

Advanced Electric and Water Meters: Program and Policies Update

Tacoma City Council and Public Utility Board

Joint Study Session

July 21st, 2020

Agenda



1. Program Update

- Customer Benefits
- Strategic Program
- Customer Communications
- Upcoming Target Dates

2. Advanced Meter Policies

- Overview
- Customer Side Repairs
- Opt-Out
- PrePay

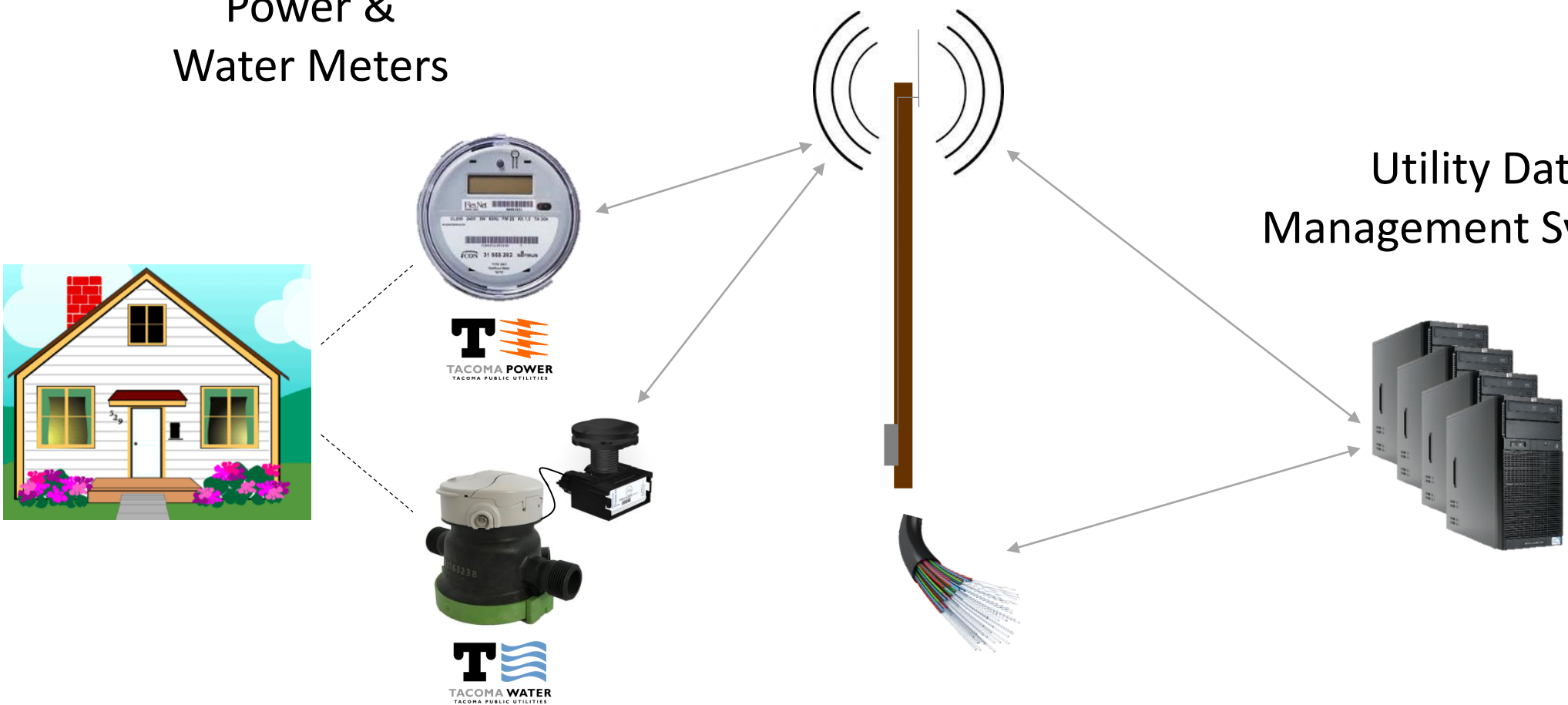
Advanced Metering Infrastructure (AMI)



