

**CANBY UTILITY**  
**REGULAR BOARD MEETING**  
**OCTOBER 11, 2022**  
**7:00 P.M.**

**AGENDA**

*The Board of Directors and staff have resumed in-person meetings. The public is invited to attend the meeting virtually or in person at Canby Utility's office.*

- I. CALL TO ORDER
- II. AGENDA
  - Additions, Deletions or Corrections to the Meeting Agenda
- III. CONSENT AGENDA
  - Approval of Agenda
  - Approval of Regular Board Meeting Minutes of September 13, 2022, and Work Session Minutes of September 27, 2022 (pp. 1-10)
  - Approval of Write-Offs
  - Approval of Payment of Water and Electric Bills
- IV. CITIZEN INPUT ON NON-AGENDA ITEMS *Citizen's wanting to speak virtually, please email or call the Board Secretary-Clerk by 4:30 p.m. on October 11, 2022 with your name, the topic you would like to speak on, and contact information: [bbenson@canbyutility.org](mailto:bbenson@canbyutility.org) or 503-263-4312.*
- V. SPECIAL PRESENTATION
- VI. RECOMMENDATION Revise Exhibit A to Resolution No. 267, Related to the Master Fee Schedule – Carol Sullivan, General Manager (pp. 11-14)
- VII. BOARD REPORT
  - Chair Comments
  - Board Member Comments
- VIII. STAFF REPORTS

Operations Manager:

  - Quarterly Reliability Report (pp. 15-16)

General Manager Updates
- IX. ADJOURN

# ***CANBY UTILITY REGULAR BOARD MEETING MINUTES SEPTEMBER 13, 2022***

**Board Present:** Chair Thompson; Members Hill, Gustafson, Horrax, and Molamphy

**Staff Present:** Carol Sullivan, General Manager; Barbara Benson, Board Secretary; Jason Berning, Operations Manager; Sue Arthur, Purchasing Agent; Cindy Dittmar, Customer Service Supervisor; and Jason Peterson, Operations Field Supervisor

**Others Present:** Joe Brennan, Jerry Nelzen, and Jeff Snyder

Chair Thompson called the Regular Board Meeting to order at 7:00 p.m.

Chair Thompson presented the meeting agenda for consideration. She asked for additions, deletions, or corrections to the meeting agenda. Board Secretary noted the agenda was amended to include a discussion about the proposed city dog park's power and water service.

Chair Thompson presented the consent agenda for approval. Member Molamphy made the \*MOTION to approve the consent agenda, consisting of the amended meeting agenda, regular meeting minutes of August 9, 2022, write-offs in the amount of \$797.07, payment of the electric and water department bills in the amount of \$1,412,414.54. Member Hill seconded, and the motion passed unanimously.

Chair Thompson asked for citizen input on non-agenda items, and there was none.

General Manager Carol Sullivan said that the city asked Canby Utility staff about serving power and water to the proposed dog park because a portion of the land for the project is outside the city limits and urban growth boundary (UGB).

The board attorney's office stated that Canby Utility may extend water to the dog park even though it is outside city limits and the UGB, subject to conditions. These conditions are ultimately related to land use and include 1) The extension of water cannot allow the property being served or any adjacent properties to develop to "urban" densities. Because it is a dog park, this should not be an issue, and 2) The city will need to coordinate the extension with Clackamas County, as it did in 2002 for the Dutch Vista homeowner's request for water service.

Sullivan said that for Canby Utility to serve the dog park with electricity, Portland General Electric (PGE) would need to agree. Then both agencies would present the Public Utilities Commission (PUC) with an allocation agreement to revise the service territory. At most, the commission itself would have to approve it on a consent agenda, though it may be something that PUC staff can approve administratively. Another option is to have the city apply for electric service through PGE directly.

Operations Manager Jason Berning said Canby Utility's policies do not specifically address serving properties outside the UGB. Furthermore, the policy in place creates confusion on authority due to language within the policy stating that requests to serve outside the city limits are subject to Canby Utility Board approval.

