Accessory Dwelling Units
February 27, 2019

• Anita Gallagher, Regional Relations Manager
Overview

• Proposed Land Use regulations for ADUs
• TPU coordination with General Government
• Seeking policy direction on potential affordability incentives
• Timeline and next steps
Proposed ADU Regulations

- Allow Detached ADUs in single-family zoning districts
- Lot size flexibility
- ADU height and size flexibility
- Owner occupancy requirement removed
- Design standards
Coordination with General Government

- TPU staff have been working with Planning and Development Services and Environmental Services to discuss how the utilities will serve DADUs.
  - Service connections
  - Billing
Affordability

• Affordable Housing Action Strategy
  – No more than 30% of gross income spent on housing each month

• Council interest in exploring utility fee waivers for ADUs rented at 50% of Area Median Income
  – $37,300 for a four-person household
  – $33,600 for a three-person household
  – $29,850 for a two-person household
Timeline and Next Steps

• Land Use regulations—First Reading of Ordinance on March 5; Final Reading on March 19

• Utilities work on incentive program and administration—May- June 2019
Utilities Considerations for Accessory Dwelling Units (DADUs)

<table>
<thead>
<tr>
<th>Scenario 1: Separate electrical service</th>
<th>$435-$755 Power AND Same water service</th>
<th>$297 Water Total range: $732-$1,052</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Power engineering fee: $675 (overhead) or $275 (underground).</td>
<td>• Power inspection fee: $80 (overhead) or $160 (underground).</td>
<td>• Water system development charge: $297. No construction charge.</td>
</tr>
<tr>
<td></td>
<td>• Separate Electricity billing for ADU (Solid Waste possible); Drinking water, Surface water, and Wastewater would remain on meter for primary structure and billed to the owner.</td>
<td>• Resident of ADU would be eligible for Electrical and Solid Waste Bill Payment Assistance programs if they qualify.</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Scenario 2: Separate electrical service</th>
<th>$435-$755 Power AND Same water service with larger meter</th>
<th>$922 Water Total range: $1,357-$1,677</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Power engineering fee: $675 (overhead) or $275 (underground).</td>
<td>• Power inspection fee: $80 (overhead) or $160 (underground).</td>
<td>• Water construction charge: $625 (5/8&quot; meter to 3/4&quot; meter).</td>
</tr>
<tr>
<td></td>
<td>• Water system development charge: $297.</td>
<td>• Separate Electricity billing for ADU (Solid Waste possible); Drinking water, Surface water, and Wastewater would remain on meter for primary structure and billed to the owner.</td>
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<td></td>
<td>• Resident of ADU would be eligible for Electrical and Solid Waste Bill Payment Assistance programs if they qualify.</td>
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<thead>
<tr>
<th>Scenario 3: Separate electrical service</th>
<th>$435-$755 Power AND Separate water service</th>
<th>$5,485-$7,485 Water At most: $8,240</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Power engineering fee: $675 (overhead) or $275 (underground).</td>
<td>• Power inspection fee: $80 (overhead) or $160 (underground).</td>
<td>• Water construction charge: $4,000-6,000 for new service line and meter.</td>
</tr>
<tr>
<td></td>
<td>• Water system development charge: $1,485.</td>
<td>• Separate Electricity, Drinking water, and Wastewater billing (Solid Waste possible). Surface water would be billed to the owner.</td>
</tr>
<tr>
<td></td>
<td>• Resident of ADU would be eligible for Bill Payment Assistance programs if they qualify.</td>
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Note: These costs are estimates only.
Additional Considerations:
The scenarios presented include separate Electricity service for the ADU for the following reasons:

- Tacoma Municipal Code 12.06A.380 provides that each newly constructed or remodeled dwelling unit, as defined by NEC 100, shall be independently metered by Tacoma Power. In other words, “master metering” is not currently practiced.
- Requiring the ADU to be separately metered for electricity encourages energy conservation because the residents of each structure on the property are fiscally responsible for their own energy consumption.
- Requiring the ADU to be separately metered for electricity also allows the potential for separate Solid Waste service, though this may not be possible due to logistical issues in some locations.
- A separate account is necessary for the ADU resident to be eligible to apply for the Bill Payment Assistance Programs (Discount Rate Program and Bill Credit Assistance Plan) available to households whose income qualifies at up to 150% of federal poverty guidelines.