Communications Network

Power & Water Meters

Utility Data Management Systems



Advanced Meters: Customer Benefits Timeline



2020-2021



- Automated Meter Reading
- Enhanced Personal Privacy



- Easier Move-In & Move-Out
- Remote Reconnect/Disconnect for Electric



- Abnormal Consumption Notifications
- Emergency Water Leak Notifications



- Monthly Billing



- PrePay for Electric

Advanced Meter Customer Benefits



Benefits Available As
Customers Receive
New Meters Over Time:
2020-2022

DRAFT: Revised 7/16/2020

2022



- Enhanced Customer Web Portal
- Expanded Ways to Save: AMI Data Available on Web Portal



- Enhanced PrePay Via Web Portal for Electric
- Selectable Bill Due Date



- Enhanced Customer Outage Notifications

Advanced Meters: Strategic Program



Advanced Meters are an *essential building block* of TPU, have been a *strategic focus for the past five years*, and will *modernize TPU services* now and in the future.



Low Customer Cost:

- The current cost to individual customers is relatively low, with **costs spread over ten years**.
- Costs for advanced meters are **factored into current rates**.
- Rate Impact: The additional cost each year for the next ten years is about:
 - 8 cents per month for the average residential power customer
 - 11 cents per month for the average residential water customer in the City of Tacoma (13 cents per month outside City)



Benefits support customer cost savings over time, particularly during times of economic uncertainty.

Customer Communications



TACOMA PUBLIC UTILITIES

Advanced Meter Project

The Tacoma Public Utilities (TPU) Advanced Meter Project will provide you with greater control, choice, and convenience. Starting in mid 2020, TPU will begin upgrades to its electric and water meters with modern digital technology that brings many new customer benefits over time, including monthly billing, remote electric service reconnection, more options to control your costs, improved reliability through faster outage and leak detection, and more flexible payment options in a safe and secure way.

TPU has been a trusted service provider in the region for more than 125 years and will continue to provide you with the reliable, affordable, and environmentally-responsible service you expect by replacing and upgrading aging meters. With technology that is used in more than 75 million households nationwide, the advanced meter project enables a shift to a modern digital utility, making operations more efficient and helping the environment through reduced carbon emissions.

Your benefits over time

Your Control, Choice, and Convenience
Access more usage data anytime to manage your use and costs.

Automated Meter Reading
More accurate, timely bills based on real-time data.

Monthly Billing
Advanced meters will allow a switch to monthly utility bills, which most people prefer.

Enhanced Personal Privacy
No need for regular physical access to read your meter.

Easier Move In, Out, and Reconnection
Remote turn on and off of electric service saves you time.

Expanded Ways to Save
Providing data about your use increases your ability to save money, water, and energy.

Faster Outage and Leak Detection
Locating and fixing issues helps us restore service to you sooner.

Flexible Payment Options
More options over time include prepaid for electric service and custom due dates.

Improved Operational Efficiency
Better information about our systems helps us manage costs.

Reduced Environmental Impact
Fewer vehicle miles traveled for meter reading, basic field services, and outage detection lowers our carbon footprint.

MyTPU.org/AdvancedMeters

TACOMA PUBLIC UTILITIES

Facts about Advanced Meters and Radio Frequency Emissions

Your concerns about radio frequency (RF) emissions are important. The intent of the information below is to help you better understand advanced meters and provide reassurance about the health and safety questions often associated with them.

How do advanced meters work?
Advanced meters measure your usage throughout the day, just like your current meter. The meters transmit data via RF to us up to twenty-four times per day. The meters emit RF only when they transmit data, which is typically less than one minute per day.

Radio Frequency (RF) Exposure Values (in microWatts)
**Based on average usage*

FM RADIO / TELEVISION
NEARBY

0.005 - 1 microWatts

WIFI ROUTER
3 FEET AWAY

0.2 - 1 microWatts

ADVANCED METER
10 FEET AWAY

4 microWatts

MICROWAVE OVEN
2 FEET AWAY

50 - 200 microWatts

CELL PHONE
AT EAR

1000 - 5000 microWatts

MyTPU.org/AdvancedMeters

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New Advanced Meters on the horizon

Monthly billing, remote service reconnection, faster outage and leak detection, and more.

