



## RESOLUTION NO. U-11229

1 A RESOLUTION approving the Water Service Line Grant and Loan Program.

2 WHEREAS, the City of Tacoma, Department of Public Utilities, (TPU)  
3 requests the Public Utility Board approve implementation of Tacoma Water's  
4 proposed "Water Service Line Grant and Loan Program," and  
5

6 WHEREAS, TPU plans to deploy Advanced Metering Infrastructure (AMI)  
7 across its entire water and electric service territories, and  
8

9 WHEREAS, as part of the AMI project, TPU reviewed existing utility  
10 policies, procedures, and practices for essential changes required to implement  
11 AMI and make other essential updates as needed in order to address customer  
12 impacts, further customer wellbeing, and ensure the success of the AMI  
13 program, and  
14

15 WHEREAS, to address these issues, on August 26, 2020, the Public  
16 Board adopted Resolution No. U-11190, which approved the Advanced  
17 Metering Infrastructure (AMI) Customer Side Repair Policy and authorized TPU  
18 staff to develop a grant and loan program specific to customer owned water  
19 infrastructure repairs and/or replacement, and  
20

21 WHEREAS, Resolution No. U-11190 further directed staff to bring the  
22 developed grant and loan program back to the Board for approval, and  
23

24 WHEREAS, staff has developed the Water Service Line Grant and Loan  
25 Program (Program) which will provide financial support for customers to repair  
26 and/or replace customer side pipe due to impacts greater than those outlined in  
the AMI Customer Side Repair Policy, and



WHEREAS, the Program will support customer owned water infrastructure repairs and/or replacement during and after the deployment of AMI, is intended to extend beyond the scope and duration of the AMI project, and has a direct nexus with water conservation by providing customers financial resources to locate and fix leaks and reduce unnecessary water consumption, and

WHEREAS, an initial Program budget of \$500,000 is recommended to be established within Tacoma Water for the Program, and

WHEREAS, Tacoma Water requests that the TPU Director (or their designee) be granted authority to make necessary changes to administer and maintain the Program; Now, Therefore,

BE IT RESOLVED BY THE PUBLIC UTILITY BOARD OF THE CITY OF TACOMA:

Sec. 1. That the proposed Water Service Line Grant and Loan Program on file with the Clerk of the Board is hereby approved for implementation;

Sec. 2. That the TPU Director or the Director's designee is authorized to make changes to the Program as necessary to administer and maintain the Program;

Sec. 3. That the recommended initial Program budget of \$500,000 is authorized to be established.

Approved as to form:

/s/  
\_\_\_\_\_  
Chief Deputy City Attorney

\_\_\_\_\_  
Chair

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Clerk

Adopted \_\_\_\_\_



## Board Action Memorandum

**TO:** Jackie Flowers, Director of Utilities  
**COPY:** Charleen Jacobs, Director and Board Offices  
**FROM:** Scott Dewhirst, Water Superintendent/COO  
**MEETING DATE:** December 9, 2020  
**DATE:** November 24, 2020

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**SUMMARY:** In order to meet objectives established by the Tacoma City Council and Public Utility Board, Tacoma Public Utilities (TPU) requests a resolution to approve implementation of the proposed "Water Service Line Grant and Loan Program" and associated funding. Water service line grant and loans will support customer owned water infrastructure repairs and/or replacement during and after the deployment of advanced meters. This program is intended to extend beyond the scope and duration of the Advanced Metering Infrastructure (AMI) Project and has a nexus with water conservation. Resolution U-11190, adopted by the Public Utility Board on August 26, 2020, approved TPU's Advanced Metering Customer Side Repair Policy, provided authorization for development of this grant and loan program, and specified the grant and loan program be brought for approval by the Board.

### **BACKGROUND:**

#### Advanced Metering Infrastructure (AMI)

Tacoma Public Utilities plans to deploy Advanced Metering Infrastructure across its entire water and electric service territories, replacing or upgrading all non-communicating power and water meters with advanced two-way communicating technology. Advanced metering is a foundational element of Tacoma Public Utilities' Utility Modernization Strategy and will deliver customers new key benefits over time related to their power and water usage. Advanced metering technology will capture interval data, enable two-way communications, include remote capabilities, and provide advanced outage/issue detection, and verification. Advanced metering will modernize utility operations and be a cornerstone to deliver customers improved services and benefits.