Considerations for Water service:

- The existing load (demand) for water in the primary structure on the property is likely to be a strong factor influencing the necessity for a larger meter or separate water service for the ADU. The typical residential 5/8” meter can provide 20 gallons per minute. As long as the new water fixtures being added to the property are under this capacity, a larger or additional meter would not be required.
- Using the existing meter for the ADU provides the benefit of less upfront construction cost, and would likely be satisfactory for small- to medium-sized ADUs.
- If the water meter for the primary structure also serves the ADU, the Wastewater rate would change from “single-family dwelling” to “multi-family dwelling” and the fixed monthly charge would increase by $25.87 (2019 rates). The water and wastewater billing must stay in the property owner’s name when one water meter serves the primary structure and the ADU.
- If the primary structure and ADU are separately metered, the billing for the primary structure and ADU can be separated into the owner and the tenant’s name.
AMI Rate Impact
2019-2028

Jodi Collins, Tacoma Water
Michelle Brown, Tacoma Power

February 27, 2019
AMI Impact

+ Rate Impact
+ Bill Impact

At the January 9th PUB study session, the Board members requested more information about how AMI implementation impacts rates. This document provides more information about the methodology and the summary of our findings shown on the next two pages.
Tacoma Water Estimated Rate Impacts with AMI

AMI rate impacts:
The average annual rate increase would be about
• 0.28% each year
• Or $1.32 each year or $0.11 per month for an average residential bill

In 2028, the compounded average rate adjustments for all classes would be about 3.33% higher than they would have been over ten years.

This forecast is subject to change, and is dependent upon actual financial performance in future years.
Rate Impact

Tacoma Power Estimated Rate Impacts with AMI

Additional shading in future years represents uncertainty associated with revenues and expenses, mostly due to potential for adverse or critical water conditions.

AMI rate impacts:

The average annual rate increase would be about:
- 0.08% each year
- Or $0.96 each year or $0.08 per month for an average residential bill

In 2028, the compounded average rate adjustments for all classes would be about 0.55% higher than they would have been over ten years.

This forecast is subject to change, and is dependent upon actual financial performance in future years.
Appendix

+ Methodology

- Methodology for Rate Impact Financial Analysis
- Economic Analysis vs Financial Analysis
Financial Analysis of AMI

Created a new Base Case without AMI
• Removed all previously assumed AMI costs from the financial model

Added in business case Operations & Maintenance costs & benefits
• Incorporated the AMI costs and benefits that impact rates regardless of financing

Incorporated AMI capital costs through debt financing
• Included a 20 year bond issuance for the business case capital costs

Determined scenario rate increases that maintain target ratios for 2019-2028
• Determined rates in 2019–2028 that closely reflect the financial metrics in the Base Case
The view depends upon your perspective

- **Economic Analysis** – looks at total costs and benefits, including triple bottom line, over the life of the asset being evaluated. Not all costs or benefits may be reflected in customer rates. This analysis looks at the feasibility of the project and helps inform the decision of whether to proceed or choose an alternative.

- **Financial Analysis** - considers rate impacts over ten-years as shown in our long range financial plans. Considers only costs and benefits that are reflected in rates. Once the decision has been made to proceed, this analysis provides projected rate impacts.
Here's what's included in the Business Case

- **Life of Asset**: 20 years
- **Discount Rate**: 5%
- **Costs**
  - Meters
  - Software
  - Communications
- **Benefits**
  - Labor Savings
  - Asset management
  - Carbon reduction

\[ \text{NPV} \]
Business Case vs Financial Analysis

Differences between the financial analysis and the business case

10-year financial plan vs 20-year business case
• Financial Planning period to set rates is 10 years vs business case and meter life of 20 years

Isolated AMI rate impact
• Did not include monthly billing assumptions that are in the AMI business case

Removed benefit assumptions that are not currently impacting rates
• Did not include AMI carbon benefits
• Did not include AMI reduction in theft benefits for Power
Over time, many customers may see bill savings from the programs and services AMI enables.