EXPLORE THE BENEFITS

PAYMENT & BILLING

OUTAGES & SAFETY

WAYS TO SAVE

COMMUNITY & ENVIRONMENT

CUSTOMER SERVICE

Community & Environment > Projects > Advanced Meters > Public Process

Back

Public Process

Advanced Meter Public Process

We host several outreach events to provide an opportunity for members of the community to learn more about the Advanced Meter project.

Public Utility Board Meetings

[View agendas and minutes from the Public Utility Board Meetings online.](#)

Neighborhood Council Meetings

- April 10, 5:30 p.m. - New Tacoma Neighborhood Council - Tacoma Municipal Building
- May 2, 7 p.m. - Central Neighborhood Council - Tacoma Nature Center
- June 3, 6 p.m. - North End Neighborhood Council
- June 17, 7 p.m. - South End Neighborhood Council
- June 19, 6:30 p.m. - South Tacoma Neighborhood Council
- June 20, 6 p.m. - Northeast Neighborhood Council

Customer communications before, during, and after meter installation.

Deployment Customer Communications Plan - *DRAFT*



General Awareness	Initial Meter Deployment Area (IDA)	Residential Deployment	Commercial Deployment
Web Content - Constant	Virtual Open House	45, 30, 14 Days - Install Letter	60 Days - Install Letter
Web Banner Ads	Installation Videos	7 Days - Install Reminder Postcard	Scheduling Call from Meter Shop
U* Article, Jan 2020 issue	45, 30, 14 Days - Install Letter	2 Days - Auto Dial Call (from MIV)	45-7 Days Outreach from Account Executives
E-newsletter	7 Days - Install Reminder Postcard	Completed Door Hanger	Reminder Call (as needed)
U*Article, Q4 2020 Issue	2 Days – Reminder Call		
Bill Insert Aug 2020			
Bill Insert Sept/Oct 2020			
Community Outreach			
Social Media			
Communication materials will be available in multiple languages.			

5 specific residential customer communications **before** meter installation.

Upcoming Target Dates



Initial Meter Deployment Area (IDA)
Communications Begin

August

IDA Meter Installations

September/October

Mass Meter Communications Begin

November/December

Mass Meter Installations

Q1 2021- Q3 2022

Policies in Progress



Draft Policy Discussion

<u>Policy/Procedure</u>	<u>Approval Level</u>	<u>Target Date</u>
1. Water Customer Service Policy	PUB	July 22 nd
2. TPU Customer Privacy Policy	PUB	July 22 nd
3. Tacoma Municipal Code (TMC) , Title 12 – Utilities	PUB	July 22 nd
4. Tacoma Power Staff Procedure A-7	City Council	Aug. 4 th & 11 th
5. Customer Services Customer Service Policy • Includes PrePay and Advanced Meter Opt-Out	Utilities Director	July 31 st
6. *Advanced Meter Customer Side Repair Policy	PUB	Aug. 12 th

*New policy or procedure

Advanced Meter Customer Side Repairs

Tacoma Public Utilities

Program Objectives



Draft Policy Discussion

The Customer Side Repair Policy will:

- Provide safe and reliable water and power services
- Ensure a smooth meter implementation that does not disrupt customer lives or create undue burden
- Assist low income customers if issues arise
- Provide all customers access to resources if needed

Our goal is to make sure every customer is covered with an option if an issue arises during meter implementation.

How Many?

Based off advanced meter deployments at similar utilities, TPU estimates typical (statistically most likely):

- **Power** customer side repairs to total:
 - Approx. 0.5% - 1.0% of meter replacements
or to potentially impact 800-1,600 residential customers
- **Water** customer side repairs to total:
 - Approx. 0.5% - 1.0% of meter replacements
or to potentially impact 480-960 residential customers



Instances of more extensive repairs (statistically least likely) related to advanced meter installations are anticipated to be minimal – a fraction of percentages shown.