As a transformative initiative, the Advanced Metering Project has and continues to require a significant effort across TPU to implement the new processes, applications, technologies, and integrations needed to fully enable the functions and features of the solution. As part of this initiative, TPU has reviewed existing utility policies, procedures, and practices for essential changes required to implement advanced metering or to make other essential updates as needed.

#### Advanced Metering Customer Side Repair Policy

The meter deployment phase of the Advanced Metering Project will exchange nearly 180,000 electric meters and 107,000 water meters over the course of 18-24 months. During this period, there is the potential for a small percentage of "Customer Impacts." Customer Impacts result from (1) disruption or damage to infrastructure or customer equipment during the meter exchange or (2) customer equipment being identified as unsafe or to have preexisting damage by the meter installer. The anticipated number of Customer Impacts is relatively low, estimated to only affect approximately 0.5-1.0% of all customers based on advanced meter deployments at similar utilities. Nevertheless, it is essential that these Customer Impacts be handled promptly so that a customer's service is restored as quickly as possible.



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To ensure both TPU customers' wellbeing and the success of this critical project, TPU has researched and identified solutions to potential Customer Impacts that may arise throughout the project. To address these impacts, TPU developed and the Public Utility Board approved the Advanced Metering Customer Side Repair Policy through Resolution U-11190. This policy outlines Power and Water customer owned infrastructure repairs to be completed by TPU during the Advanced Metering Project. Specifically, this includes Water Repair Criteria to replace up to approximately 3 feet of customer owned pipe or other minor, related repairs. The Advanced Metering Customer Side Repair Policy will terminate at the end of the Advanced Metering Project (currently December 31, 2022).

### Water Service Line Grant and Loan Program

In addition to approving the Advanced Metering Customer Side Repair policy, Resolution U-11190 provides authorization to develop a grant and loan program specific to customer owned water infrastructure repairs and/or replacement. **Board approval is requested to implement the proposed program during 2021, including associated funding, as outlined below.**

Related to the deployment of advanced meters, the Water Service Line Grant and Loan Program will provide financial support for customers to repair and/or replace customer side pipe due to impacts greater than those outlined in the Advanced Metering Customer Side Repair Policy (e.g. greater than 3 feet of pipe). It is estimated that as many as 0.1% of customers (about 100 customers) will be impacted in such a way as to need grant or loan support during advanced meter deployment. Financial support of customers impacted by this circumstance was requested by the Tacoma City Council and Public Utility Board.

- **Effective Date:** TPU anticipates the Water Service Line Grant and Loan Program to be available to customers in the first quarter of 2021, before residential advanced meter mass deployment begins.
- **Availability:** During advanced meter deployment, grant and loan support will only be available to customers impacted by advanced metering installation. Following the Advanced Metering Project, it is intended that grant and loan support will be available to all water customers at any time based upon program criteria.
- **Water Service Line Grant Criteria:** A \$5,000 maximum grant is anticipated to be offered to customers who qualify for TPU's Bill Credit Assistance Plan (BCAP) (income criteria that includes households making less than or equal to 60% of the adjusted Median Family Income).
- **Water Service Line Loan Criteria:** A \$5,000 maximum loan, with a 7 Year (84 month) term at 0% interest rate is anticipated to be offered to customers not qualified for grant funds, but have a satisfactory utility credit history. If the \$5,000 maximum loan is issued over 84 months, this equates to customer payments of about \$60 per month. Potential additional loan options will be evaluated as applicable, including longer loan terms and deferred loans (where the loan is repaid when the property is sold).
- **Exceptions:** Exceptions to grant and loan criteria, including but not limited to amounts, eligibility, term duration, and eligible infrastructure, will be reviewed and considered on a case by case basis. Such review will include the division and/or section manager overseeing the program in order to achieve Advanced Metering Project goals and water conservation objectives.