Customer benefits not quantified in the business case

- Outage notifications
- Energy monitoring
- Bill management
- New products & services
Wholesale Pricing & Policy Initiative

Sean Senescall, Finance and Analytics Manager
Lyna Vo, Utilities Economist

Public Utility Board Study Session | February 27, 2019
0 | Agenda

1 | Objective
2 | State of the Utility
3 | Contracted Capacity & Demand
4 | Recent Wholesale History
5 | Challenges
6 | Pricing
7 | Wholesale Customer Decision Points
8 | 10 Year Forecast Comparison
9 | Managing Supply Risk
10 | Timeline
1 | Objective

To increase net revenue in the wholesale market while responsibly managing supply risk.

- **Goal #1**: Establish new pricing model
- **Goal #2**: Draft policy changes
- **Goal #3**: Ensure internal alignment
- **Goal #4**: Communicate proposal
- **Goal #5**: Implement revisions
The trajectory of our demand and accounts over time.
3 | Contracted Capacity & Demand

Historical and forecasted underutilization of contracted capacity by wholesale customers.
The trajectory of our wholesale market over recent years.

### 2006 - 2012
**Demand Erosion/Decline**
Wholesale behavior: declining demand, lack of pricing competitiveness, and underutilization of wholesale capacity.

### 2013
**Market Pricing Effort**
We started exploring alternative pricing structures such as market-based pricing, designed to compete with a wholesale customer’s supply options.

We also received conceptual support from PUB/CC, and wholesale customers for this work effort.

### 2015
**Drought**
The 2015 drought combined with concerns regarding the possibility of a methanol plant halted pricing discussions during this time.

### 2016
**SI 98 & FCS Report**
SI 98 initiated pricing model and recommendations for cost recovery, with an evaluation of SDCs, fixed fees, time and material charges, private contracts, main charges, and rate discounts.

FCS refreshed the SDC analysis and their findings supported a reduction in SDCs.

### 2017 - Today
**SI 143 & SI 145**
SI 143 laid the foundation for SI 145 in terms of communication and engagement with management, the Director, and wholesale customers.

SI 145 seeks to implement a new pricing model along with comprehensive policy changes to support wholesale market revenue growth.
5 | Challenges

The challenges facing our utility in the wholesale market.

**Challenge #1**
Some customers are not in a position to take water.

*Example: Black Diamond*
Black Diamond has yet to grow into their purchased capacity from Tacoma.

**Challenge #2**
Some customers are concerned with adverse changes.

*Example: Fife*
Fife has few alternatives to supply. We would like to minimize adverse impacts in order to preserve revenue stream while formalizing our supply obligation.

**Challenge #3**
Some customers have competing offers.

*Example: Firgrove*
Firgrove may be interested in the most economical offer and value.

**Challenge #4**
Some customers have a different business model.

*Example: Rainier View*
Rainier View may want to invest in additional infrastructure for an additional source of supply.
The new pricing model attempts to equitably recover the cost of service for the wholesale class.

<table>
<thead>
<tr>
<th>Current Pricing</th>
<th>Proposed Pricing</th>
<th>Potential Impact to Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Designed to recover about 9% of wholesale costs through a monthly ready-to-serve charge</td>
<td>• Restructures embedded cost pricing to recover 35% of fixed costs through a monthly ready-to-serve charge</td>
<td>• Increase in charges: Auburn, Black Diamond, Bonney Lake</td>
</tr>
<tr>
<td>• 91% of cost recovery is through a variable rate per CCF</td>
<td>• Only 75% of the remaining cost recovery would be through a variable rate per CCF</td>
<td>• Decrease in charges: Fife, Firgrove, Valley WD</td>
</tr>
<tr>
<td>• Ready-to-serve charge is allocated to customers based on meter size</td>
<td>• Ready-to-serve charge is allocated to customers based on peak capacity</td>
<td>• Neutral: Coal Creek, Enumclaw, RSN Enterprises</td>
</tr>
</tbody>
</table>
The general rate structure of the new pricing model.