TPU Proposes 3 Ways to Assist Customers



Draft Policy Discussion

1. Advanced Meter Customer Side Repair Policy
2. Water Customer Grant Program
3. Water Customer Loan Program

Infrastructure Data Analysis

Purpose:

- I. Assess historical water pipe installation practices and possible areas of customer vulnerability
- II. Review historical and present day equity concerns to inform mass meter deployment

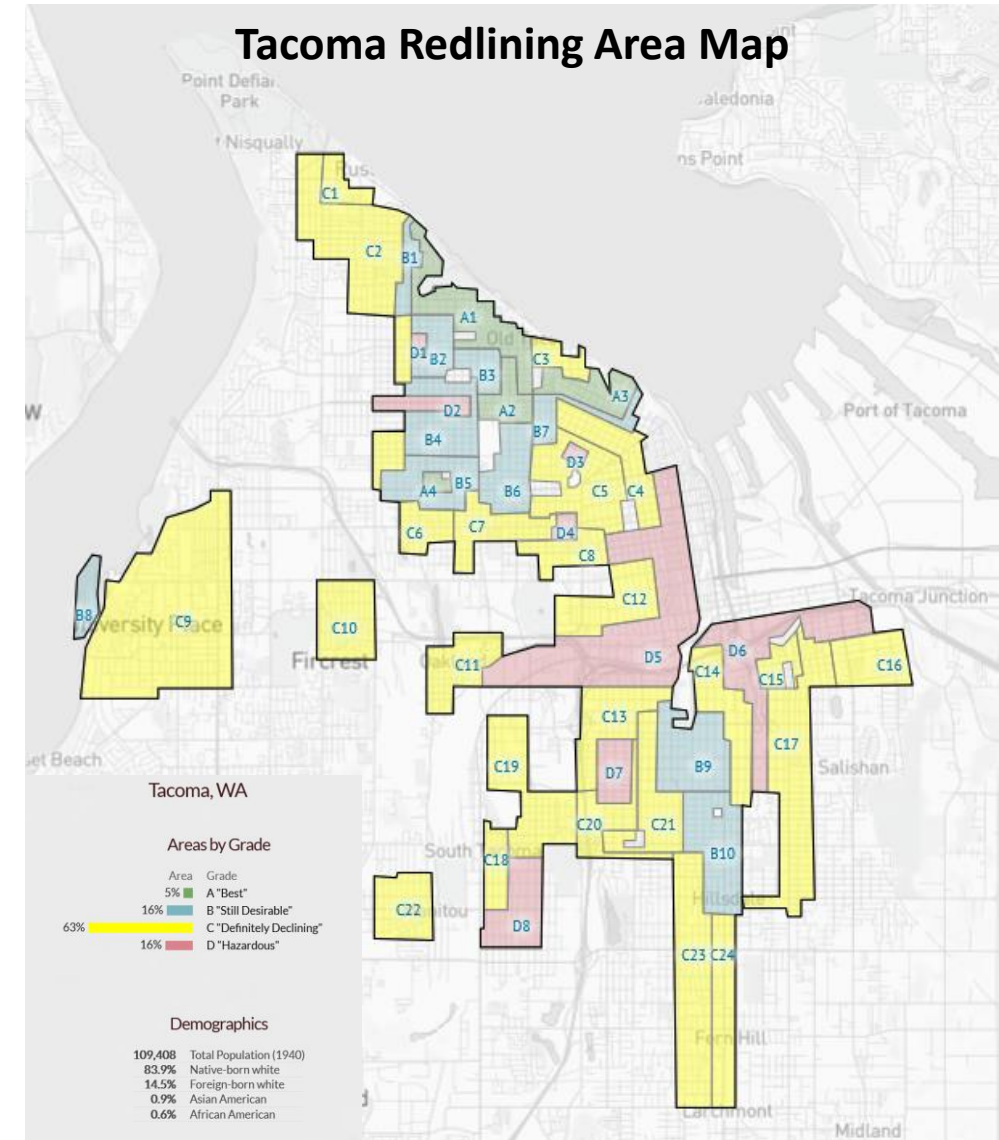
Impacts - Understand potential impacts to:

- Areas of low historical infrastructure investment
- Low income homeowners
- Low income senior homeowners

Apply Results - Shape grant/loan program development:

