Cushman & Adams Substations MOU

July 11, 2018

Cushman & Adams Substations – April, 1937
Overview of Properties

Adams Street Substation

Cushman Substation
What’s happened?

• **March 28, 2018 Public Utility Board Study Session**
  – Edits made to Draft MOU incorporating PUB feedback

• **May 30, 2018 Tacoma City Council Infrastructure, Planning and Sustainability Committee presentation**
  – Edits made to Draft MOU incorporating Tacoma City Council feedback
  – NENC Vice Chair testifies, thanks TPU/GG for outreach, supports draft MOU, advocates for “master planning” to determine the future of the properties

• **Consistent with Draft MOU, Phase 2 of environmental characterization work continues**

• **Consistent with Draft MOU, review of options to replace storage and crane capabilities in progress**

• **Ongoing engagement with community stakeholders**

• **Work on North 21st Street transmission line project continues**
What changed in Draft MOU?

• **Section 6, pages 3-4**
  – Master planning identified/community outreach goals refined
  – Community outreach/initial master planning begins in 2018

  • *The community outreach process will serve as an initial phase of a master planning process and should ensure broad community involvement and identify community goals for redevelopment of the Properties, which will be reconciled with costs and market constraints that could include public amenities and private development.* In order to generate data necessary to allow Tacoma Power to appropriately scope the level and extent of any necessary environmental cleanup of the properties, Tacoma Power will fund up to $50,000.00 of outside consultant work for the public outreach, and general government will include necessary environmental cleanup levels as a deliverable within the scope of such consulting services. Community outreach may occur with or without a transfer of the properties from Tacoma Power to the City's general government as the Parties deem most efficacious. *The community outreach/initial master planning phase should begin in calendar year 2018.*
Joint Staff Task Force

- Terry Coggins, Tacoma Power
- Ward Groves, Legal
- Jennifer Hines, Real Property Services
- Peter Huffman, Planning & Development Services
- Clark Mather, TPU
- Tom Morrill, Legal
- Terry Ryan, Tacoma Power
- Steve Victor, Legal
- Joe Wilson, Tacoma Power
Proposed next steps

• Interim Director & City Manager sign MOU

• Joint Staff Task Force to identify scoping of outreach/initial master planning, continues community engagement on scoping

• General Government identifies consultant and initiates outreach/initial master planning process in calendar year 2018
Community & Government Relations Update
July 11, 2018

• Clark Mather, Community and Government Relations Manager
• Marian Dacca, State Relations Manager
Overview

• What’s new?
  » Federal
  » State

• 2019 legislative priorities development
  » Ongoing coordination with General Government
  » Suggested new processes
Federal Elections in 2018

House of Representatives – Republican Majority

- Republicans hold the majority in the House (235 Republicans, 193 Democrats, & 7 vacant seats)
- Two-Year Terms
- All 435 Representatives are up for election in 2018
- 218 needed for control

235 – 193

Senate – Republican Majority

- Republicans hold the majority in the Senate (51 Republicans, 47 Democrats + 2 Independents who caucus with the Democrats)
- Six-Year Terms
- 33 Senators are up for election in 2018

51 – 49

President – Republican

- President Donald Trump
- Term expires January 20, 2021
Federal Update

**Power**
- Murky prospects for TPU-endorsed energy legislation
- Spending bill includes $$ that Cushman hydro project is eligible for
- Ongoing battle on DOE reporting structure, affects BPA
- Troubling pole attachment legislation resurfaces – working with General Government on advocacy strategy

**Water**
- Water resources legislation
  - Howard Hanson Language included, Senate supports WIFIA
- Senate spending legislation mentions Howard Hanson

**Rail**
- Seeking reauthorization of 45G tax credit

**Click!**
- Senate passes resolution that would nullify FCC net neutrality rollback
State Update

2018 Elections

• Washington Primary Election
  » Tuesday, August 7, 2018

• Washington General Election
  » Tuesday, November 6, 2018
State Elections in 2018

House of Representatives – Democratic Majority

- Democrats hold the majority in the House (50 Democrats – 48 Republicans)
- All 98 Representatives are up for election in 2018
  
  50 – 48

Senate – Democratic Majority

- Democrats hold the majority in the Senate (25 Democrats – 23 Republicans + 1 Ind. Democrat who caucuses with the Republicans)
- 24 Senators are up for election in 2018
  
