



Advanced Electric and Water Meters: Program Update and Customer Benefits

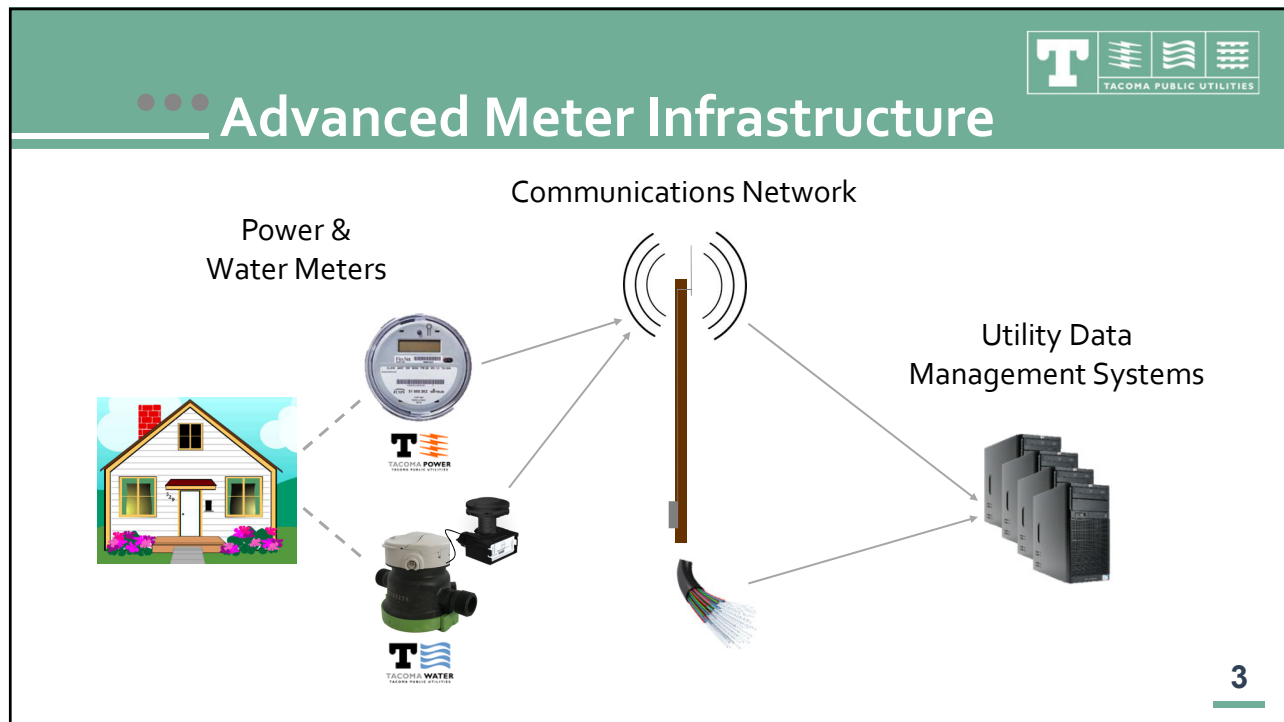
Tacoma City Council and Public Utility Board
Joint Study Session
March 3rd, 2020



Agenda



1. Program Update
 - Scope
 - Milestones
 - Schedule
 - Budget & Rates Impact
2. Customer Benefits
 - Customer Benefits Timeline
3. Meter Deployment Readiness
 - Readiness Scorecard
 - Communications



Advanced Meters in the Pacific Northwest

Neighboring utilities with or currently deploying advanced metering technology:

- Puget Sound Energy
- Seattle City Light
- Avista
- Grant County PUD
- Snohomish PUD
- Clark Public Utilities
- Peninsula Light
- Lakewood Water District
- Woodinville Water District
- Portland General Electric
- City of Bellevue
- City of Renton

Over 70% of US electric meters have been upgraded to smart meters.

75% of US water utilities are planning to make smart water investments in the next 24 months.

Existing metering technology is becoming obsolete.

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Program Scope



Infrastructure

- Installation of approximately:
 - 180,000 electric meters
 - 107,000 water meters & modules
- Installation of the Advanced Meter Communication Network, approximately:
 - 65 base stations (radio communication units)

Power & Water Meters



Base Stations



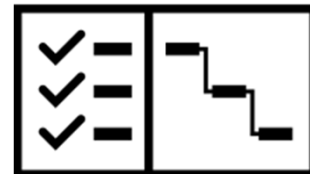
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Program Scope