City of Canby's Public Works Director Jerry Nelzen added that the project has gone through the pre-application process with Clackamas County and the City of Canby. The city is currently waiting for the County's assessment for Canby Utility to serve water to the park. The water service needed for the portion of the site outside the UGB is for irrigation. Nelzen said that the project design changed so that most utility infrastructure will be inside the city limits. Berning added that if the city needs lighting outside the UGB, they will need to contact PGE to discuss options. A brief discussion ensued regarding the property's RRFF-5 (Rural Residential Farm/Forest) zoning, the next steps, and the city covering all the costs.

General Manager Carol Sullivan presented the proposed inflationary adjustment to the water system development charges (SDC). The SDC methodology allows for an annual inflationary adjustment to the charges based on the Engineering News Records Construction Cost Index. The fiscal year 2023 inflation factor increase is 8.85% for one dwelling unit equivalent or \$377. The fiscal year 2022 inflation factor increase was 3.82% or \$157. Letters were mailed to contractors on record to notify them of the proposed change, and some contractors have requested to pay for SDCs early to avoid the increase. Chair Thompson asked Sullivan to explain the purpose of SDCs. Sullivan stated the SDCs are a fee to "buy into" the water system to reimburse and improve infrastructure. After discussion, Member Hill made the \*MOTION to adopt Resolution No. 310, adjusting Canby Utility's Water System Development Charges by the prescribed inflationary amount, effective October 1, 2022, and repealing Resolution No. 308. Member Horrax seconded, and the motion passed 5-0.

Chair Thompson noted that the Board had a target date of six months for the general manager's review. Last week, Sullivan and Thompson discussed postponing her review until a date later in September or at the regular board meeting in October. The Board agreed to delay the evaluation until the October 11 meeting.

Member Molamphy asked about the process for claims when a vehicle hits one of our power poles and causes damages. Operations Manager Jason Berning stated that at the time of an accident, the staff collects photographs, the police report, and any other information needed about the driver. That information is then turned over to Human Resources/Administration Manager Barbara Benson to handle the claim. Benson then works with the insurance company to submit claims for payment. A brief discussion ensued regarding a recent accident where a car damaged a power pole.

Board Secretary Barbara Benson discussed two upcoming trainings for the board. One training is related to board governance, and the other is about anti-harassment/non-discrimination. Board Attorney Ashley Driscoll will present the governance training, and City/County Insurance Services will provide the additional training. The first training is scheduled for September 27 and will be held virtually. Benson stated that the boardroom would be open to the public. The second

training will be held at a later date yet to be determined, and the board approved a virtual setting for that training. A brief discussion ensued regarding the board attorney's office analysis of the Board's legal authority in relation to the City's Charter. Benson stated that the document is still in draft format.

General Manager Carol Sullivan reported that she, Member Molamphy, and Barbara Benson attended the Special Districts Duties and Liabilities Comprehensive Overview for Board Members and Staff training. Sullivan reviewed the training topics.

Sullivan also reported that staff met with Murraysmith engineering virtually to discuss the Water Master Plan project. The topics discussed in the meeting included the Clearwell reservoir painting project, the addition of a fifth pump, rust appearing on the seismically-retrofitted 13th Avenue concrete reservoir, water storage, water treatment, and point of diversion on the Willamette River. The new water treatment plant will be Canby Utility's most expensive project. Chair Thompson asked about the status of the Request for Proposals for the water rate study, and a discussion ensued.

Sullivan reported that Canby Utility was ready for the wildfire red flag warning weather. She noted that staff received calls from concerned customers but were assured that Canby Utility had no plans for public safety power shut-offs. With recent tree-trimming efforts, the crew has mitigated Canby's wildfire areas of concern, and most of our power lines are underground. Operations Manager Jason Berning shared that a car-hit-pole accident during the red flag warning weather had caused a power outage.

Sullivan said that she attended the Chamber luncheon today. Canby Utility received good reviews from city officials on working as a team and our responsiveness to the outage.

