

Tacoma Power 2021-22 Revenue Requirement & Rate Proposals

Public Utility Board

26 August 2020



Agenda

Overview

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Pricing Proposals

Section 3

Revenue Requirement
& LRFP Scenarios

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Section 1

Overview

2021-22 Pricing Proposals for PUB Discussion

Already Introduced (May 27th PUB Meeting):

- ✓ Residential Prepayment rate
- ✓ Shore Power rate
- ✓ Distributed Generation (DG) rate
- ✓ Non-Firm rate
- ✓ New Large Load rate


For Discussion Today:

- Open Access Transmission Tariff (OATT) update
- New business service fees update
- Rate component attribution of increase

Long-Range Financial Plan—Forecast Sensitivities

Scenarios:

- Second wave of pandemic shut-downs in 2021
- Loss of large load in 2021
- Critical water in 2021
- Adverse water in 2021 and 2022
- Economic rebound
- Low wholesale prices



Standard
Planning
Scenarios

Actual-to-Date Load Variances

Observed retail loads have **declined** under stay-at-home and phased-restart orders, compared to the pre-COVID forecast.

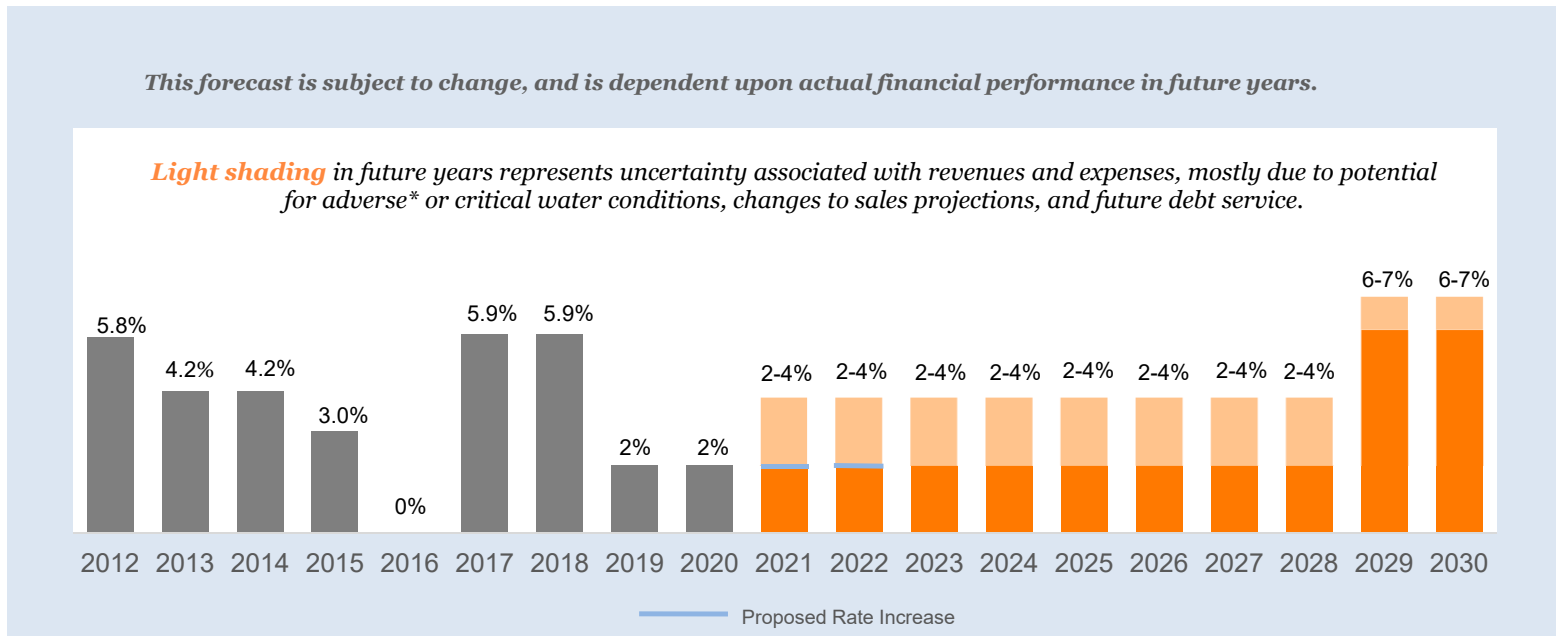
| 2020 | January | February | March | April | May | June | July |
|--------------------------------|---------|----------|--------|--------|--------|--------|---------|
| Weather-Normalized Actual Load | 681.0 | 657.6 | 596.6 | 520.2 | 454.4 | 461.7 | 460.2 |
| October 2019 Forecast Load | 679.3 | 643.3 | 607.5 | 549.8 | 482.3 | 479.8 | 486.4 |
| Forecast Variance | 0.25% | 2.21% | -1.80% | -5.38% | -5.79% | -3.77% | -3.07%* |

