027
250	\$ 1.48	\$ 1.57	\$ 1.61	\$ 1.66	\$ 1.70	\$ 1.74	\$ 1.78
500	1.48	1.57	1.61	1.66	1.70	1.74	1.78
750	1.48	1.57	1.61	1.66	1.70	1.74	1.78
1,000	1.48	1.57	1.61	1.66	1.70	1.74	1.78
1,250	1.48	1.57	1.61	1.66	1.70	1.74	1.78
1,500	1.48	1.57	1.61	1.66	1.70	1.74	1.78
2,500	1.48	1.57	1.61	1.66	1.70	1.74	1.78



# Proposed Rates – Basic Customer Charge

Class	Existing		Proposed Basic Charge (\$/Month)				
	2022	2023	2024	2025	2026	2027	2028
Residential - 1P	\$ 39.55	\$ 43.29	\$ 46.09	\$ 48.88	\$ 51.67	\$ 54.46	\$ 57.26
Residential - 3P	79.08	86.56	92.15	97.73	103.32	108.90	114.49
Small General Service - 1P	43.59	49.40	52.35	55.33	58.36	61.41	64.60
Small General Service - 3P	87.19	98.81	104.71	110.67	116.73	122.84	129.21
Medium General Service	72.44	74.06	74.88	75.69	76.50	77.31	78.12
Large General Service	198.06	207.07	211.73	216.50	221.37	226.35	231.44
Industrial	296.72	310.22	317.20	324.34	331.64	339.10	346.73
Seasonal Irrigation - 1P	26.04	29.09	30.71	32.36	34.06	35.80	37.58
Seasonal Irrigation - 3P	52.09	58.19	61.42	64.74	68.13	71.61	75.18
Area Lighting	12.01	12.56	12.84	13.13	13.42	13.73	14.03
Highway Lighting Service - 1P	41.85	45.01	46.63	48.28	49.96	51.67	53.43
Highway Lighting Service - 3P	78.97	84.93	88.00	91.10	94.27	97.50	100.82



# Proposed Rates – Energy Charge

Class	Existing	Proposed Energy Charge (\$/kWh)						
		2022	2023	2024	2025	2026	2027	2028
Residential	\$ 0.0761	\$ 0.0778	\$ 0.0780	\$ 0.0783	\$ 0.0786	\$ 0.0790	\$ 0.0794	\$ 0.0799
Small General Service	0.0755	0.0758	0.0761	0.0764	0.0767	0.0770	0.0773	0.0777
Medium General Service	0.0633	0.0648	0.0662	0.0678	0.0693	0.0709	0.0726	0.0742
Large General Service	0.0513	0.0525	0.0536	0.0548	0.0561	0.0573	0.0586	0.0599
Industrial	0.0491	0.0502	0.0513	0.0525	0.0537	0.0549	0.0561	0.0574
Seasonal Irrigation	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716
Area Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Highway Lighting Service	0.0735	0.0739	0.0744	0.0748	0.0754	0.0759	0.0765	0.0770