<table>
<thead>
<tr>
<th>Rate Design Comparison</th>
<th>2019 Rate Design</th>
<th>Proposed Rate Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Recovery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable Cost Recovery</td>
<td>2,505,392</td>
<td>1,790,726</td>
</tr>
<tr>
<td>Fixed Cost Recovery</td>
<td>249,571</td>
<td>964,237</td>
</tr>
<tr>
<td>Total Wholesale Cost of Service</td>
<td>$2,754,963</td>
<td>$2,754,963</td>
</tr>
</tbody>
</table>

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<tr>
<th></th>
<th>Winter Rate</th>
<th>Summer Rate</th>
<th>Peaking Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Rate Design</td>
<td>$2.04</td>
<td>$2.55</td>
<td>$3.83</td>
</tr>
<tr>
<td>Proposed Rate Design</td>
<td>$1.46</td>
<td>$1.83</td>
<td>$2.74</td>
</tr>
</tbody>
</table>

Fixed Cost Recovery: 9% (2019) vs. 35% (Proposed)

Through an unbundling process, we have established we can recover up to 53% in fixed costs from wholesale customers.
6 | Pricing | Proposed Rate Structure

Comparing status quo to the proposed rate structure for different wholesale customers.

The comparisons are dynamic and based upon updated wholesale customer information.
The flow chart of decision points for wholesale customers.

**1. TMCH Pricing Model**
- Default option if no action is taken
- Fixed charge is allocated based on peak capacity
- Variable rate is based on new pricing schedule

**2. Reverse Capacity Amortization**
- Enables option to not pay monthly fixed charge
- Reduces capacity for each month that they opt out of a fixed charge payment
- Reduction would be equivalent to monthly fixed charge and pro-rata share of depreciation expense
- Requires a new or amended contract

**3. Market-Based Pricing Model**
- Enables option to pay different rate than new pricing schedule
- Pricing would be based on a customer's existing supply options
- Requires a new or amended contract
10 Year Forecast Comparison

A comparison of various demand and revenue scenarios against the status quo.

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Average Daily Demand (MGD)</th>
<th>Forecasted Wholesale Revenue</th>
<th>% of Total Expected Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status Quo</td>
<td>2.20</td>
<td>$26,000,000</td>
<td>2.7%</td>
</tr>
<tr>
<td>Pricing &amp; Policy Revisions</td>
<td>7.60</td>
<td>$60,800,000</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Potential Opportunity Cost: $34,800,000
Managing Supply Risk

The impact of incremental water sales and responsibly managing supply risk.
Next steps include meeting with key stakeholders to communicate proposal, incorporate feedback, and request approval.

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<tbody>
<tr>
<td>PUB SS</td>
<td>Wholesale Customers</td>
<td>GPFC</td>
<td>PUB &amp; City Council</td>
</tr>
<tr>
<td>Informational</td>
<td>Informational</td>
<td>Informational</td>
<td>Approval Request</td>
</tr>
<tr>
<td><strong>We are presenting our recommendations on wholesale pricing and policy revisions.</strong></td>
<td><strong>We are scheduled to present our pricing and policy revisions to wholesale customers on 03/13/2019.</strong></td>
<td><strong>We are tentatively scheduled to present our recommendations to the GPFC on 03/19/2019.</strong></td>
<td><strong>We intend to request approval on our changes to wholesale pricing and policy.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>We have a target implementation date of 01/01/2020.</strong></td>
</tr>
</tbody>
</table>
We are asking for feedback and support on our general approach so that we can move forward with our work.