*In the month of July, a contract industrial customer conducted their annual maintenance process, which significantly impacted forecast variance. For this reason, forecast variance reported in that month excludes contract industrial loads. When contract industrial loads are included, forecast variance increases to -5.39%.

Tacoma Power continues to monitor the changing situation.

2021-22 Revenue Requirement & Long-Range Financial Plan Scenarios

Base Case Forecast: 2 percent Rate Increases Proposed for 2021 & 2022



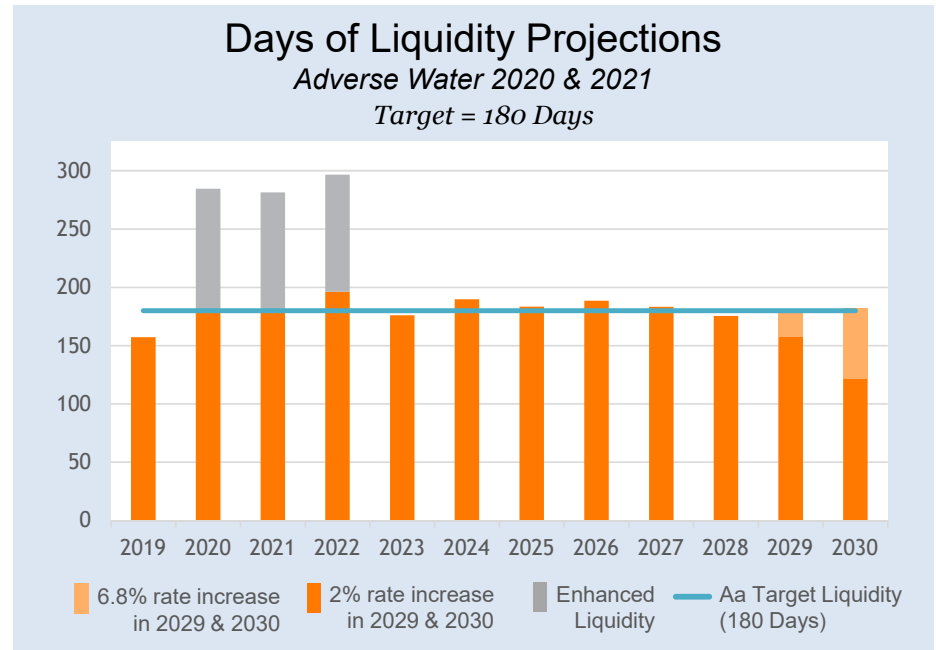
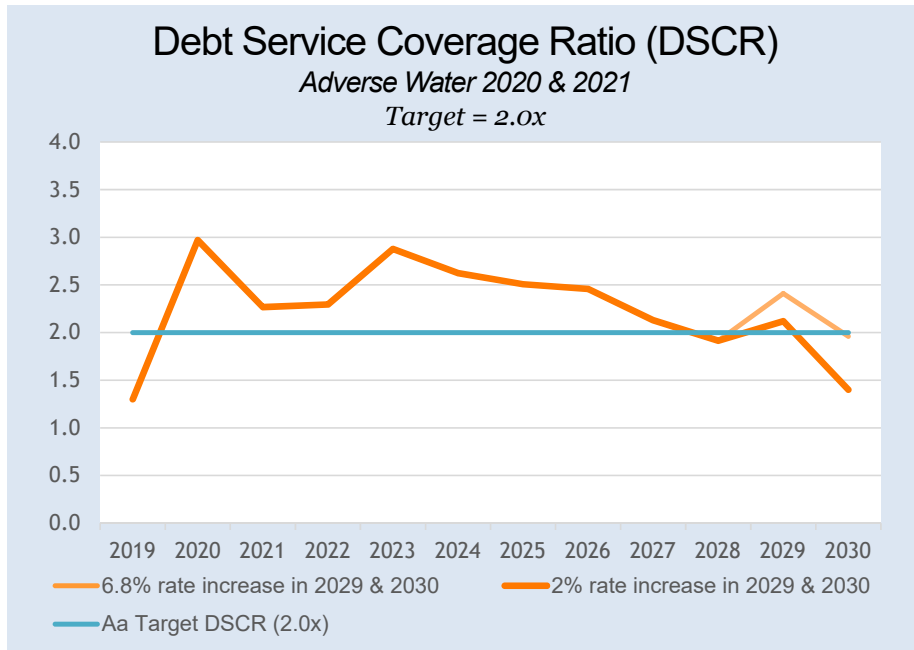
LRFP Scenario Rate Forecasts