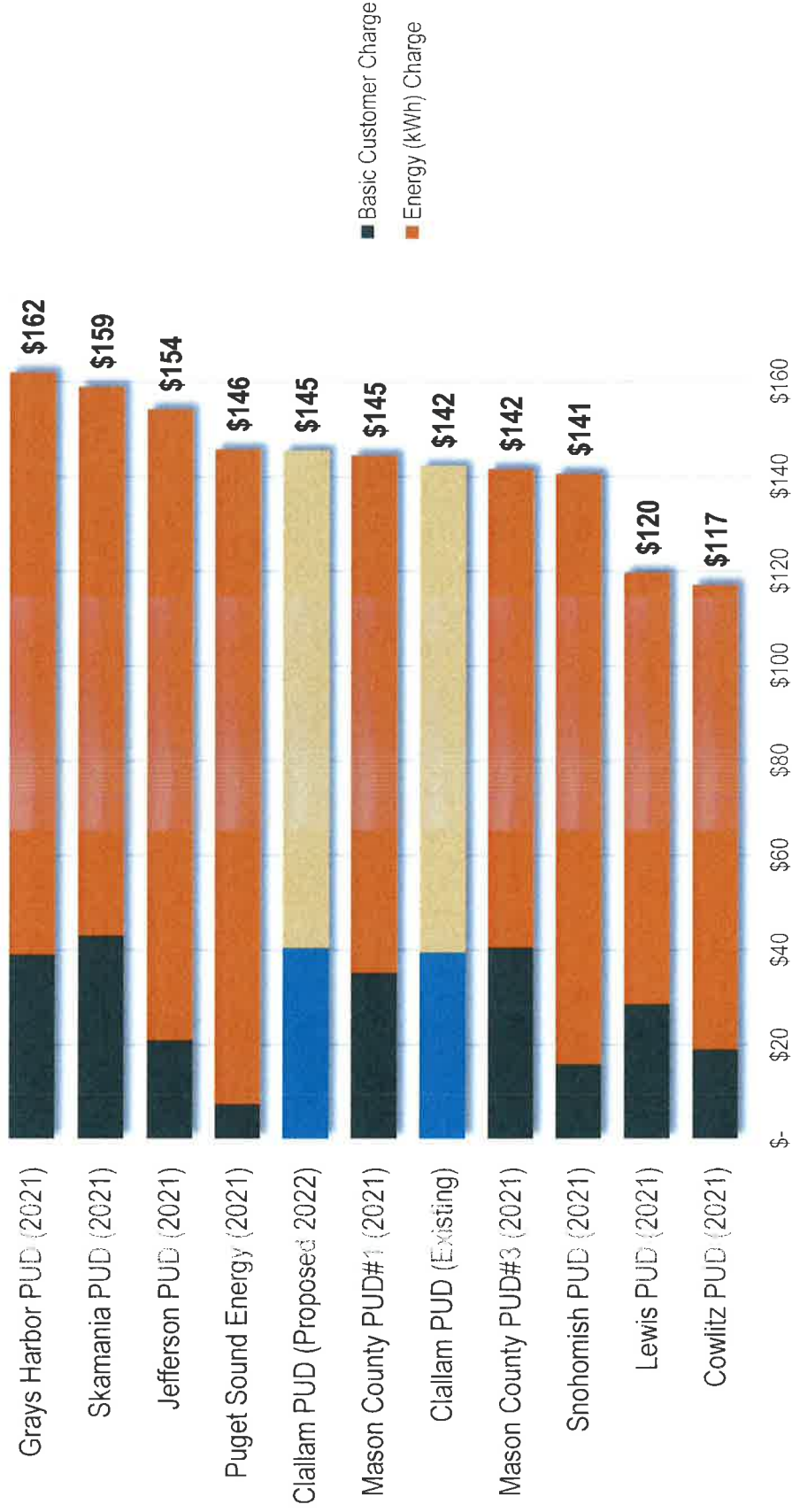
# Proposed Rates – Demand Charge

Class	Existing	Proposed Demand Charge (\$/kW)						
		2022	2023	2024	2025	2026	2027	2028
Residential	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Small General Service	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Medium General Service	\$ 3.56	\$ 3.64	\$ 3.73	\$ 3.81	\$ 3.90	\$ 3.99	\$ 4.08	\$ 4.18
Large General Service	5.53	5.65	5.78	5.91	6.04	6.18	6.32	6.46
Industrial	6.87	7.02	7.18	7.34	7.51	7.68	7.85	8.03
Seasonal Irrigation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Area Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Highway Lighting Service	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a



# Residential Rate Survey

Estimated Residential Monthly Bill (Based on 1,350 kWh)



Note: Some utilities apply taxes on top of the bill

# Discussion / Direction

- **Board feedback:**
  - » Revenue requirement – overall annual increases
    - 2.25% proposed for 2022 & 2023
    - 2.25% projected from 2022 – 2028
  - » Cost of service considerations
    - Across the board increases?
    - Continue monitoring equitable distribution across rate classes?
  - » Rate design – phase in basic customer charges for most classes?
    - Intra-class migration (cost-based unit costs)?
- **Rates effective April 1<sup>st</sup> of each year**

Thank you!  
Questions?

[www.fcsgroup.com](http://www.fcsgroup.com)





MEMORANDUM

Date: July 26, 2021
To: Doug Nass, General Manager
From: Bill Decker, Project Manager; John Purvis, Assistant General Manager
Re: ACCEPTANCE MEMO OF COMPLETION
BID OPENING FEBRUARY 12, 2020
FORKS OPERATIONS BUILDING
CONTRACT NUMBER 190804

All work under the above-referenced contract with Interwest Construction, Inc., has been completed. It is recommended that this work be accepted as complete.