  25 – 24

Governor – Democrat

- Governor Jay Inslee – Democrat
- Term expires 2020
Carbon Fee Initiative

- “Initiative Measure No. 1631” was filed on March 2, 2018
  - “AN ACT Relating to reducing pollution by investing in clean air, clean energy, clean water, healthy forests, and healthy communities and imposing a fee on large emitters based on their pollution.”
- On July 2, supporters of I-1631 turned in more than 370,000 signatures to qualify the measure for the November ballot. 259,622 valid signatures were needed.
- Upcoming Tacoma Power Presentation on I-1631 and analysis of Clean Energy policy proposals.
  - Scheduled for July 25, 2018 Study Session
State Update

Pole Attachments, Small Cell Technology & Broadband Deployment

• On January 10, 2018 the PUB adopted new contract templates and fees for:
  » Wireline Attachments - Washington State methodology RCW 54.04.045 for calculating the General Pole Attachment fee. Resulting in an increase from $17.29 to $26.49.
  » Small Cell Wireless Attachments - $1200.

• TPU Wireline pole attachment fees had not been updated since 2011, and new small cell technology had yet to be installed in Tacoma.

• Staff from TPU and General Government worked together to draft a city-wide ordinance regarding the deployment of new small cell technology. Collaboration included stakeholder meetings with the telecommunication industry for feedback.
State Update

Pole Attachments, Small Cell Technology & Broadband Deployment

• Disagreements have yet to be fully resolved regarding attachment costs and contract terms for certain carriers in Tacoma and around the state.

• 2017 Legislative Session: Industry legislation to preempt local governments and limit cost recovery failed to be enacted.

• 2018 Legislative Session: House and Senate worked on compromise legislation – no legislation was enacted.

• It is unclear what legislative proposals will emerge in 2019, however we expect to see proposals emerge on this issue.
State Update

Proactive Strategy Development Continues

- **Electrification of Transportation, Clear Authority for Public Utilities**
  » TPU continues to partner with a coalition of consumer-owned utilities to seek clear legislative authority to offer incentive programs and services in electrification of transportation for our customers.

- **Solar Incentives for Low-Income Customers**
  » TPU continues to advocate for legislation to increase state support for community solar and low-income access to solar generation.

- **Report back in Q4**
SB 6091, “Ensuring that water is available to support development,” was enacted during the 2018 Legislative Session to address the *Hirst* and *Foster* Supreme Court Decisions.

- Created a joint legislative task force on the *Foster* Decision with a report back date of Nov. 15, 2019.
- The first meeting of the task force was held on June 22.
  - Introduction of Task Force Members.
  - Briefing on the *Foster v. Department of Ecology* supreme court decision.
  - Briefing on five pilot projects.
  - Discussion of Task Force mission, possible operating procedures, and future meeting schedules.

- We will continue monitoring this process and keep the PUB updated.
TPU/GG Government Relations Coordination

- Current Coordination includes
  - Regular meetings between TPU/GG advocacy staff, particularly during Washington State Legislative sessions
  - Periodic written activity reports shared across General Government and Tacoma Public Utilities
  - Ad-Hoc interactions between GG/TPU legislative advocacy staff on issues at the State and Federal levels
TPU/GG Government Relations Coordination

• New coordination ideas for review
  • 3rd Quarter Annually
    » General Government and TPU staff will present proposed legislative policies for the City of Tacoma to a joint PUB/City Council study session
    » Presentation would include a review of present and proposed changes to legislative policies for the City of Tacoma, including policies with a nexus to TPU
    » GG/TPU staff would work collaboratively to recommend policy positions on issues that impact TPU and its operations or customers
TPU/GG
Government Relations Coordination

• New coordination ideas for review
  • 4th Quarter Annually
    » General Government and TPU staff will present the General Government’s and TPU’s legislative agendas for the upcoming congressional and legislative session to a joint PUB/City Council study session
TPU/GG
Government Relations Coordination

• **New coordination ideas for review**
  
  • Regularly
    » City Council and Public Utility Board schedule permitting, General Government and TPU staff will present updates on congressional and legislative sessions to joint study sessions of the PUB and Tacoma City Council
  
  • Special Meetings:
    » On policy items of particular interest to the General Government and TPU, staff will recommend to the City Council and Public Utility Board on the necessity for other joint briefings on policy issues
What’s Ahead...