Projected Rate Increases

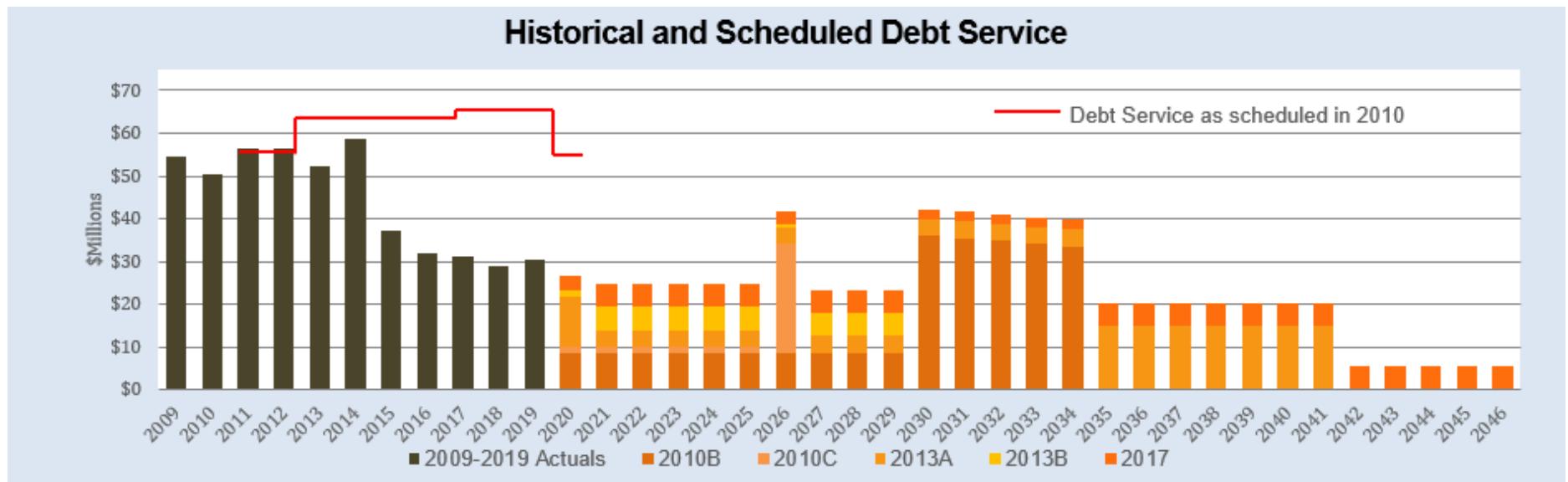
| Scenario | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Case: Average Water Conditions | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 6.0% | 6.0% |
| Budget - Adverse Water in 2021 & 2022 | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 6.8% | 6.8% |
| Critical Water in 2021 | 2.0% | 2.0% | 2.0% | 2.0% | 6.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 4.5% | 4.5% |
| Loss of Large Customer | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 3.0% | 3.0% | 7.0% | 7.0% |
| Lower Wholesale Prices | 2.0% | 2.0% | 2.0% | 2.0% | 5.0% | 2.0% | 2.0% | 2.0% | 3.0% | 3.0% | 4.0% | 5.5% |
| Second Wave Pandemic in 2021 & 2022 | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 3.8% | 7.5% | 7.5% |

Preliminary

Base Case Debt Service Coverage and Liquidity Metrics



Manage Debt Profile to Minimize Long-Term Rates



The Long View:

Managing debt service has produced significant savings to date.