The project consisted of construction of a single story operations building of approximately 11,640 square feet located at 241 Industrial Center, Forks, WA. A wood-framed building with concrete slab on grade, metal siding and roof, new mechanical and electrical systems including a standby generator supporting the operations building and existing vehicle storage building. Site work included, clearing, grading and fill, new base materials, gravel surfacing, pavement, new utilities, and storm drainage systems.

The Contractor started the project on April 20, 2020, and completed the work on March 16, 2021. The total contract cost is as follows:

Table with 2 columns: ITEM, TOTAL. Rows include Contract Amount (\$3,175,103.00), Change Orders Total (\$ 320,187.26), WSST (8.5%) (\$ 297,099.67), and TOTAL COST (\$3,792,389.93).


JP/BD/jk

Accepted by Board of Commissioners at meeting of \_\_\_\_\_, 20\_\_.

Doug Nass, General Manager



MEMORANDUM

Date: August 9, 2021  
To: Doug Nass, General Manager  
From: John Purvis, Assistant General Manager   
Bill Decker, Project Manager  
Re: ACCEPTANCE MEMO OF COMPLETION  
BID OPENING APRIL 20, 2021  
POLE INSPECTION, TREATING, AND REPORTING CLALLAM COUNTY  
BID NUMBER 211003

All work under the above-referenced contract with **PACIFIC POLE INSPECTION, LLC.**, has been completed. It is recommended that this work be accepted as complete.

The project consisted of pole inspection, treating, and reporting of an unspecified number of electrical transmission and distribution poles within Clallam County.

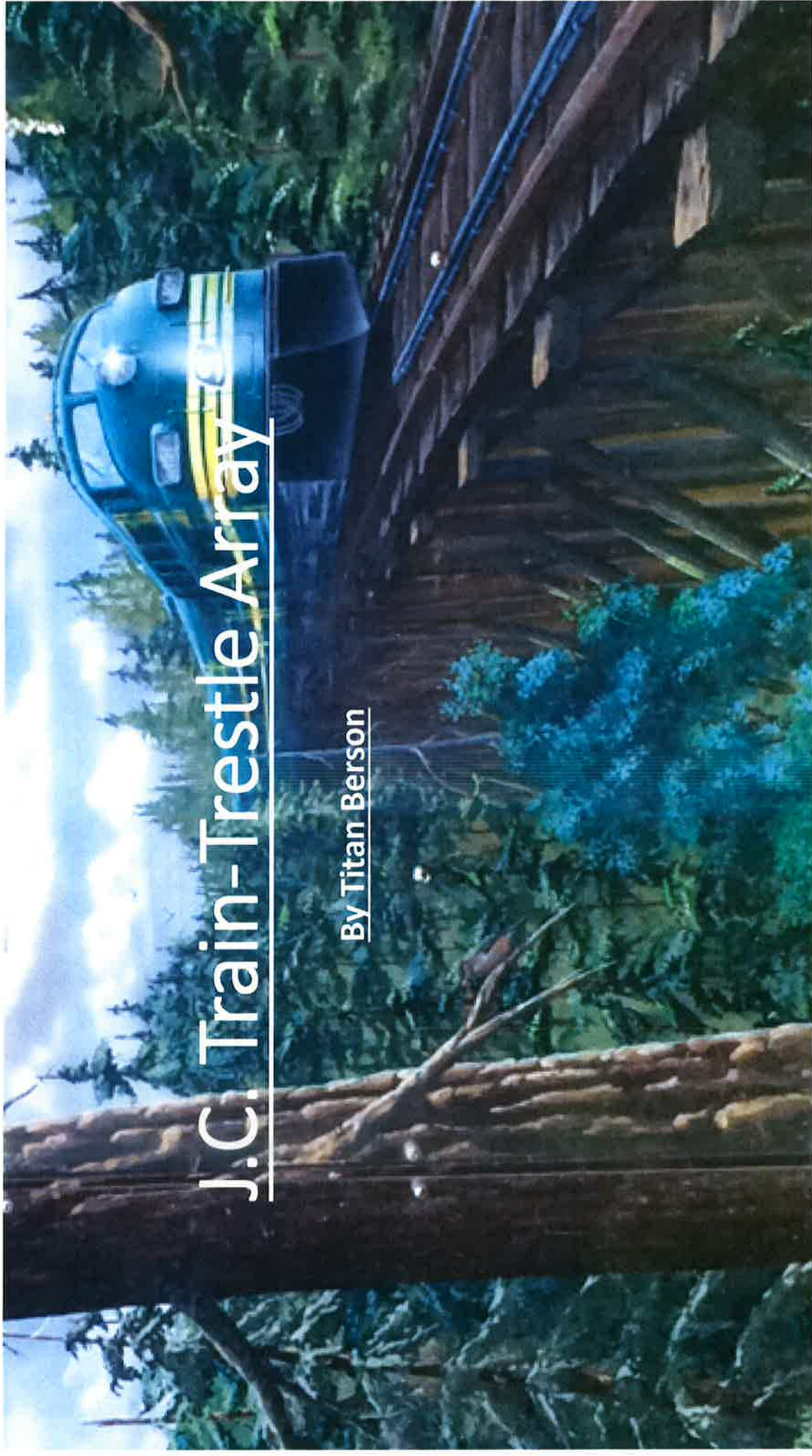
The Contractor started the project on June 14, 2021, and completed the work on July 23, 2021. The total contract cost:

JP:BD:jk

Item	Total
Contract Amount	\$129,368.00
Change Order 1	\$780.00
WSST (8.8%)	\$11,453.02
<b>Total Contract Cost</b>	<b>\$141,601.02</b>

Accepted by Board of Commissioners at meeting of: \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Doug Nass, General Manager



# J.C. Train-Trestle Array

By Titan Berson

## Part 1) Location

- Why Johnson Creek?
  - Proximity to the J.C.(Johnson Creek) Substation
  - We already own the land
  - The land has been mostly cleared, whereas very few trees, bushes, and plants remain



## Part 1) Another Contender

- The empty lot by engineering at 83 Idea Place
  - Pros: already owned, already cleared
  - Cons: That land could be used for future expansion, such as offices or garages





## Part 2) Type of Panels

- We choose the Canadian Solar panel over the listed names, based off a 25 year performance test and a price per kWh test through excel

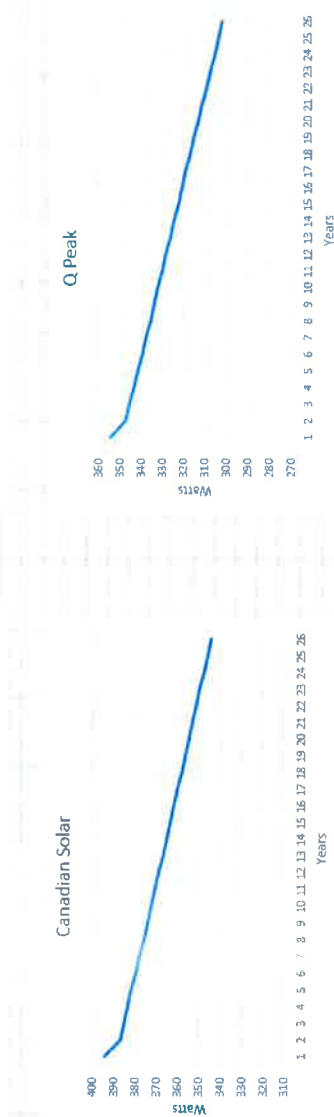
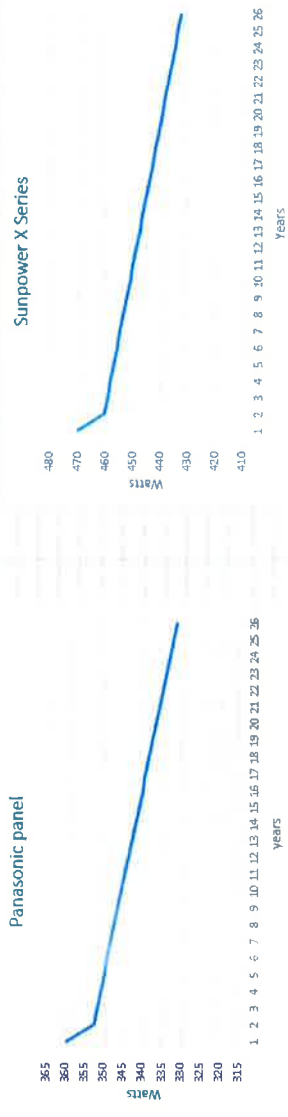