- Consider use of funds for areas of infrastructure vulnerability
- Inform education and outreach opportunities related to grants/loans

*Grant program will be limited to customers who qualify for low income assistance programs



Advanced Meter Opt-Out Policy

Tacoma Public Utilities

Benefits of Advanced Metering



Customer Benefits (over time)

Standard Advanced Meter

Opt-Out Meter

Frequent usage data and expanded ways to save money

✓ Yes

No

Easier move in, out, and reconnection

✓ Yes

No

Faster outage and leak detection

✓ Yes

No

Flexible payment options (including PrePay and selectable bill date)

✓ Yes

No

Budget billing

✓ Yes

✓ Yes

Monthly billing

✓ Yes

✓ Yes

Automated meter reading

✓ Yes

No

Reduced environmental impact

✓ Yes

No

Electric Opt-Out

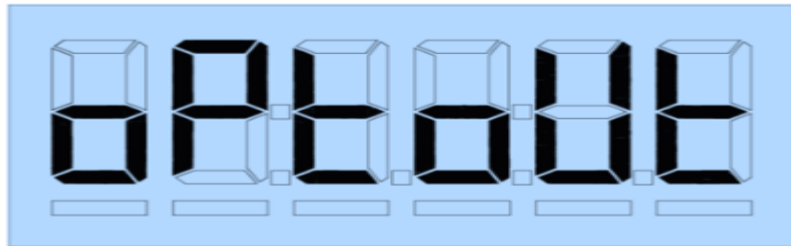


Draft Policy Discussion

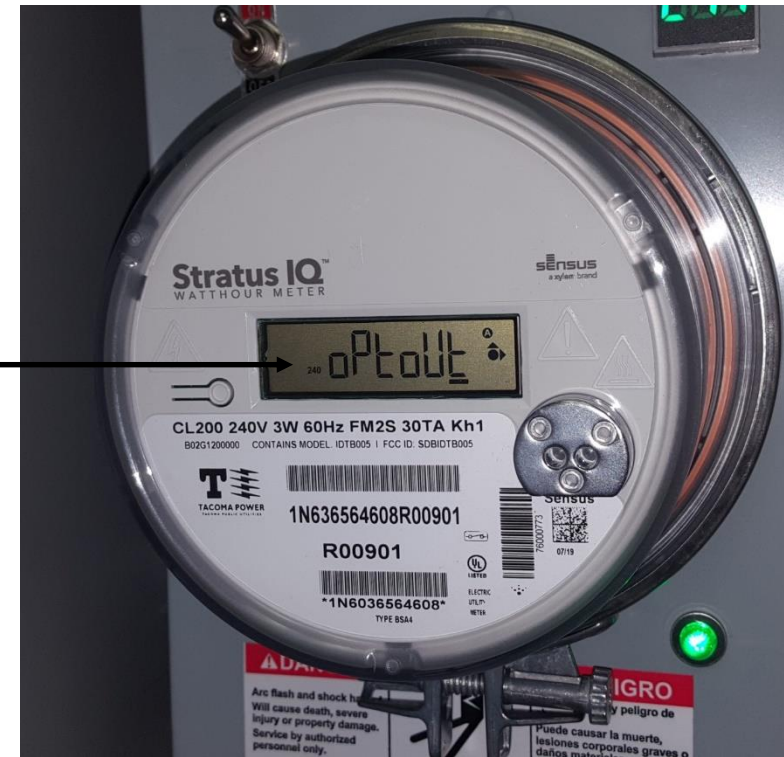
- TPU has developed two opt-out options for customer who do not wish to participate in advanced metering for electric:
 - Option #1: Existing Legacy Meter
 - Opt-out before meter upgrade
 - Customers may temporarily keep their existing legacy meter (defer upgrade)
 - Option #2: Radio Off Meter
 - Opt-out after meter upgrade
 - The advanced meter's radio transmission communications will be turned off
- Availability & Application
 - Available for residential electric customers: single family or multi-unit of 4 units or less
 - Customers must sign a form acknowledging fees, terms, and conditions.

Radio Off Meter

- The meter's radio transmission communications will be turned off (opt-out mode).
- Communications can be enabled and disabled remotely.