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- **Application:** An application will be required to verify customer qualifications related to grant/loan criteria and provide approval of funds. Loans will require a promissory note and legal agreement, similar to Tacoma Power conservation loans. TPU anticipates digital and paper application formats to be available.
- **Eligible Customer Side Infrastructure to be Repaired and/or Replaced** (includes but not limited to):
  - Water service line: piping and water appurtenances located between the meter yoke outlet, onto the premises, and to the exterior wall of the first structure after the meter.
  - Installation or replacement of a whole house shut-off valve, if required to establish a temporary service line (may be located inside dwelling)
- **Ineligible Customer Side Infrastructure to be Repaired and/or Replaced** (includes but not limited to):
  - Sprinkler or irrigation system repairs
  - Repair of plumbing fixtures, piping, etc. within a dwelling
  - Repair or replacement of an outdoor hose bib
  - Repair or replacement of branch water piping
  - Installation or repair of a pressure reducing valve (PRV) assembly not connected to the service line
  - Installation or repair of a backflow prevention assembly not connected to the service line
- **Funding:** An initial program budget of \$500,000 is recommended to be established within Tacoma Water for the Water Service Line Grant and Loan Program. During advanced meter deployment, TPU will monitor and seek to maintain the required program budget to meet the anticipated grant/loan funding need in potential areas of customer vulnerability. Program budget updates and/or requests will be brought forth as needed, no less than annually during the Advanced Metering Project.

A new Tacoma Water sub-fund for the Water Service Line Grant and Loan Program will be established and initial funds transferred in December 2020. These funds, in the amount of \$500,000, will be appropriated from existing reserves in the Tacoma Water Operating Fund to fund the program for the 2021-2022 biennium. Ongoing additions to the sub-fund will include applicable customer loan payments and interest earned on cash balances. These additions will be considered during review for future program funding, and remaining program funding needs will be included during the biennial budget process.

- **Program Staffing:** TPU has estimated that a 0.5 FTE is required to oversee the administration & servicing of grants/loans. The program is planned to be housed under the existing Tacoma Water Customer Experience/Conservation Program team. TPU Customer Solutions intends to support income verification of grant/loan application.
- **Program Changes:** It is recommended that the TPU Director (or their delegated designee) be granted authority to make necessary changes to administer and maintain the grants and loans program. This allows for timely response to changing economic conditions in order maximize assistance available to customers.



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### Nexus to Water Conservation

Water service line repair and replacement work has a direct nexus with water conservation. Specifically, with the implementation of Advanced Metering, leak alerts created by the metering system will be available to customers. Alerts will include continuous usage alarms (nonstop usage over a specific period) and high flow alarms if a pipe bursts.

In both instances, alerts identify opportunities for water conservation and this grant and loan program will support conservation by providing the customer with financial resources to locate and fix the leak. In the case of continuous usage, small leaks associated with service lines can take months or years to identify, all the while wasting treated drinking water. It is in the best interest of Tacoma Water, the customer, and water conservation to identify and fix leaks right away. Quick action reduces unnecessary water consumption by the customer, saves treatment costs, and reduces overall system demand.

Advanced metering will also provide multiple conservation improvements to customers, including:

- The ability of the advanced metering system to better detect leaks and provide that information to customers to take prompt action
- A new 'customer portal' that will provide customers with near real time information on their water usage so that they can make more informed choices about their consumption
- The replacement of water meters with more accurate meters that will better identify actual water usage

### **ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED?**

Yes, funds are planned and subject to budget approval for the 2021-2022 biennium.

### **IF THE EXPENSE IS NOT BUDGETED, PLEASE EXPLAIN HOW THEY ARE TO BE COVERED.**

N/A.

### **IF THE ACTION REQUESTED IS APPROVAL OF A CONTRACT, INCLUDE LANGUAGE IN RESOLUTION AUTHORIZING \$200,000 INCREASE IN ADMINISTRATIVE AUTHORITY TO DIRECTOR?**

N/A.

**ATTACHMENTS:** Resolution U-11190 (approval of TPU's AMI Customer Side Repair Policy)

**CONTACT:** Andre' Pedefferri, Utility Technology Services, Advanced Meter Program Manager, (253) 502-8997; Matt Hubbard, Utility Technology Services, Power Engineer, (253) 345-1662



## RESOLUTION NO. U-11190

1 A RESOLUTION related to the adoption of the Advanced Metering  
2 Infrastructure (AMI) Customer Side Repair Policy and development of a  
3 Tacoma Water grant and loan program related to conservation.