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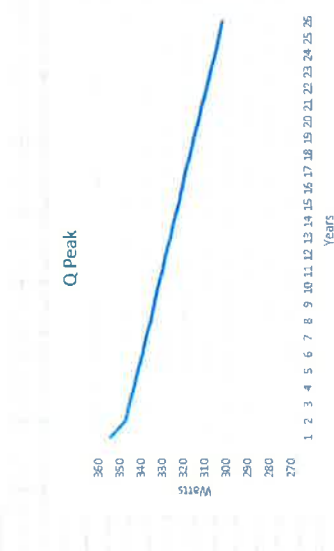
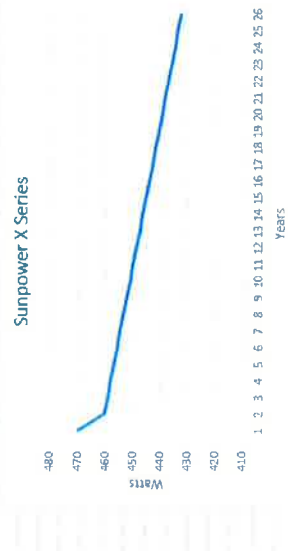
	Name:
1	Panasonic EverVolt Black Series
2	Sunpower-X-Series X21-470-COM
4	Q.PEAK DUO-G6+
5	Canadian Solar CS3W-395PB-AG



# Part 2) Performance Results



Name:	Wattage (W)
Panasonic EverVolt Black Series	360
Sunpower-X-Series X21-470-COM	470
Q.PEAK DUO-G6+	355
Canadian Solar CSSW-395PB-AG	395



AB	AC
Final value	Life Cycle ending degradation percentage
331.2	92%
432.4	92%
301.892	85.04%
344.0845	87.20%



# Part 2) Price per kWh test



E	F	G	H	I	J	K	L	M	N
Wattage (W)	Panel sq ft	Weight (lbs)	Efficiency (%)	Panel degradation percentage per year after one year (%)	Solar cell type	Price per Watt (\$)	Price(\$)	Degration @ 25 year value(kW)	Price Per Watt with degradation after 25 years
360	18.833	43	20.6	2% in the first year, 0.25 afterwards	mono	\$1.11	\$399.60	0.3312	\$1.21
470	23.29	56	>21	2% for the first year, 0.25 afterwards	mono	\$1.52	\$714.40	0.4324	\$1.65
355	19.29	43.87	20.1	2% for the first year, 0.54 afterwards	mono	\$0.62	\$220.10	0.301892	\$0.73
395	24.06	62.2	17.68	2% for the first year, 0.45% afterwards	poly	\$0.54	\$213.30	0.344085	\$0.62

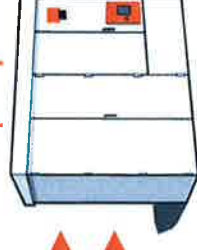
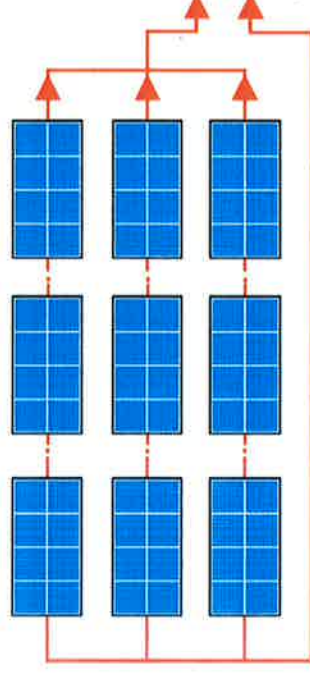
Note the 1000kWh/kW factor came from PVWatts



Canadian Solar 395W panels are both cost efficient and service life.

## Part 2) Additional Information

- 270 panels + 14 spare panels = 284 panels total
- 3 rows of arrays, 3X30 in landscape format
- 15 panels connected to a string, 6 strings to one inverter, therefore 90 panels in 1 row



CENTRAL INVERTER



## Part 3) The Structure

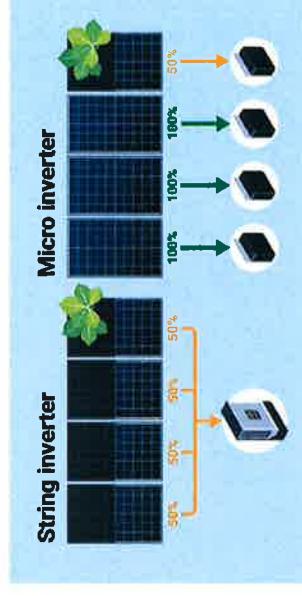


- I decided to use a landscape RBI structure, similar to the ones modeled at the Sequim solar site
- The J.C. Train-Trestle Array would be 3 times the size for the city of Sequim Array, therefore, 3 times the amount of supports;