Tacoma Power PUB Presentation on I-1631 and Analysis on Clean Energy
  • Wednesday, July 25, 2018

Joint PUB/City Council Study Session on City of Tacoma Legislative Policies
  • Tuesday, August 21, 2018

2018 Elections
  • Washington Primary Election – Tuesday, August 7, 2018
  • Washington General Election – Tuesday, November 6, 2018

2019 Legislative Session
  • Legislative Agenda Study Session: Q4 2018
  • 2019 Legislative Session: Monday, January 14, 2019
    » Long Session, lasting for 105 calendar days

116th Congress
  • Convenes Thursday, January 3, 2019
Residential Solar in Tacoma

Update on the plan to increase residential solar and address equity concerns

Public Utility Board Study Session

Clay Norris

July 11, 2018
Presentation Purpose

- Review solar plan
- Update on solar adoption in Tacoma
- Provide updates on progress
  - Discuss challenges with low-income loan
  - Share preliminary research on community solar and multifamily pilot
- Recommended next steps
# Residential Solar Plan

<table>
<thead>
<tr>
<th>Plan Element</th>
<th>Timeline</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joined Washington State New Voluntary Solar Incentive Program</td>
<td>2017</td>
<td>Complete</td>
</tr>
<tr>
<td>Expand Marketing, Customer Outreach and Education</td>
<td>Fall 2017-18</td>
<td>On Track</td>
</tr>
<tr>
<td>Modify SAP Process to Accommodate Solar</td>
<td>Q2 2018</td>
<td>Q3 2018</td>
</tr>
<tr>
<td>Work with Strategic Partners to Find Solutions for Low-Income Solar Access</td>
<td>Spring 2018</td>
<td>Still work to do</td>
</tr>
<tr>
<td>Incentives for residential low-income customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Waive inspection fees</td>
<td>Q2 2018</td>
<td>Ready but concerned about customer impacts</td>
</tr>
<tr>
<td>• Prepay renewable energy credit value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Develop zero-interest loan program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advocate for State Legislation Changes to Increase State Support for Low-Income &amp; Community Solar</td>
<td>2018+</td>
<td>Still work to do</td>
</tr>
<tr>
<td>Pursue Multi-Family Pilot</td>
<td>2018</td>
<td>On Track</td>
</tr>
<tr>
<td>Revamped Evergreen Options</td>
<td>2017</td>
<td>Complete</td>
</tr>
<tr>
<td>Evaluate New Community Solar Project</td>
<td>2018</td>
<td>On Track</td>
</tr>
</tbody>
</table>
Residential Solar Adoption in Tacoma

May 2018
Actual: 471
Low-Income zero interest loan

- Tacoma Power has developed a zero-interest loan package for low-income customers that includes
  - upfront purchase of the renewable energy credit value
  - waived inspection fees
- Staff is concerned about marketing a poor financial investment for low-income customers
Low-income zero interest loan

- **Production Credits**: Washington State incentive for solar production
- **Federal Investment Tax Credit**: Up to 30% of solar project cost can be deducted from federal income tax
- **Bill Reduction**: Solar net billing methodology reduces utility electric bills
- **Inverter Maintenance**: Inverters last approximately 10 years - inverters change PV system DC power to AC power for home use
- **Loan Payment**: Monthly loan payments to the utility for up to 8 year term
- **Cumulative Cash Flow**: Participant net annualized projected financial impact
8-Year Loan
20-Year Life

Typical Participant Group: Annualized Cash Flow

Notes: 8-yr loan, 20-yr life cycle, 6% ITC, Participant responsible for inverters
Partnership Flip Finance Model

Typically involves 3 partners:
- Private investor
- Lender (utility)
- Project developer (utility or non-profit)

Non-profit and utility cannot monetize tax benefit, therefore, a private investor with tax liability is needed who can
Community Solar

- Using the same structure as existing project is not cost effective
  - Lower state production incentives
  - Access to location for siting
- Pursuing new opportunity that includes “partnership flip” finance model
  - Successful in other regions
  - Spark Northwest
  - Bonneville Environmental Foundation
  - Locate in eastern WA
Multifamily Solar

• Working with partners to evaluate options for solar access
  – Bonneville Environmental Foundation
  – Washington State Housing Finance Commission
  – Washington State Department of Commerce

• Pursuing new opportunity in partnership with Tacoma Housing Authority that includes
  – “partnership flip” finance model
  – Grant funding
Recommended Next Steps

• Hold low-income loan until economics are favorable for low-income customer

• Continue pursuing legislative changes to help increase solar adoption

• Evaluate option that includes public/private partnership to obtain a new community solar project

• Evaluate option that includes grants and a public/private partnership, including a non-profit, for multifamily project

• Promote solar through TPU website and WattPlan solar calculator
Appendix
BE IT RESOLVED BY THE COUNCIL OF THE CITY OF TACOMA:

Section 1. That the City Council hereby requests the Tacoma Public Utility Board (“Board”) to develop a plan to increase the use of residential solar in the City of Tacoma, which plan will address economic inequality and ensure an equitable increase in the number of residential solar users from all income levels.

