

**INFORMAL HEARING**  
**Otter Tail Power Company**  
**CASE No. PU-23-283**  
September 27, 2023



## OTTER TAIL PARTICIPANTS

- Paula Foster – Supervisor Regulatory Analysis
- Amber Stalboerger – Manager Regulatory Analysis
- Ben Christenson – Supervisor Energy Measurement and Control
- Tanya Kelm – Principal Energy Marketing Engineer

# INFORMAL ON AMDT COST RECOVERY 2024 RATES

## Agenda

- Summary of Request
- Project Overview
- Review of Revenue Requirement
- Rate Design and Rate Impact
- Closing Summary

# SUMMARY OF REQUEST

1. Projects included in this update
  - Advanced Metering Infrastructure (AMI)
  - Outage Management System (OMS)
  - Demand Response (DR)
2. Total Revenue Requirement for recovery period \$1,343,206.
3. Recovery Period is January 1, 2024 – December 31, 2024.
4. Effective date: January 1, 2024
5. Residential customers will see a decrease of \$0.95 per meter/per month from \$1.71 to \$0.76 per meter/per month.
6. Rate design is a per meter charge.

# PROJECT OVERVIEW

## Advanced Metering Infrastructure - Implementation Delays

Delays in the implementation timing are due to:

- System integration challenges, and
- Turnover of key project team members.

Three separate vendor teams are implementing the following:

- AMI Command Center (or Head End System)
- Gridstream Meter Data Management System
- Updates to Cayenta Utilities (Customer Information System)

Earlier in the project, configuration and modifications were tested separately by each vendor team and then changes were migrated to the user acceptance test system. Multiple new issues were being introduced that required additional system updates.

# PROJECT OVERVIEW

## Advanced Metering Infrastructure - Implementation Resolution

Otter Tail held a summit in early spring 2023 to address project challenges, and three main steps were taken as a result.

- An integrated unit testing phase was implemented for vendors to test functionality with all other systems prior to Otter Tail's testing.
- To ease some of the testing challenges, internal employees with more direct experience with the current software systems requiring interface work were added to the project team.
- Tiger teams, which are teams made up of subject matter experts, were created to focus on critical issues.

Otter Tail also contracted a system integrator to consult on integration best practices.

# PROJECT OVERVIEW

## Advanced Metering Infrastructure

### Project Status:

- Phase I: **Completed**
  - Selection of vendor
  - Finalized contracts
- Phase II: **Current Phase**
  - System Workshops/Business Processes (Completed)
  - System integration (In progress)
  - Initial deployment (Pilot expected Q4 2023)
- Phase III: **Next Step**
  - Full Deployment: 2024



# PROJECT OVERVIEW

## Advanced Metering Infrastructure – O&M Savings

- Savings due to:
  - The decline and ultimate end of manual meter reading
  - Decreased meter reading system and equipment costs
- Estimated savings will be evaluated and adjusted on an annual basis.
- North Dakota 2024 estimated savings of \$1,037,153 are shown as a reduction to the Revenue Requirement.



# PROJECT OVERVIEW

## Outage Management System

- Enhance outage restoration and reliability
  - Identify outages and deploy crews more quickly
  - Gather data that will help plan and design reliability improvements
- Improve customer engagement and communication
  - Outage notifications
    - Planned outages
    - Estimated time of restoration
    - Outage reporting
    - Outage viewing
- Safety
  - Real time data to understand current state of electrical system



# PROJECT OVERVIEW

## Outage Management System

### Project Status:

- OMS has been completed and is in service.
- Geographic Information System (GIS) updates are expected to be completed by Q4 2023.
- AMI must be fully deployed before OMS will reach its full potential.



