What is the Customer Solutions Office?

- A team of **12** Customer Services employees dedicated to working with seniors, customers with disabilities, and households with limited incomes who are seeking help with their utility bills.

- We work closely with our customers and community partners to provide a holistic approach to providing assistance for utilities provided through TPU and Environmental Services.
CURRENT UTILITY ASSISTANCE PROGRAMS

<table>
<thead>
<tr>
<th>Plan</th>
<th>Discount Rate</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Credit Assistance Plan</td>
<td>Up to $564 per year*</td>
<td>Financial Education Credit</td>
</tr>
<tr>
<td>Discount Rate Program</td>
<td>30% Discount</td>
<td>One-time bill credit Up to $160**</td>
</tr>
</tbody>
</table>

*Credits are based on the number of services billed directly from TPU.

** Completion of approved financial education program.
# HALF-YEAR REPORT & COMPARISONS

## Bill Credit Assistance Plan (BCAP)

**January – June 2018 vs 2019**

<table>
<thead>
<tr>
<th>Activity</th>
<th>2018</th>
<th>2019</th>
<th>Difference</th>
<th>Total Active Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Enrollments</td>
<td>121</td>
<td>1,061</td>
<td>777% ↑</td>
<td>1,254</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>2018</th>
<th>2019</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits Earned</td>
<td>$47,535</td>
<td>$101,290</td>
<td>113% ↑</td>
</tr>
</tbody>
</table>
# Discount Rate Program

## January – June 2018 vs 2019

### New Enrollments

<table>
<thead>
<tr>
<th>Activity</th>
<th>2018</th>
<th>2019</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>381</td>
<td>643</td>
<td>69%</td>
</tr>
</tbody>
</table>

Total Active Accounts: 5,295

### Discounts

<table>
<thead>
<tr>
<th>Activity</th>
<th>2018</th>
<th>2019</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars</td>
<td>$1,657,539</td>
<td>$1,711,929</td>
<td>3%</td>
</tr>
</tbody>
</table>
MARKETING & OUTREACH

Banners, Counter Stands, Posters & Table clothes
MARKETING & OUTREACH

Community Events
IN THE WORKS

Information being researched for future consideration


• Customer Donations – Reviewing possibility of expanding customer donations to be used for all utility services.
CONTACT INFORMATION

Tacoma Public Utilities
Customer Solutions Office
3628 South 35th Street
Tacoma, WA 98409
Phone: 253-502-8400
Website: MyTPU.org/Assistance
Power Supply
Power Supply Update

Graph 1: Tacoma System Flows Near 5th Percentile for May through July
(Tacoma System Hydro Flows, Water Year 1929 – 2019)
Power Supply Update

Graph 2: Federal System Flows Have Been Below Average
Power Supply Update

Graph 3: 2019 Tacoma System Flows are Nearing Lowest on Record
(Tacoma System Flows Annual Avg., Water Year 1929 – 2019)
Power Supply Update

Graph 4: Cowlitz Has Filled Substantially, but is Unlikely to Reach “Full”
(Cowlitz Elevation, Current vs. Historic)
Power Supply Update

Graph 5: Lake Cushman unlikely to reach 735 ft this summer
(Cushman Elevation, Current vs. Historic)
Power Supply Update

Graph 6: Market Prices Have Decreased Closer to Budget Levels
(Market vs. Budget Prices, 2018 – 2022)
Power Supply Update

Graph 7: We’ve Been Selling Less than Budgeted, Purchasing More
(Actual vs. Budget Wholesale Volumes, 2019 – 2020)
Wholesale Net Revenues

Section 2
Wholesale Net Revenues

Graph 8: Actual Wholesale Net Revenue is $12M Below Budget YTD
(Monthly Actual vs. Budget Wholesale Purchases and Net Revenues)
Wholesale Net Revenues

Graph 9: $12M Below Budget Due to Poor Hydro, Purchases
(Cumulative Wholesale Net Revenue Variance, Jan – Jun 2019)

- Hedging, Balancing, Ancillaries
- Market Prices vs. Budget
- Customer Demand vs. Budget
- Generation vs. Budget (Adverse Water)
- Biennium to Date Total

Dollars (in Millions)

- $9.13
- $5.41
- $0.25
- $8.45
- $11.92
Wholesale Net Revenues

Graph 10: Low Q2 Revenues, Projections Below Budget
(Cumulative Actual vs. Budget Wholesale Net Revenues, 2019 – 2020)
Wholesale Net Revenues

Graph 11: Probability of Making Budget Has Decreased to 46%
(Risk Model Simulation of Biennial Net Revenues, 2019 – 2020)

46% probability of exceeding the biennium budget of $79.3M
Hedging Program & Credit Risk Management
Hedging Program

Overview

Hedging Program Objective

A hedging program is part of Tacoma Power’s energy risk management policy.