4 WHEREAS the City of Tacoma, Department of Public Utilities (TPU)  
5 plans to deploy Advanced Metering Infrastructure (AMI) across its entire water  
6 and electric service territories, replacing or upgrading all non-communicating  
7 power and water meters with advanced two-way communicating technology,  
8 and

9 WHEREAS advanced meter infrastructure will modernize utility  
10 operations and be a cornerstone to deliver customers improved services and  
11 benefits, and

12 WHEREAS to ensure both customer wellbeing and the success of this  
13 critical project, TPU has researched and identified solutions to potential  
14 customer impacts that may arise throughout the AMI project, and

15 WHEREAS to address these impacts, Tacoma Power and Tacoma  
16 Water have developed an Advanced Meter Customer Side Repair Policy  
17 (Policy) on file with the Clerk of the Board, and

18 WHEREAS additionally TPU intends to develop grant and loan programs  
19 specific to customer owned water infrastructure repairs and/or replacement,

20 WHEREAS the adoption of this policy will authorize the utility to develop  
21 grant and loan programs specific to customer-owned water infrastructure  
22 repairs and/or replacement, and



WHEREAS these specific grant and loan programs are intended to  
extend beyond the scope and duration of the AMI program and will have a  
nexus with water conservation; Now, therefore,

BE IT RESOLVED BY THE PUBLIC UTILITY BOARD OF THE CITY OF TACOMA:

Sec. 1. That the proposed Advanced Meter Customer Side Repair Policy  
as on file with the Clerk of the Board is hereby approved; and

Sec. 2. That the appropriate TPU staff are hereby authorized to develop  
a grant and loan program specific to customer- owned water infrastructure  
repairs and/or replacement to be brought back for approval by the Board.

Approved as to form:

/s/  
Chief Deputy City Attorney

*Charles Jacobs*  
Clerk

Chair  
*Christine L. Cooley*  
Secretary

Adopted 8-26-2020





## Board Action Memorandum

**TO:** Jackie Flowers, Director of Utilities  
**COPY:** Charleen Jacobs, Director and Board Offices  
**FROM:** Chris Robinson, Power Superintendent/COO  
Scott Dewhirst, Water Superintendent/COO  
**MEETING DATE:** August 26, 2020  
**DATE:** August 14, 2020

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**SUMMARY:** Tacoma Public Utilities (TPU) requests a resolution to adopt the proposed Advanced Metering Infrastructure (AMI) Customer Side Repair Policy to make specific customer owned infrastructure repairs in support of the Advanced Metering Project. In addition, TPU requests that this resolution authorize the utility to develop grant and loan programs specific to customer owned water infrastructure repairs and/or replacement. This water specific grant and loan programs are intended to extend beyond the scope and duration of the AMI program and will have a nexus with water conservation.

**BACKGROUND:** Tacoma Public Utilities (TPU) plans to deploy Advanced Metering Infrastructure (AMI) across its entire water and electric service territories, replacing or upgrading all non-communicating power and water meters with advanced two-way communicating technology. Advanced metering is a foundational element of Tacoma Public Utilities' Utility Modernization Strategy and will deliver customers new key benefits over time related to their power and water usage. Advanced metering technology will capture interval data, enable two-way communications, include remote capabilities, and provide advanced outage/issue detection, and verification. Advanced metering will modernize utility operations and be a cornerstone to deliver customers improved services and benefits.

As a transformative initiative, the Advanced Metering Project has and continues to require a significant effort across TPU to implement the new processes, applications, technologies, and integrations needed to fully enable the functions and features of the solution. As part of this initiative, TPU has reviewed existing utility policies, procedures, and practices for essential changes required to implement advanced metering or to make other essential updates as needed.

The meter deployment phase of the Advanced Metering Infrastructure (AMI) Project will exchange nearly 180,000 electric meters and 107,000 water meters over the course of 18-24 months. During this period, there is the potential for a small percentage of "Customer Impacts." Customer Impacts result from (1) disruption or damage to infrastructure or customer equipment during the meter exchange or (2) customer equipment being identified as unsafe or to have preexisting damage by the meter installer. The anticipated number of Customer Impacts is relatively low, estimated to only affect approximately 0.5-1.0% of all customers based on advanced meter deployments at similar utilities. Nevertheless, it is essential that these Customer Impacts be handled promptly so that a customer's service is restored as quickly as possible.