## Part 4) String Inverter vs. Micro-Inverter

- The job of an inverter is to transform the current from DC to AC, since solar panels generate current in DC.
- Central inverters, or string inverters, use a string based system, where solar panels are “linked” together in certain groups, combining their respective voltages to one input at the inverter.
- A micro-inverter is an individual inverter attached per panel that converts the current to AC “at the panel”.



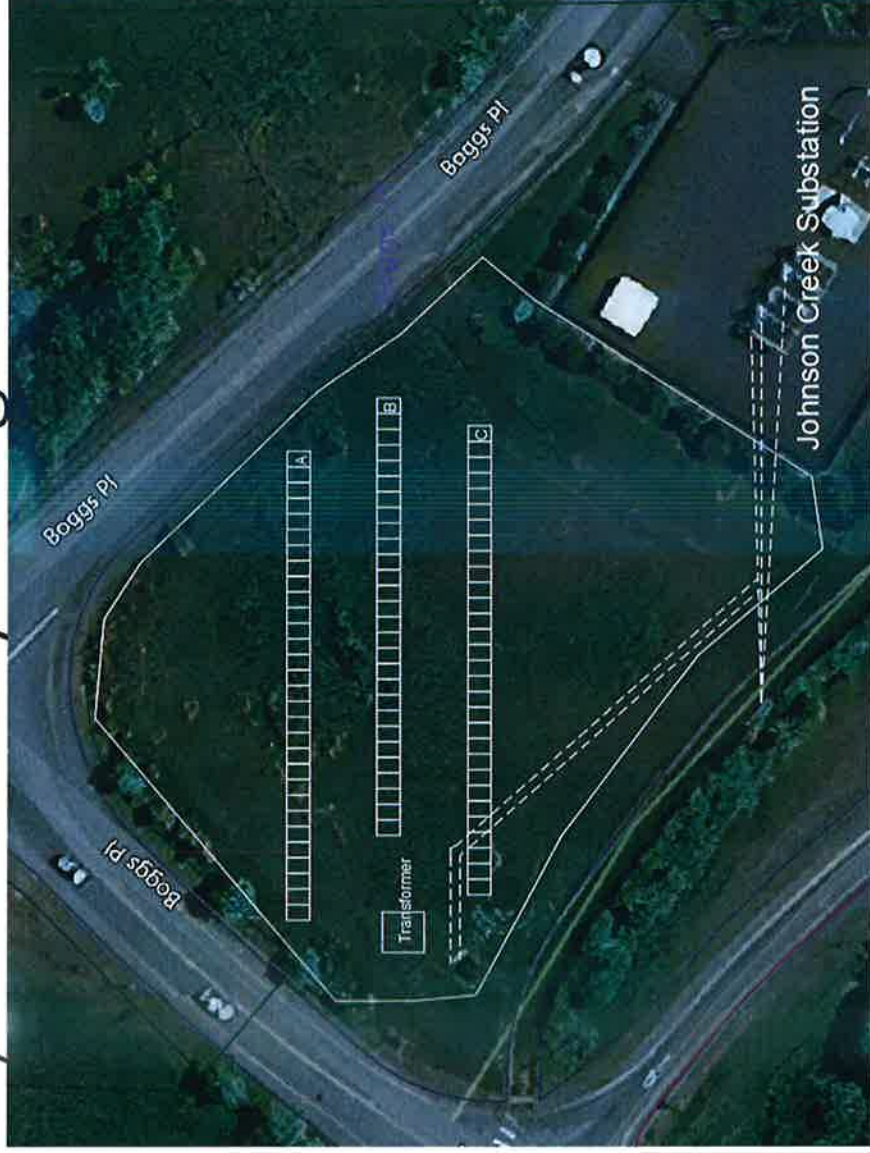
## Part 4) The Inverter



- I choose to model the J.C. Train-Trestle Array with the SMA, Tri-Power 33.3kW string inverter.
- The J.C. Train-Trestle Array is modeled to use a total of 3 string inverters.
- It saves PUD roughly \$27,660 to use 3 string inverters instead of 270 micro-inverters.