Member Molamphy made the \*MOTION to adjourn the meeting. Member Gustafson seconded, and the motion passed 5-0.

There being no further business, the meeting adjourned at 7:44 p.m.

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Melody Thompson, Chair

*Resigned from Board 9/27/22*

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Tim Gustafson, Member

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John Molamphy, Member

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David Horrax, Member

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Robert Hill, Member

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Barbara Benson, Board Secretary

***CANBY UTILITY  
BOARD WORK SESSION MINUTES  
SEPTEMBER 27, 2022***

*Due to COVID-19 Pandemic, the Board of Directors work session was held virtually. The public was invited to attend the meeting virtually or in-person at Canby Utility's office.*

**Board Present:** Chair Thompson; Members Hill, Horrax, and Molamphy

**Staff Present:** Carol Sullivan, General Manager; and Barbara Benson, Board Secretary

**Others Present:** Ashley Driscoll, Board Attorney, Beery Elsner & Hammond

Chair Thompson called the Work Session to order at 7:03 p.m.

Ashley Driscoll, Board Attorney, with Beery Elsner & Hammond provided training for the board members that included an introduction and purpose for the training, the Canby Utility Board's background, public meetings, public records, and ethics.

The work session adjourned at 8:15 p.m.

A copy of the presentation is attached for reference.

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Melody Thompson, Chair

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David Horrax, Member

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Robert Hill, Member


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John Molamphy, Member

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Barbara Benson, Board Secretary

BEH | Beery Elsner & Hammond, LLP




## Canby Utility Board Training

September 27, 2022

Presented by Ashley Driscoll  
BEERY ELSNER & HAMMOND, LLP

BEH | Beery Elsner & Hammond, LLP


### Mission Statement



- As a customer-owned utility, CUB's mission is to efficiently provide fair, honest, and responsible hometown service to our customers by furnishing adequate amounts of safe, reliable electricity and pure water at reasonable, stable prices with a balanced, flexible approach to environmental concerns and future needs.

BEH | Beery Elsner & Hammond, LLP


### Overview



- Introduction & Purpose
- CUB Background
- Public Meetings
- Public Records
- Ethics

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### Canby Utility



- Exclusive jurisdiction, control and management of the Electric Department and all its operations and facilities.
- Has all the powers and duties possessed by the City to construct, acquire, expand and operate the electric system, and to do any and all acts or things that are necessary, convenient or desirable in order to operate, maintain, enlarge, extend, preserve and promote an orderly, economical and businesslike administration of the electric system.

BEH | Beery Elsner & Hammond, LLP


### Canby Utility



- Canby Utility is a customer-owned utility that is established in the City of Canby Charter as an independent subdivision of the City.
- Funded solely through rates, fees and charges and not subsidized by property taxes or the City's general fund.

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### Canby Utility



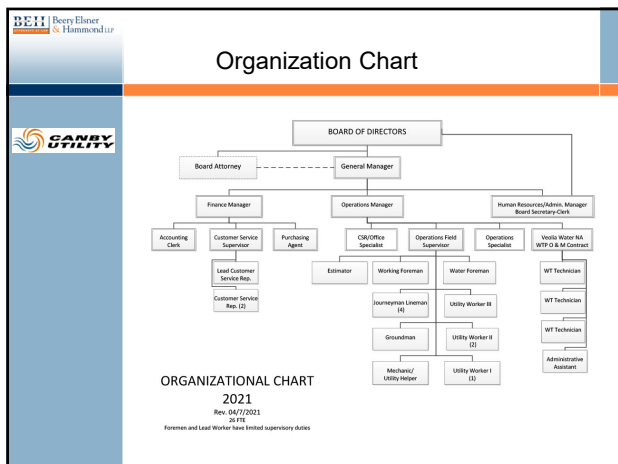
- Control and management of all water facilities and services within the City of Canby have been delegated to CUB by the City pursuant to written agreement as authorized by the City charter.
- Under the agreement, CUB is authorized to maintain the continuing operation and management of all facilities, services and aspects of Canby's water department.
- City may rescind the delegation of authority to CUB by giving formal written notice to CUB at least one full fiscal year prior to the effective date of such a revocation.