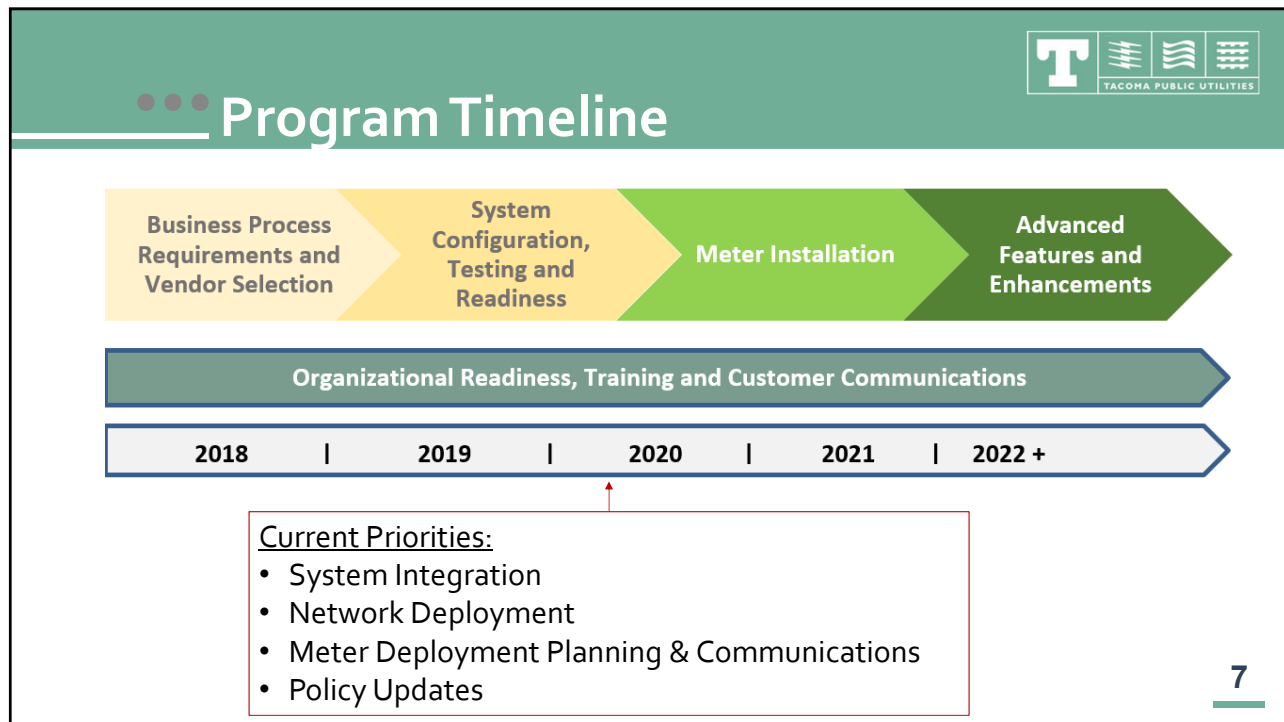


Software

- Utility Data Systems:
 - Advanced Meter System to SAP integration
 - Meter Data Management System (MDMS)
- Transition to monthly billing
- Deployment of a customer usage portal
- All applications and functionality associated with Phase 1 of the AMI roadmap



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Utility Modernization Strategy

Integrate technology & foster innovation to deliver affordable, flexible, secure, resilient, and sustainable power & water services for our customers

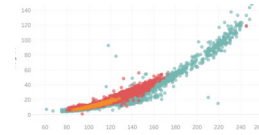
Advanced metering deployment



Customer digital engagement



Advanced data analytics



Mobile workforce mgmt.



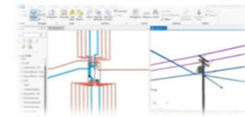
Cybersecurity maturity



Energy imbalance market



Geospatial systems



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Customer Benefits Timeline



2020

- Automated Meter Reading
- Enhanced Personal Privacy
- Easier Move In & Move Out
- Remote Reconnect/Disconnect for Electric
- Abnormal Consumption Notifications
- Emergency Water Leak Notifications

2021

- Monthly Billing
- Basic Prepay for Electric

2022

- Enhanced Customer Web Portal
- Expanded Ways to Save: AMI Data Available on Web Portal
- Enhanced Prepay Via Web Portal for Electric
- Choose Your Own Bill Date
- Enhanced Customer Outage Notifications

Advanced Meter Customer Benefits



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

DRAFT: Revised 2/21/2020

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Budget & Rates Impact

Category	Current Forecast ¹
Electric Meter Deployment	\$ 26,059,039
Water Meter Deployment ³	\$ 21,363,073
Communications Network Deployment	\$ 3,280,816
System Integration	\$ 8,891,422
Capital Internal Labor	\$ 2,043,167
Professional Services	\$ 3,788,946
Operations & Maintenance (O&M) Costs	\$ 9,491,736
AMI Customer Engagement Portal ⁴	\$ 250,000
Projected Total \$	75,168,200
<i>Contingency \$</i>	<i>6,597,243</i>
Total With Contingency² \$	81,765,443

¹Actual costs through November 2019.

²TPU Internal Support Costs, in addition to business case costs shown above, are tracked separately and do not incrementally impact rates.

³Complementary budget for replacing end of life water meters is budgeted within the Water Division.

⁴Budget for AMI specific web portal integration requirements.

Rates Impact:

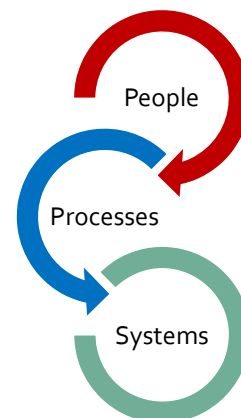
- Costs for advanced meters are already factored into current rates.
- The additional cost each year for the next ten years is about:
 - 8 cents per month for the average residential power customer
 - 11 cents per month for the average residential water customer in the City of Tacoma
 - 13 cents per month for the average residential water customer outside the City of Tacoma

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Meter Deployment Readiness

- Learn from industry and neighboring utility experiences
- Understand areas of strength and risk before beginning deployment
- Readiness Scorecard
 - TPU Readiness
 - Program Readiness
 - Technical Readiness
 - Communications Readiness



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Questions?

MyTPU.org/AdvancedMeters