“Opt-Out”
periodically displayed on meter



Recurring Billing Cycle Fee

(recurring cost to manually read and process meters)

- A recurring fee will be charged each billing cycle based on TPU's costs to provide the opt-out service

Effective no sooner than January 1st, 2021

- Fee to begin on the billing cycle following meter installation
- Fee will follow TPU's existing Discount Rate Program and eligibility requirements

Discount Rate Program = 30% Discount
- Customers can opt-in at any time for no charge

Opt-Out Fee: Proposed & Examples



Draft Policy Discussion

Utility	One Time Fee	Monthly Fee	Comments
Tacoma Public Utilities (PROPOSED)	None	\$15	-Existing Discount Rate Program applies (e.g. 30% discount)
Seattle City Light	\$124.43 (admin) \$84.21 (install) \$208.64 (total)	\$15.87	-One-time install fee waived if opting-out two weeks before mass installation. -60% discount for rate assistance customers. -Net metering is not eligible.
Puget Sound Energy	\$90 electric \$50 gas	\$15 per meter*	-One-time fee waived if notified before mass installation. *Billing cycle fee is every other month.
Avista	\$75	\$10*	-One-time fee waived if within 31 days of install. -Recurring fee waived for income assistance customers. *\$10 tariff is currently proposed to the Washington Utilities and Transportation Commission; current fee is \$15
ComEd	\$77.47	\$21.53	-One-time fee charged if after installation. -Monthly fee begins four billing periods after installation.
Con Edison	\$104.74 electric \$93.91 gas	\$9.50	-One-time fee only charged if after installation.
Grant PUD	\$250.99	\$64.34	-Rural.

Water Opt-Out

- TPU will not be providing a water meter opt-out option
- Considerations supporting this decision include:
 - Water meters are typically located in the public right of way, not on private property
 - Peer utilities have seen the most opposition to electric meters, not water or gas meters
 - Many large water utilities TPU researched do not offer an opt-out option



TPU PrePay Program

Tacoma Public Utilities

PrePay History – PayGo



Draft Policy Discussion

PayGo: Pay as you go electric service

- 2005: Internal employee pilot
 - 2006: Offered pilot to external customers
 - 2019: PayGo pilot system was decommissioned
-
- TPU was one of the first utilities to offer remote pay programs (IVR – interactive voice response, Pay Boxes, mail, online, etc.)
 - PayGo had over 1,400 customers at its peak
 - Available for residential electric customers
 - Disconnections only occurred 8am-8pm M-F, no disconnections on holidays
 - Customer could set alert levels for notification of funds



PrePay Benefits & Timing



Draft Policy Discussion

- No security deposit
- Zero interest installment plan – automatic debt repayment
- Tools to manage energy and bills
 - Monitor usage
 - Alerts
 - Identify malfunctioning appliances/equipment
- Benefits from pledge assistance
 - Internal
 - External (community partners valued lower bill amounts)
- Energy education for the whole family



Similar to smart thermostats, PrePay is an opportunity for energy education.

Timing: First Available Mid-2021

Questions?