**Canby Utility**

- Other powers granted by Chapter X of the City of Canby Charter are meant to further implement these duties. Such powers include:
  - ✓ authority to employ a General Manager and such other employees as necessary;
  - ✓ purchase and sell real estate;
  - ✓ construct plants, transmission lines and other facilities;
  - ✓ enter into contracts;
  - ✓ issue bonds;
  - ✓ exercise eminent domain powers.
- May not levy ad valorem taxes on any taxable property.

**Board of Directors**

- No person shall be eligible for appointment as a Board member or entitled to hold such office unless at the time of appointment and continuing thereafter, such person is a qualified elector within the meaning of the State Constitution and has resided in the City of Canby during the six months immediately preceding appointment and continues to reside in the City for the term of the appointment.
- The compensation for the services of each Board member shall be whatever amount the Board fixes.



**Conducting Business**

- At its first meeting in January, the Board members must elect one of their members as Chair.
- If the Chair is absent at any meeting, a pro-tem shall be appointed by the members present.
- The Chair shall preside over all meetings of the Board and in doing so, shall, so far as possible, follow Roberts Rules of Order.

**Conducting Business**

- No action shall be taken by the Board except by the affirmative vote of the majority of the members.
- The Board conducts its business as a body – individual members have no independent authority to act on behalf of the CUB.
- Three (3) Board members shall constitute a quorum.

**Conducting Business**

- The Board shall hold a regular meeting at least once a month at a time and place to be fixed by the Board.
- Special meetings may be called by the Chair of the Board, or by two members of the Board.
- Meetings must comply with state public meeting laws.

**Public Meetings**

- The Oregon form of government requires an informed public that is aware of the deliberations and decisions of governing bodies.
- Deliberations and decisions by a quorum of the Board must be done in public.
- Beware of electronic meetings (e-mail and social media) as well as serial meetings.
- Purely social gatherings are not covered – but don't discuss CUB business at social gatherings.

**Public Meetings Violations**

- Any person may file a complaint with OGEK for executive session violations. Liability is personal, and OGEK may investigate, find a violation, and impose penalties.
- Civil Penalty = up to \$1000 per violation\*  
\* may not be imposed if public body acted on advice of public body's legal counsel - ORS 244.350(2)(b).
- OGEK may also issue letters of reprimand, explanation or education.
- Court may invalidate certain decisions.

**Public Meetings**

- Presiding officer has inherent authority to keep order and impose reasonable restrictions necessary for the efficient and orderly conduct of a meeting.
- Board should not eject an individual from a meeting unless that individual has actually disrupted the meeting, which means the Board is unable to do its work.
- Let staff serve as your liaison.

**Public Records**

- Public Record Laws require both inspection and preservation (aka "retention").
- The law applies to all government records of any kind if they contain information about "the public's business." This includes emails, text messages and social media posts.
- May charge reasonable fees for inspection – must adopt fee schedule.
- Exemptions exist that permit CUB to keep certain documents confidential.
- Responses to requests must occur within certain deadlines.

**Public Meetings**

- Board may use executive sessions to discuss certain matters, defined by law, privately.
- No final decisions may be made in an executive session.
- Must follow specific procedures when going into executive session.
- Media permitted to attend in most situations but may not report – can use information to follow other leads though!


**Public Records**

- CUB must follow record retention policy adopted by Secretary of State archives division.
- Must keep one official copy of each record for applicable retention period.
- Duty extends to Board members, not just employees (which means social media posts, texts and emails to home addresses/ computers must be retained).
- Destruction of public records is a criminal offense.