To ensure both TPU customers' wellbeing and the success of this critical project, TPU has researched and identified solutions to potential Customer Impacts that may arise throughout the project. To address these impacts, this policy has been developed. This policy outlines Power and Water customer owned infrastructure repairs to be completed by TPU during the Advanced Meter Project. This includes Power Repair Criteria to replace customer owned equipment required to facilitate the meter exchange and safely provide the customer with electrical service and Water Repair Criteria to replace up to approximately 3 feet of customer owned pipe or other minor, related repairs.



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In addition, TPU intends to develop grant and loan programs specific to customer owned water infrastructure repairs and/or replacement. Since this water specific customer grant and loan resource extends beyond the breadth of the Advanced Metering Infrastructure Project and has a unique nexus with water conservation, it will be addressed separately.

Lastly, the existing TPU claims process is also available to all customers if damage or claimed Customer Impact is disputed or exceeds the repair criteria listed in this policy.

### **ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED?**

Yes, funds for the customer owned infrastructure repairs outlined in this policy are budgeted within the planned and approved 2019-2020 biennium Advanced Meter Program and its contingency. Funds for the 2021-2022 biennium are planned and subject to budget approval.

### **IF THE EXPENSE IS NOT BUDGETED, PLEASE EXPLAIN HOW THEY ARE TO BE COVERED.**

N/A.

### **IF THE ACTION REQUESTED IS APPROVAL OF A CONTRACT, INCLUDE LANGUAGE IN RESOLUTION AUTHORIZING \$200,000 INCREASE IN ADMINISTRATIVE AUTHORITY TO DIRECTOR?**

N/A.

**ATTACHMENTS:** Proposed Advanced Metering Infrastructure (AMI) Customer Side Repair Policy and Explanatory Comments

**CONTACT:** Andre' Pedefferri, Utility Technology Services, Advanced Meter Program Manager, (253) 502-8997; Matt Hubbard, Utility Technology Services, Power Engineer, (253) 345-1662



## **Tacoma Public Utilities**

# **Advanced Metering Infrastructure (AMI) Customer Side Repair Policy**

**August 2020**

Adopted by Public Utility Board Resolution U-11190 on August 26, 2020



## **1. POLICY DURATION:**

- 1.1. This policy shall be in effect during the period that the Advanced Metering Infrastructure (AMI) Project is designated as a Special Project of Limited Duration, which is currently through December 31, 2022, as established by Public Utility Board Resolution No. U-11055.
- 1.2. For clarity, if the Advanced Metering Infrastructure Special Project of Limited Duration is extended by the Public Utility Board, the duration of this policy will be extended automatically to match the new Project resolution end date.
- 1.3. During the policy duration, this Policy shall supersede and be controlling over any other conflicting Tacoma Public Utilities (TPU) customer service policies, procedures, and practices. Following the Project, customer owned infrastructure repairs will revert to existing TPU customer service policies, procedures, and practices.





## 2. BACKGROUND:

- 2.1. Advanced meters are a foundational element of Tacoma Public Utilities' Utility Modernization Strategy and will deliver customers new key benefits over time related to their power and water usage. TPU will deploy advanced metering across its entire water and electric service territories, replacing or upgrading all non-communicating power and water meters with advanced two-way communicating technology. Advanced metering technology will capture interval data, enable two-way communications, include remote capabilities, and provide advanced outage/issue detection, and verification. Advanced metering will modernize utility operations and be a cornerstone to deliver improved services and benefits to customers.
- 2.2. The meter deployment phase of the Advanced Metering Infrastructure Project will exchange nearly 180,000 electric meters and 107,000 water meters over the course of 18-24 months. During this period, there is the potential for a small percentage of "Customer Impacts." Customer Impacts result from (1) disruption or damage to infrastructure or customer equipment during the meter exchange or (2) customer equipment being identified as unsafe or to have preexisting damage by the meter installer. The anticipated number of Customer Impacts is relatively low, estimated to only affect approximately 0.5-1.0% of all customers based on advanced meter deployments at similar utilities. Nevertheless, it is essential that these Customer Impacts be handled promptly so that a customer's service is restored as quickly as possible.
- 2.3. To ensure both TPU customers' wellbeing and the success of this critical project, TPU has researched and identified solutions to potential Customer Impacts that may arise throughout the project. To address these impacts, criteria is outlined in this policy for Power and Water customer owned infrastructure repairs to be completed by TPU during the Advanced Meter Project.
- 2.4. In addition to this policy, TPU intends to develop grant and loan programs specific to customer owned water infrastructure repairs and/or replacement. Since this water specific customer grant and loan resource extends beyond the breadth of the Advanced Metering Infrastructure Project and has a unique nexus with water conservation, it will be addressed separately.
- 2.5. Lastly, the existing TPU claims process is available to all customers if damage or claimed Customer Impact is disputed or exceeds the criteria listed.