# Part 5) Solar Array Design

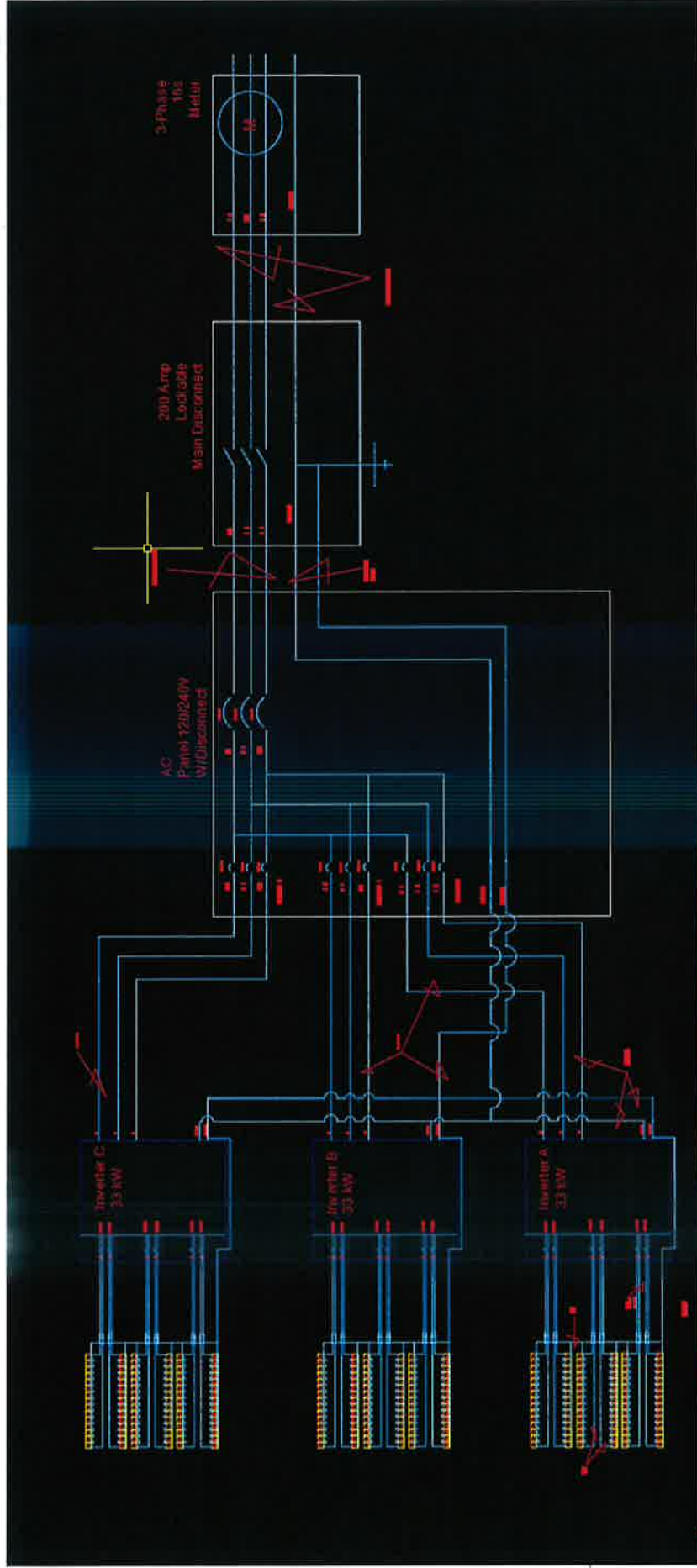




# Part 5) Wiring Diagram



Bringing Energy To Life™



## Part 6) Bifacial Panels



- The selected Canadian Solar panels have a unique feature, known as being bifacial, meaning that the panels can charge from both sides!