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## Ethics


- Conflicts of Interest
  - Actual and Potential
- Abuse of Office
- Gifts
- Miscellaneous
  - Future Employment and Contracts
  - Confidential Information
  - Nepotism



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## Conflict of Interest


- Businesses with which a public official is associated :
  - ✓ A person is "associated with" a private business if: the person is a director, officer, owner, or employee or agent of the business; or if a person owns or has owned more than \$1000 worth of stock, equity interest, stock options, or debt interest of a private business in the preceding calendar year.
  - ✓ A person is "associated with" a publicly held corporation if: the person is an officer or director of the publicly traded company, or if the person owns or has owned more than \$100,000 worth of stock in the preceding calendar year.
  - ✓ A person is a "associated with" a business if they are required to file an annual statement of economic interest and that business is a "source of income" that produces 10 percent or more of the person's total annual household income.



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## Conflict of Interest

- An actual conflict of interest is defined under ORS 244.020 as any decision or act by a public official that would result in a "private pecuniary benefit or detriment."
- An actual conflict extends not only to financial gain or loss to the individual public official but also to any relatives of the public official or any business with which the official or relative is associated.




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## Conflict of Interest

In the case of an actual conflict of interest, the official must both:


- Announce the actual conflict of interest; and
- Refrain from taking official action.



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## Conflict of Interest


- A relative includes:
  - (1) the spouse, parent, step-parent, child, sibling, step-sibling, son-in-law and daughter-in-law of a public official;
  - (2) the parent, step-parent, child, sibling, son-in-law and daughter in law of the spouse of a public official;
  - (3) any individual that the public official has a legal obligation to support; and
  - (4) any individual to whom or from whom the official provides or receives benefits from employment



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## Conflict of Interest

- A potential conflict of interest is distinguished from an actual conflict of interest in that the benefit or detriment "could" occur while in an actual conflict of interest situation, the benefit or detriment "would" occur.
- In the case of a potential conflict of interest, the official must announce the conflict, but may take action on the issue.



**Conflict of Interest**

- Where a public official is part of a "class" that consists of a larger group of people affected by a decision, no conflict exists.
- Class exception determined by OGEC.
- There is no hard and fast rule on the size or type of class to which the conflict exemption applies, and it depends on the facts of each case.

**Gifts**

- A gift is anything of economic value, but the definition excludes things such as:
  - gifts from relatives or members of the household of the public official;
  - gifts in the form of tokens, plaques, trophies or mementos with a resale value less than \$25; and
  - gifts received as part of one's private business, employment or volunteerism.
- Several other exemptions from definition of gifts.

**Abuse of Office**

- Public officials may not use or attempt to use their position to obtain financial gain or avoid financial detriment that would not otherwise be available but for the holding of the official position.
- Applies to the public official, a relative or member of the household of the public official, or any business with which the public official or a relative or member of the household of the public official is associated.

**Future Employment & Contracts**

For two years after a public official ceases holding the position as a public official they may not have a direct beneficial financial interest in a public contract when one of the parties to the contract is the official's former public body if the contract:



- Was authorized by the public official, in their former capacity as a public official;
- Was authorized by a governing body (board, committee, or council) that the former public official was a member of when the contract was authorized.

**Gifts**

- The law prohibits public officials, relatives of public officials and members of a public official's household from soliciting or receiving any gifts over \$50 in a calendar year from any source that has, or could reasonably be expected to have, a legislative or administrative interest in the public official's decisions or votes.
- Always look to source of the gift!



**Confidential Information**

- Public officials may not further or attempt to further personal gain through use of confidential information gained in the course of or by reason of their official positions or activities in any way.

## Nepotism



- Public official may not participate in the appointment, employment, promotion, discharge, firing or demoting of a relative or member of the household.
- Public officials may not directly supervise a relative or member of the household unless local policy expressly permits.

## Questions



- Please feel free to call or email with any questions or comments.