### **3. POWER REPAIR CRITERIA:**

- 3.1. As specified in the Tacoma Power Customer Service Policy and Tacoma Power Electric Service Handbook, the customer is responsible for maintaining customer owned equipment, compliance with up-to-date electrical codes, and Tacoma Power policies (Figure 1, attached). This ensures both customer and utility staff safety when working in and around the meter. If customer owned equipment is impacted by a meter exchange, TPU staff will make a reasonable attempt to re-establish the service connection.
- 3.2. Tacoma Power expects minimal customer owned equipment impacts during advanced meter deployment.
- 3.3. During the Advanced Metering Infrastructure Project, TPU may, at its discretion, replace customer owned equipment required to facilitate the meter exchange and safely provide the customer with electrical service. Customer owned equipment related to electrical service is identified in Figure 1. TPU at its discretion may replace or repair items such as:
  - I. The meter socket, jaws, and/or enclosure (including minor related incidental repairs, as determined in the field)
  - II. Miscellaneous nuts/bolts related to the meter socket, jaws, and/or enclosure
  - III. The meter post
- 3.4. Items that TPU will not replace or repair include, but are not limited to the following:
  - I. Service panels
  - II. Tampering
  - III. Code violation repairs

### **4. WATER REPAIR CRITERIA:**

- 4.1. As specified in the Tacoma Water Customer Service Policy, the customer is responsible for the integrity of the water service line (Property Side Pipe) between the meter setter/yoke outlet and the exterior wall of the first structure after the meter (Figure 2 and Figure 3, attached). If the customer owned service line (Property Side Pipe) is impacted by a meter exchange, TPU will make a reasonable attempt to re-establish water service.
- 4.2. Tacoma Water expects minimal customer owned service line impacts during advanced meter deployment. It is rare to impact the customer pipe connection when exchanging a meter, since the meter is typically not directly connected to the customer owned pipe (it is typically connected to the meter setter/yoke within the meter box).
- 4.3. During the Advanced Metering Infrastructure Project, TPU may replace up to approximately 3 feet of customer owned pipe (Property Side Pipe). This is subject to the discretion of the utility and consultation with the property owner. In addition, TPU may at its discretion:
  - I. Perform meter box adjustments
  - II. Perform minor repairs to hard surfaces (concrete, sidewalks, driveways, retaining walls, etc.)
  - III. Perform minor landscaping restoration (lawns, bark, gravel, etc.)
  - IV. Repair or replace a customer owned pressure reducing valve (PRV)
  - V. Install a property side shutoff valve to facilitate a temporary water service installation
  - VI. Install a temporary service line



4.4. Items or conditions that TPU will not replace or repair include, but are not limited to:

- I. Inaccessibility of the pipe
- II. Structures over or near the pipe
- III. Major repairs to hard surfaces (concrete, sidewalks, driveways, retaining walls, etc.)
- IV. Major landscaping restoration (plants, trees, gardens, etc.)
- V. Excessively deep or long runs of pipe
- VI. Sprinkler system repairs
- VII. Repair of plumbing fixtures, piping, etc. within a dwelling
- VIII. Backflow prevention assembly installation or repairs
- IX. Repair or replacement of an outdoor hose bib

## **5. TPU DISCRETION AND DISCLAIMER.**

5.1. Repairs or replacements are strictly at the discretion of TPU. This policy does not require or obligate TPU to make or complete any repairs or replacements. In making said repairs, TPU or its contractors will exercise the degree of skill and care required by good practice and procedure followed in the utility industry. However, TPU cannot warrant or guaranty that replaced equipment will be without defect.