- **Benefits:**

- On a more than ideal day, the panels have the potential of generating an increased amount of wattage by 30%
- They can still generate energy when the front panel is covered by snow or dust

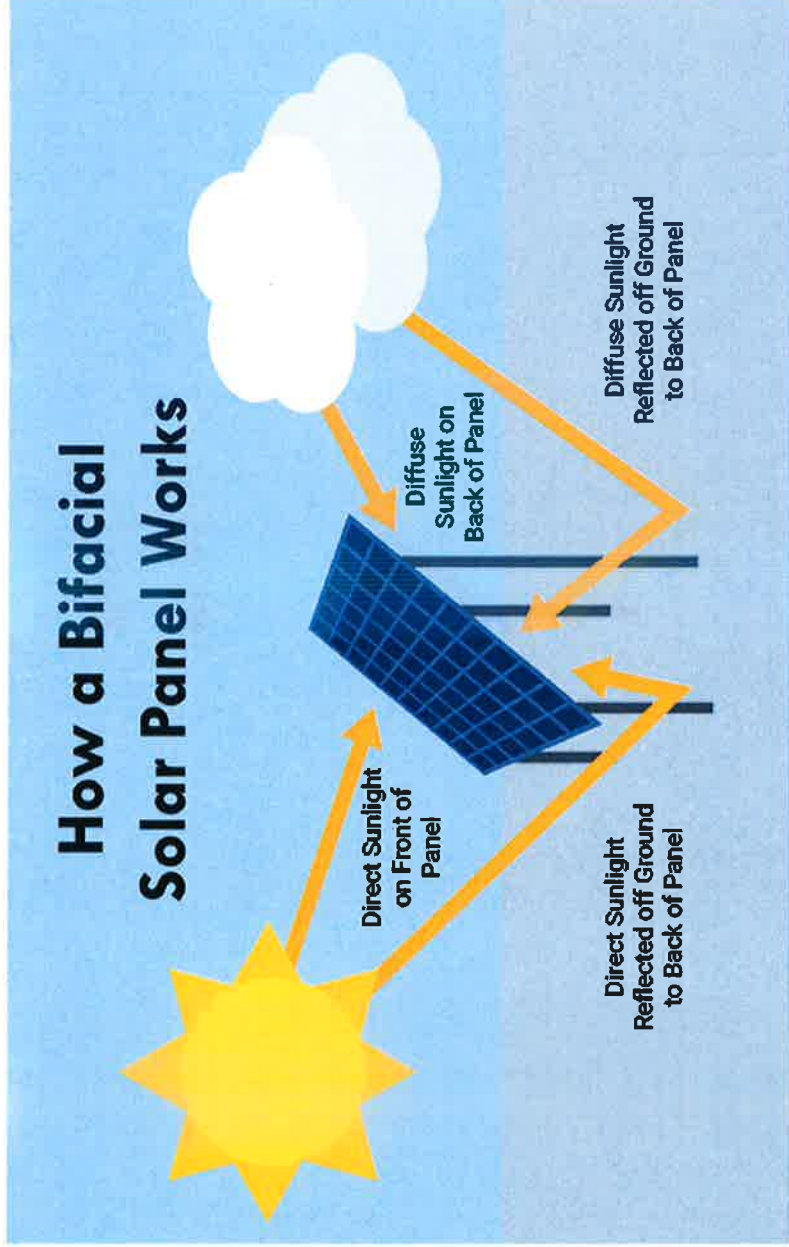


- **Cons:**

- They require a few variables; additional frame height, specialized frames and angles, and high surrounding albedo(reflective surfaces)



# Part 6) Bifacial Panels Continued



## Part 7) Bill of Materials and Final Costs

- Please refer to individual costs and quantities on the Pricing\_V2 excel sheet.
- The total cost for bidding to build the J.C. Train-Trestle Array is \$241,904.30 => making our price per Watt, \$2.42
- The cost for a 25 year upkeep is \$18,750
- The cost for building a border fence and gate bid should be \$76,000
- Total costs of the J.C. Train-Trestle Array is \$336,654.30, or a levelized cost of 0.129\$/kWh
- The J.C. Train-Trestle Array has the capacity for another 219 panels or 86.5kW's(bifacial not included), for future expansion



## Part 7) Compared to Sequim Solar



The Sequim 31.4kW Solar farm had a total installation cost (minus the fence) of \$126,600 leading to a levelized cost of 0.158\$/kWh. Cost per watt is \$4.03/watt.

Removing the fence cost from the J.C. Train-Trestle Array, we have a levelized cost of 0.099\$/kWh. Cost per watt is 40% less than Sequim Sub Solar PV.



# My Summer Experience



I have learned many things over the course of 3 months from Clallam County PUD

- SCADA/ Clallam County's Power Grid/ Metering Methods
- Sub-stations/ How BPA supplies Clallam County
- Engineering/Planning and Mapwise
- # of departments in PUD, and what each one does
- Solar Arrays and their associated components
- I learned how Clallam County PUD calculates power factor





# Questions?