# PROJECT OVERVIEW

## Demand Response

- Otter Tail has strong customer adoption with almost one-third customer participation
- System replacement will allow the continuation and future development of Demand Response programs.
- Reduce energy costs for participating customers
- Produce System benefits:
  - Lower energy and fuel costs
  - Efficiencies to the grid and generators
  - Avoided generation capacity
  - Avoided energy and transmission
  - System emergency protection



# PROJECT OVERVIEW

## Demand Response – Timeline

- Replacement of the DR system currently in RFP Phase, with vendor selection occurring in Q4 2023.
- Software installation expected to begin 2024
- Hardware installation expected to begin 2025
- Project completion by 2027

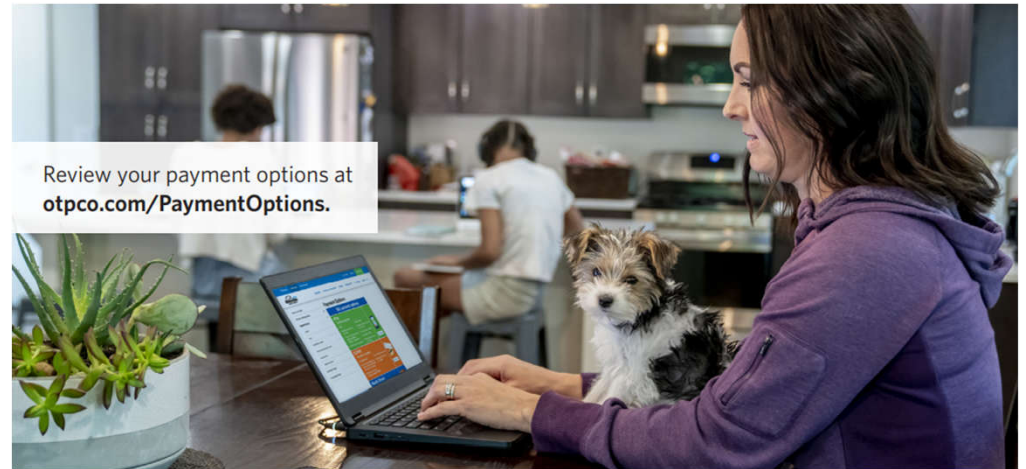


# REVIEW OF REVENUE REQUIREMENT

<b>January 2024 – December 2024 Recovery Period</b>	
Advanced Metering Infrastructure	\$3,499,145
Outage Management and GIS Updates	\$690,749
Demand Response	\$279,030
Operations and Maintenance Savings due to AMI	(\$1,037,153)
Carrying Charge	(\$90,565)
True-Up	<u>(\$1,998,000)</u>
<b>Total</b>	<b>\$1,343,206</b>

# RATE DESIGN AND RATE IMPACT

- Rate Design is based upon a per meter charge.
- North Dakota residential customers will be charged \$0.76 per month, which is a monthly per meter decrease of \$0.95.
- Proposed rates for 2024 are lower than anticipated due to delays in project spending.
- Rates will likely increase when the updated rates are submitted for 2025 and then begin to decline going forward as project spend ceases, assets depreciate, and savings are realized.



# RATE DESIGN AND RATE IMPACT

## Updated Per Meter Charges as Proposed

Service Category	Per Meter Charge
Residential	\$0.76
Residential RDC	\$1.84
Farm	\$1.80
General Service	\$2.92
General Service -TOU	\$5.99
Large General Service - Primary / Transmission	\$21.80
Large General Service - Secondary	\$7.04
Irrigation Service	\$4.92
Outdoor Lighting (Metered)	\$1.87
OPA (Metered)	\$2.09
Controlled Service Water Heating	\$1.84
Controlled Service Interruptible - Small Dual Fuel	\$1.87
Controlled Service Interruptible - Large Dual Fuel	\$7.53
Controlled Service Deferred	\$2.29

# CLOSING SUMMARY OF OTTER TAIL REQUEST

Otter Tail Respectfully Requests the Commission Approve:

- The Advanced Metering and Distribution Technology annual rate adjustment as set forth in this Annual Update filing to be in effect on and after January 1, 2024.



[otpc.com](http://otpc.com)  
[otpsustainability.com](http://otpsustainability.com)