The objective of the hedging program is to:

✓ Stabilize net revenues from wholesale operations
✓ Protect against very low wholesale revenue outcomes

Hedging Program Design

The hedging policy enforces dollar cost averaging of surplus sales and prohibits holding deficit positions.

The program has a two year horizon, and utilizes physical forward contracts.

Allowable hedge ratio governed by “hedging bands” that:

✓ Limit the maximum amount hedged far into the future
✓ Require progressively more surplus be hedged as time to delivery gets closer
Hedging Program

Graph 12: Current Hedging Program Performance Is Not Typical
(Hedging Program, 2017 – 2020)
Background

- Tacoma Power frequently sells electricity to wholesale trading partners or “counterparties”
- Tacoma Power incurs credit exposure – money that the utility could lose in the event of a counterparty default

Credit Risk Management Program

- Tacoma Power manages credit risk by:
  - Extending credit to investment grade counterparties only
  - Setting exposure limits based on creditworthiness
  - Daily monitoring of credit quality
  - Daily monitoring of exposure
  - Actions include stopping trading with a specific counterparty, requesting collateralization
# Wholesale Credit Exposures

## Graph 13: Current Credit Exposures Are at Typical Levels

*(Top 15 Counterparty Credit Exposures)*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Counterparty</th>
<th>Internal Model Rating</th>
<th>Letter of Credit Collateral</th>
<th>Loss in Event of Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Citigroup Energy, Inc.</td>
<td>A-</td>
<td></td>
<td>$1,050,824</td>
</tr>
<tr>
<td>2</td>
<td>Avangrid Renewables, LLC</td>
<td>BBB+</td>
<td></td>
<td>$729,396</td>
</tr>
<tr>
<td>3</td>
<td>California ISO</td>
<td>AA-</td>
<td></td>
<td>$612,964</td>
</tr>
<tr>
<td>4</td>
<td>Puget Sound Energy, Inc.</td>
<td>BBB</td>
<td></td>
<td>$563,276</td>
</tr>
<tr>
<td>5</td>
<td>Sacramento Municipal Utility District</td>
<td>AA-</td>
<td></td>
<td>$367,691</td>
</tr>
<tr>
<td>6</td>
<td>Public Service Company of Colorado</td>
<td>BBB+</td>
<td></td>
<td>$297,440</td>
</tr>
<tr>
<td>7</td>
<td>Portland General Electric Co.</td>
<td>BBB+</td>
<td>$1,000,000</td>
<td>$163,985</td>
</tr>
<tr>
<td>8</td>
<td>Macquarie Energy, LLC</td>
<td>A</td>
<td></td>
<td>$284,966</td>
</tr>
<tr>
<td>9</td>
<td>Morgan Stanley Capital Group, Inc.</td>
<td>A+</td>
<td></td>
<td>$241,803</td>
</tr>
<tr>
<td>10</td>
<td>Powerex Corp.</td>
<td>A+</td>
<td></td>
<td>$178,624</td>
</tr>
<tr>
<td>11</td>
<td>TransAlta Energy Marketing (US) Inc.</td>
<td>BB+</td>
<td>$1,000,000</td>
<td>$163,985</td>
</tr>
<tr>
<td>12</td>
<td>PacifiCorp</td>
<td>A-</td>
<td></td>
<td>$80,800</td>
</tr>
<tr>
<td>13</td>
<td>Bonneville Power Administration</td>
<td>A-</td>
<td></td>
<td>$68,263</td>
</tr>
<tr>
<td>14</td>
<td>BP Energy Company</td>
<td>A-</td>
<td></td>
<td>$44,506</td>
</tr>
<tr>
<td>15</td>
<td>Shell Energy North America (US), L.P.</td>
<td>BBB</td>
<td></td>
<td>$37,905</td>
</tr>
</tbody>
</table>