MyTPU.org/AdvancedMeters



Reference Slides

Customer Side Repair Policy

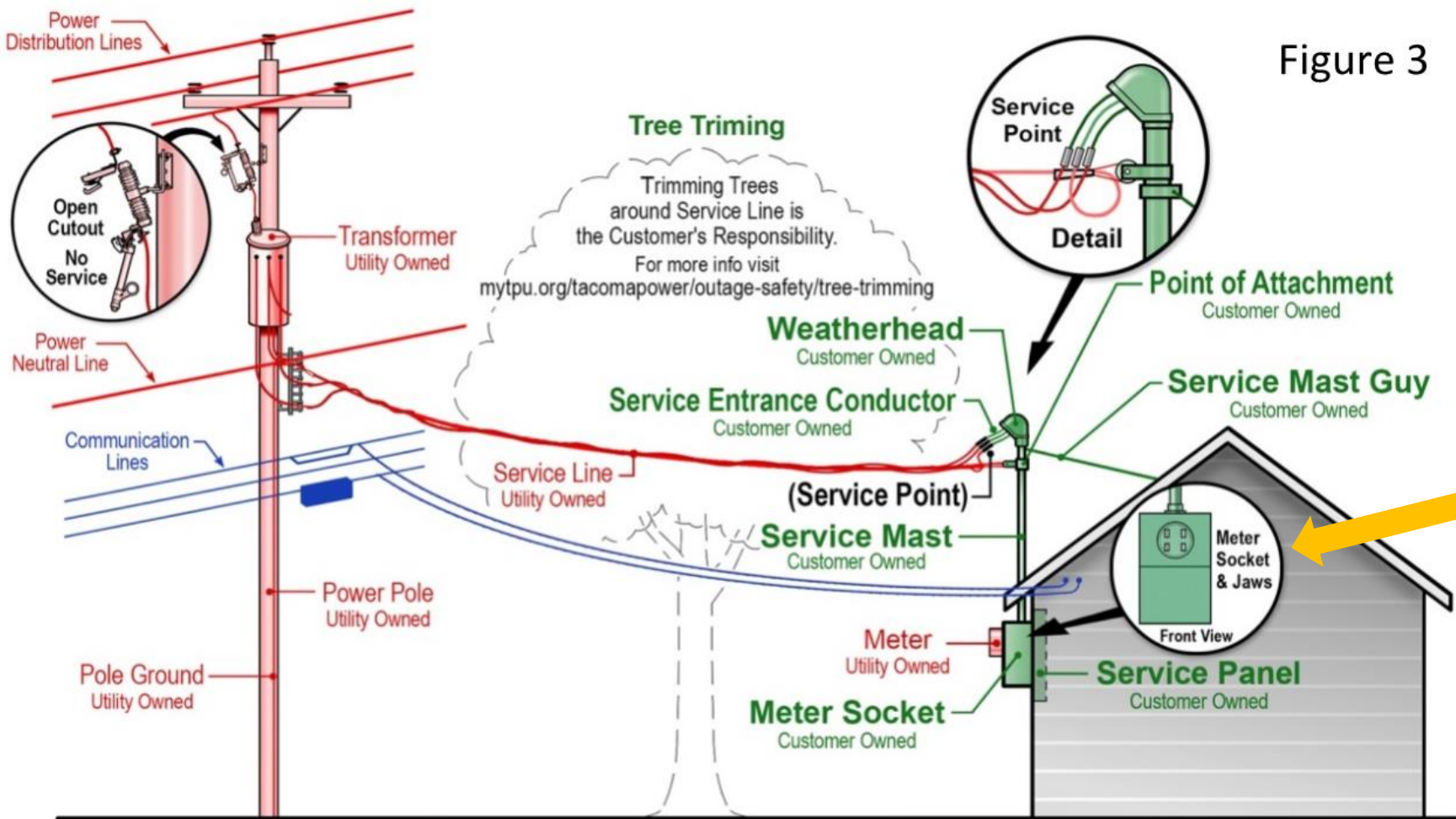
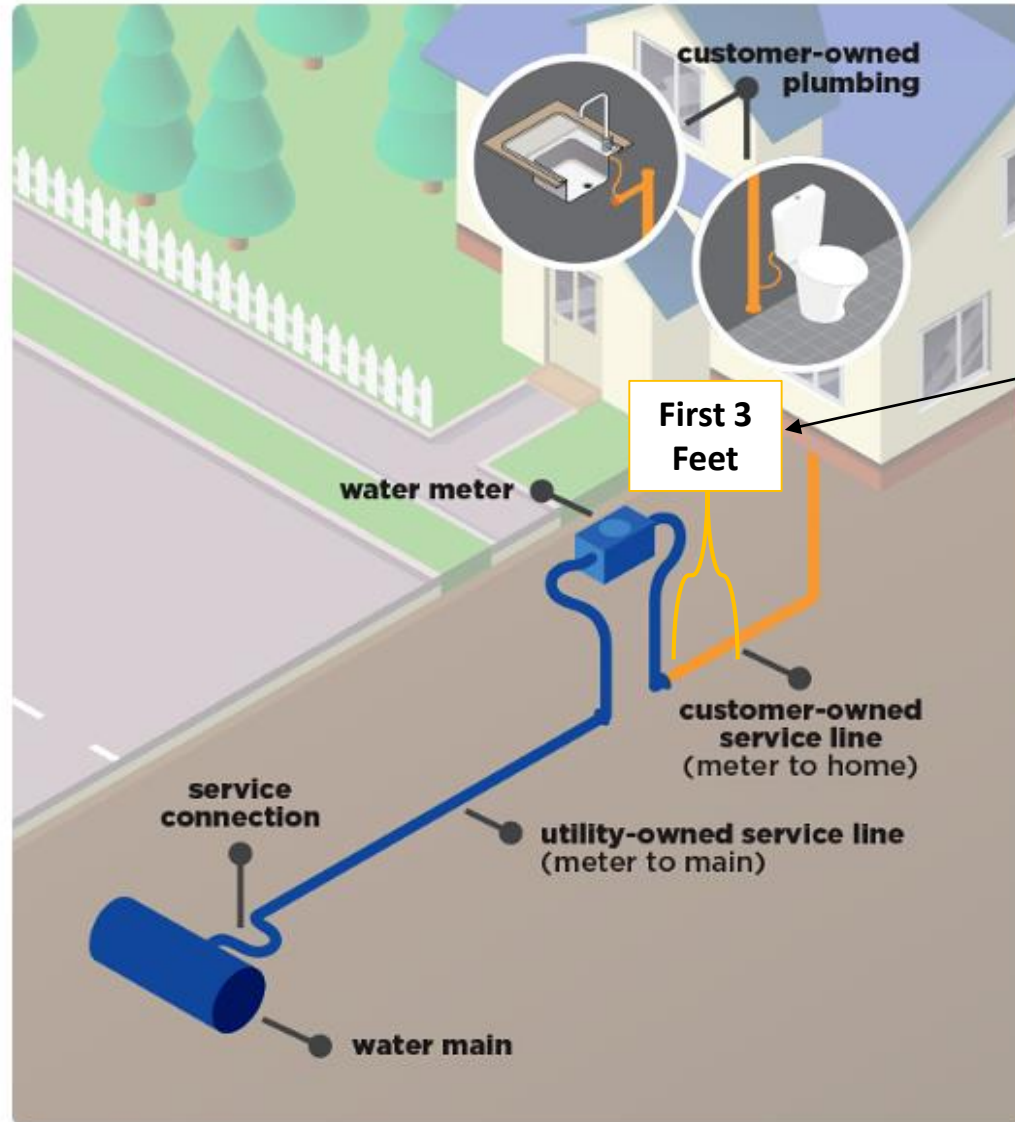