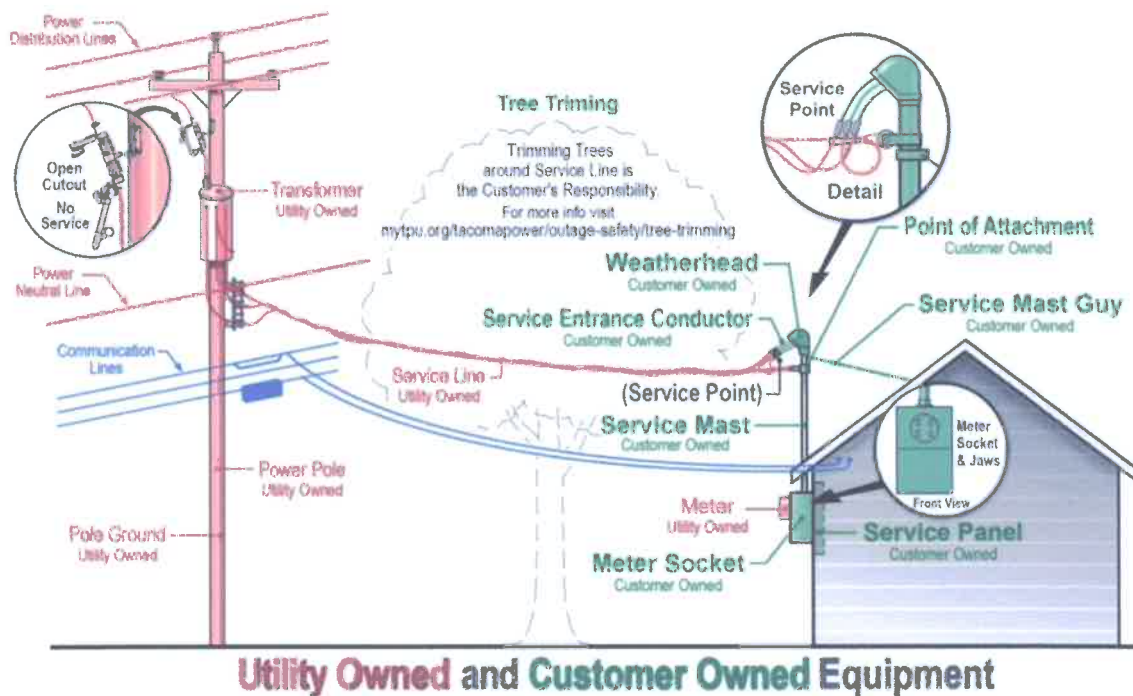
5.2. By enacting this policy or making any repairs or replacements, TPU does not assume or offer any ongoing replacement, repair, or maintenance obligation. TPU may make repairs or replacements to the equipment as specified herein solely at its discretion. However, TPU will have no other obligation or duty to make other repairs or to maintain the equipment.

## **6. ATTACHMENTS:** Customer Owned Infrastructure Figures, Figures 1-3

**Figure 1. Power Owned vs. Customer Owned Equipment**

(<https://www.mytpu.org/wp-content/uploads/new-electric-service-handbook.pdf>, page 9)

(blue is non-utility owned equipment, typically cable, phone, or internet providers)



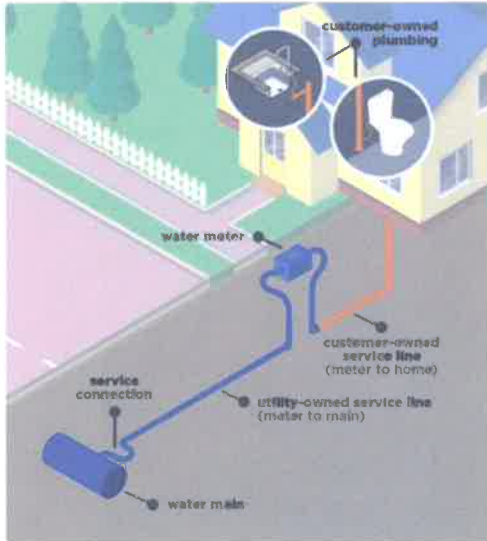




**Figure 2. Water Owned vs. Customer Owned Equipment:**

(<https://www.mypu.org/outages-safety/water-trouble/>)

**Ever wondered what's underground?**



In blue, the water main, service line, and water meter are what we own and maintain. You own the property-side service lines and plumbing, shown above in orange.

**Figure 3. Detailed drawing of water service line, meter box, and customer owned pipe:**