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## Sanctions for Ethics Violations

- Civil Penalty: \$5000 maximum
- Forfeiture: Twice the amount of any financial benefit realized from ethics violation
- Letters of Reprimand, Explanation or Education
- Sanctions are personal to the public official (i.e., not against the Board)

## OGEC

- Staff Advice
- Staff Opinion
- Advisory Opinion
  - Telephone  
503-378-5105
  - FAX 503-373-1456
  - e-mail: [ogec.mail@state.or.us](mailto:ogec.mail@state.or.us)
- Website: [ogec.state.or.us](http://ogec.state.or.us)



## MEMORANDUM

October 6, 2022

TO: Chair Thompson, Member Hill, Member Horrax, and Member Molamphy

FROM: Carol Sullivan, General Manager

SUBJECT: Master Fee Schedule Update

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**RECOMMENDATION:** Adopt Revised Exhibit A to Resolution No. 267, Related to the Master Fee Schedule effective November 1, 2022.

**BACKGROUND:** On September 24, 2013, the Board adopted Resolution No. 267, establishing a master fee schedule for Canby Utility's water, electric, and customer services, and allowing for an annual review of and update to the exhibit of fees.

Staff proposes the following revisions to Exhibit A to reflect current costs:

- Adding a fee for a job cost estimate of \$500. Excess funds would be applied to the job or refunded. Additional costs would be billed. Currently, we don't charge this fee. Canby Utility has completed many job cost estimates that never develop.
- Water line inspection fee increase from \$74 to \$87 per hour.
- Adding a fee for water line flushing of \$87 per hour, and charge for the estimated water use at the current irrigation rate. Newly constructed water lines require flushing, sometimes more than once, and the cost for water consumption have not been recouped. This can result in substantial water loss depending on the size of the development.
- Adding a fee for water pressure and fire flow tests of \$87 per hour, and charge for the estimated water use at the current irrigation rate.
- Adding a charge for water theft. First offense is \$250, second offense is \$500, and additional offenses are \$1,000. The estimated water use will also be charged at the current irrigation rate.
- Adding a fee for pre-disconnect of \$25. An employee goes to a service address for a nonpayment disconnect, and we give the customer additional time to pay that day to avoid service interruption. Currently there is no charge for our costs. If the customer's service were to be shut off, they would pay a reconnect fee to cover the cost of the disconnection and reconnection. This fee is half of the proposed reconnection fee.

- Reconnection fee increase from \$40 to \$50.
- Same day service fee increase from \$40 to \$50.
- Water hook-up charge for meter installation only, updated as follows:
  - 5/8" – 3/4"      Increase from \$375 to \$440
  - 1"                Increase from \$500 to \$700
  - 1 - 1/2"        Increase from \$1,036 to \$1,200
  - 2"                Increase from \$919 to \$950

Staff will answer any questions the Board may have.

# CANBY UTILITY MASTER FEE SCHEDULE

## RESOLUTION 267 EXHIBIT A

OTHER SERVICES	FEE
JOB COST ESTIMATE	\$500
WATER LINE INSPECTION	\$87 per hour plus estimated water use at Irrigation rate
WATER LINE FLUSHING	\$87 per hour plus estimated water use at Irrigation rate
WATER PRESSURE / FIRE FLOW TEST	\$87 per hour plus estimated water use at Irrigation rate
WATER THEFT CHARGE	\$250 (1 <sup>ST</sup> offense), \$500 (2 <sup>nd</sup> offense), \$1,000 (additional offenses) plus estimated water use at Irrigation rate
DOORHANGER FEE	\$25
DISCONNECT NOTICE FEE	\$25
FAILED PAYMENT ARRANGEMENT	\$25
NSF CHECK	\$33
PRE-DISCONNECTION	\$25
RECONNECTION	\$50
SAME DAY SERVICE FEE	\$50
AFTER-HOURS RECONNECTION	\$250
ACCOUNT SET UP FEE	\$25
PUBLIC RECORDS	Staff time and benefits, and material costs (first 30 minutes no charge).
PUBLIC RECORDS (Mailing Costs)	Actual cost plus \$1 handling
PUBLIC RECORDS (Faxing Costs)	\$0.50 per page
PHOTOCOPIES (Single/Double Sided)	\$0.25
PHOTOCOPIES (Color or Printouts)	\$0.75