Figure 3

Power
Specific focus on Meter Socket & Jaws as statistically most likely area for TPU repair on customer owned equipment if needed

Utility Owned and **Customer Owned** Equipment

Customer Side Repair Policy



Water

Specific focus on first 3 feet of customer owned line as statistically most likely area for TPU repair if needed

Proposed Ways to Assist Customers



Draft Policy Discussion

1. Advanced Meter Customer Side Repair Policy

- Funded by Advanced Meter Program & exists for duration of mass meter implementation
- Focus on statistically highest type of equipment prone to problems in the immediate location of the meter
 - Power: Electric meter socket & jaws focus; exceptions process for additional work (e.g. service mast)
 - Water: Up to 3 feet of customer side water line

2. Water Customer Grant Program

- Income based qualification for up to 200% of Federal Poverty Level
- \$5,000 grant limit [amount shown is for reference; grant limit to be determined]
- If repair costs exceed grant limit, then exceptions process for review and/or deferred loan
- Program continues for Tacoma Water after AMI mass meter implementation as a conservation offering

3. Water Customer Loan Program: deferred loan or zero interest loan

- Modeled after TPU's existing Power Conservation loan program
- Deferred loan for those who need additional financial support as well as a zero interest loan for other customers
- Dollar cap with exception upon management review & approval
- Deferred loan lasts until property transfers; 48-60 month loan payback for zero interest loan
- Program continues for Tacoma Water after AMI mass meter implementation as a conservation offering