Section 2. That the Board shall present its plan to the City Council no later than October 1, 2017.
Typical Participant Group: Monthly Cash Flow, year 5

8-Year Loan
20-Year Life

- Loan Payments
- Reduced Electric Bill
- State Production Credit
- Cumulative Cash Flow
Community Solar: Participant Annualized Cash Flow

199 kW
$1.89/Watt
12.3% capacity factor

Cumulative Cashflow

- Production Incentive
- Energy Value
- REC Value
- Participant Contribution

Cumulative Cashflow
UTILITY TECHNOLOGY STRATEGIC PLAN
2018 – 2022

PUBLIC UTILITY BOARD
STUDY SESSION
JULY 11, 2018

JOE TELLEZ, CHIEF TECHNOLOGY OFFICER
ANDREW BRAEGER, ENTERPRISE ARCHITECT
PRESENTATION OBJECTIVE

Share the Updated Utility Technology Strategic Plan for TPU

1) Where we’ve been & what we’ve accomplished

- 2014 – 2018 Strategic Plan Review
- Key Accomplishments

2) Where the industry is heading

- Emerging Industry Trends
- TPU Business Drivers

3) How we’re responding & where we’re going

- Updated Strategic Objectives
- Key Projects & Initiatives
WHERE WE’VE BEEN & WHAT WE’VE ACCOMPLISHED...

2014 – 2018 Strategic Plan Review

Key Accomplishments
Modernize & optimize infrastructure technology

Enable smart utility integration

IT/OT convergence & enhance cybersecurity posture

Excellence in service delivery
KEY TECHNOLOGY PROJECTS & TRANSFORMATIONAL INITIATIVES

Energy Management System

Advanced Metering Infrastructure

Utility Bill Redesign

Workforce Connect
Back in 2014...

- Technology focused
- Meet compliance
- Project Management Best Practices
- Governance: Project Lifecycle
- Specialty solutions & customization
- Contract management
- On-premise
- Waterfall delivery

Responsive

Maturing Utility Technology Management Capabilities

Today

- Service focused
- Enable cybersecurity discipline
- Portfolio Management & Enterprise Architecture
- Governance: Holistic
- Best of breed standard platforms
- Vendor management
- Emerging cloud adoption
- Incremental agile delivery

Engaging
WHERE THE INDUSTRY IS HEADING...

Emerging Industry Trends

TPU Business Drivers
**Digital Transformation**
Digital customer engagement provides new service opportunities
Digital worker enablement transforms utility field operations
AMI is a key enabler of utility digital transformation

**Operational Analytics & Situational Awareness**
Data driven operations
Asset performance management
Internet of things and the sensor revolution

**Technology Delivery & Management**
Standards based vs. customization
Cloud gaining traction
Transforming while performing
TPU’s Business Drivers

- Legacy utility operations
- Ever-increasing customer expectations
- An evolving workforce
HOW WE’RE RESPONDING & WHERE WE’RE GOING...

Updated Strategic Objectives

Key Projects & Initiatives
Integrating technology to **deliver customer value** & **realize operational excellence**

- **AMI Readiness & Deployment**
  
- **Customer Engagement & Digital Services**
  
- **Operational Analytics**
  
- **Cybersecurity Program Maturity**
Enabling greater customer choice and optimizing utility operations

Provide new customer products/services that yield two-way engagement

Enhance outage detection

Provide asset management capability

Collect and analyze data to improve operations
CUSTOMER ENGAGEMENT & DIGITAL SERVICES

Meeting evolving customer needs

Value my time

Value my money

Value me

Value my preferences

TPU Customers
Enable a data-driven utility

**Customer Analytics**
- Provide personalized customer communications

**Asset Analytics**
- Perform condition-based maintenance

**Operational Analytics**
- Proactive fault monitoring
- Leak detection

**Workforce Analytics**
- Optimize employee engagement & retention
Maturing TPU’s cybersecurity program to prevent, detect, respond to, and resolve cyber threats.
TECHNOLOGY STRATEGIC ROADMAP: 2018 - 2022

PayBox Replacement
mytpu.org redesign
Outage communications

Office 365 & Skype for Business
Email/SMS marketing
Dynamics 365 (CRM)

Enhanced customer portal
Social listening
Meter data management system

Advanced metering infrastructure program
GIS modernization

Data lake
Cloud data warehouse
Enterprise historian

Establish information security operations center
Utility analytics use cases
Refine cybersecurity policies

Workforce Connect
Land mobile radio

2018
2019
2020
2021
2022

Be a data-driven utility
Do our work better

Key
Provide customer-focused digital services

Critical Project
TPU’s utility technology management capabilities are advancing.

Our technology portfolio is modernizing with the rest of our industry.

Our industry is facing numerous opportunities for digital transformation.

Recent technology investments have laid the foundation required for highly complex and integrated transformational projects.