STREET LIGHTING FIXTURE RENTAL	MONTHLY FEE
100 WATT	\$4.00
150 WATT	\$4.10
200 WATT	\$6.75
250 WATT	\$6.90
400 WATT	\$7.25

STREET LIGHTING POLE RENTAL	MONTHLY FEE
24' ALUMINUM POLE	\$3.00
30' WOOD POLE	\$1.50
35' WOOD POLE	\$1.75
40' WOOD POLE	\$2.75

<b>WATER HOOK-UP MAIN TO METER SERVICE LATERAL INCLUDING METER</b>	
<b>METER SIZE</b>	<b>CHARGE</b>
5/8" – 1"	\$9,885
1-1/2"- 2"	\$10,949
Above 2"	Job Cost Estimate

<b>WATER HOOK-UP METER INSTALLATION ONLY</b>	
<b>METER SIZE</b>	<b>CHARGE</b>
5/8" – 3/4"	\$440
1"	\$700
1-1/2"	\$1,200
2"	\$950
Above 2"	Job Cost Estimate

**Source Documents:**

Customer Service Policies & Procedures:	Resolution No. 288
Electric Service Conditions:	Resolution No. 254
Water Service Policies and Procedures:	Resolution No. 259
Public Records Request Procedures:	Procedure 402

OUTAGE AVERAGES Oct 2021 THROUGH Sep 2022

MONTH	YEAR	NUMBER OF OUTAGES	NUMBER OF CUSTOMERS AFFECTED	TOTAL CUSTOMER MINUTES OFF	MONTHLY NUMBER OF CUSTOMERS IN THE SYSTEM	NUMBER OF MOMENTARY INTERRUPTIONS
Oct	2021	1	2	272	7908	3
Nov	2021	0	0	0	7928	0
Dec	2021	0	0	0	7950	1
Jan	2022	2	10	1980	7950	2
Feb	2022	1	1	90	7947	2
March	2022	0	0	0	7947	1
April	2022	0	0	0	7960	0
May	2022	1	3	270	7971	2
June	2022	0	0	0	7978	1
July	2022	2	14	498	8005	1
Aug	2022	0	0	0	8023	1
Sep	2022	4	715	370102	8061	5
12 MONTH TOTALS		11	745	373,212	95,628	19
12 MONTH AVERAGE		0.92	62	31,101	7,969	1.6

			C.U.	Industry Typical Value
SAIDI =	$\frac{\text{Sum of all customer interruption minutes}}{\text{Total number of customers}}$	$= \frac{373,212}{7,969}$	$= 46.8330$	$87.0$
SAIFI =	$\frac{\text{Total number of customer interruptions}}{\text{Total number of customers}}$	$= \frac{745}{7,969}$	$= 0.09$	$0.93$
MAIFI=	$\frac{\text{Total number of cust. momentary interruptions}}{\text{Total number of customers}}$	$= \frac{19}{7,969}$	$= 0.002$	$0.96$
CAIDI =	$\frac{\text{Total interruption minutes for 12 months}}{\text{Total number of interruptions}}$	$= \frac{501}{6}$	$= 83$	$107.25$

## **System Average Interruption Duration Index (SAIDI)**

SAIDI indicates the total sustained interruption duration for the average customer during a predefined period of time. It is commonly measured in minutes or hours of interruption.

## **System Average Interruption Frequency Index (SAIFI)**

SAIFI indicates how often the average customer experiences a sustained interruption during a predefined period of time.

## **Momentary Average Interruption Frequency Index (MAIFI)**

MAIFI is a reliability indicator used by electric power utilities. MAIFI is the average number of momentary interruptions that a customer would experience during a given period (typically a year).

## **Customer Average Interruption Duration Index (CAIDI)**

CAIDI gives the average outage duration that any given customer would experience. CAIDI can also be viewed as the average restoration time.