Planned \$150 million bond issuance in 2021.

A bond call in 2023 and defeasance in 2025 are desirable to manage debt service and keep rates low.

Tacoma Power has AA-level credit ratings¹

High ratings enable:

- access to financing (e.g. KeyBank agreement)
- lower interest rate on bonds

Electric Rate & Financial Policy:

- requires debt-service coverage ratios and days cash on hand consistent with current rating
- mandates low and consistent rate increases to minimize customer impact
- approved by TPU Board and City Council

Strategic Directive SD-2 on Financial Sustainability:

- Outcome 4: “AA-level bond rating, or better, to facilitate access to lower-cost financing and produce sustainable debt service expenses.”
- Outcome 7: “Financial management of debt service over the long term to maintain reasonable debt-service requirements and meet debt service coverage ratios.”

Rating agencies are interested in different things

| | Moody's* | S&P | Fitch |
|---|----------|------|-------|
| <i>Investment Grade</i> | Aaa | AAA | AAA |
| | Aa1 | AA+ | AA+ |
| | Aa2 | AA | AA |
| | Aa3 | AA- | AA- |
| | A1 | A+ | A+ |
| | A2 | A | A |
| | A3 | A- | A- |
| | Baa1 | BBB+ | BBB+ |
| | Baa2 | BBB | BBB |
| | Baa3 | BBB- | BBB- |
| <i>Non-Investment Grade Speculative</i> | Ba1 | BB+ | BB+ |
| | Ba2 | BB | BB |
| | Ba3 | BB- | BB- |
| | B1 | B+ | B+ |
| | B2 | B | B |
| | B3 | B- | B- |
| | Caa1 | CCC+ | |
| | Caa2 | CCC | |
| | Caa3 | CCC- | CCC |
| | Ca | CCC | |
| | C | | DDD |
| | | D | DD |
| | | | D |

This table compares the different rating scales for the three credit rating agencies, with Tacoma Power's current rating highlighted.

— Target ■ Current Tacoma Power Rating

* Moody's current rating for Tacoma Power only applies to Bonds issued before 2017.

¹ Fitch Ratings affirmed Tacoma Power's AA- rating on August 14, 2020. The full report is included in the Board packet and [available online](#).

Section 3

2021-22 Pricing Proposals

2021-22 Pricing Proposals for PUB Discussion

For Discussion Today:

- Open Access Transmission Tariff (OATT) update
- New business service fees update
- Rate component attribution of increase

Update Open Access Transmission Tariff (OATT)

Tacoma Power has chosen to provide transmission service to third parties under a standard rate, the Open-Access Transmission Tariff. This rate is based on the cost of providing transmission service.

The OATT was last updated in 2012, using 2009 data. Since that time:

- Costs have escalated.
- Tacoma Power is accounting for use of more of the transmission system for itself.
- Transmission customers are taking a new mix of services

Because the rate has not been updated in many years, some percent increases are high. On an annualized basis, however, most changes are around 3%.

Some legal language changes may also be incorporated into the OATT at the same time the rates are changed, to facilitate usage with the EIM.

Preliminary Open-Access Transmission Tariff (OATT)

| OATT Schedule | Schedule Name | Current (per MWh) | 2019 | Increase | As % | % Annual |
|---------------|--|-------------------|---------|----------|------|----------|
| 1 | Scheduling, System Control, and Dispatch | \$0.82 | \$1.06 | \$0.24 | 29% | 2% |
| 2 | Reactive Supply and Voltage Control | \$0.08 | \$0.14 | \$0.06 | 75% | 7% |
| 3 | Regulation and Frequency Response | \$0.34 | \$0.52 | \$0.18 | 53% | 1% |
| 5 | Spinning Reserve | \$14.45 | \$20.48 | \$6.03 | 42% | 2% |
| 6 | Supplemental Reserve | \$14.45 | \$20.48 | \$6.03 | 42% | 2% |
| 7 | Point-to-Point | \$2.99 | \$3.95 | \$0.96 | 32% | 3% |

Initial Revenue Impact Estimate :
 \$1.75 to \$2 million additional annual wheeling revenue to Tacoma Power

Preliminary and subject to change.

New Business Service Fees Update

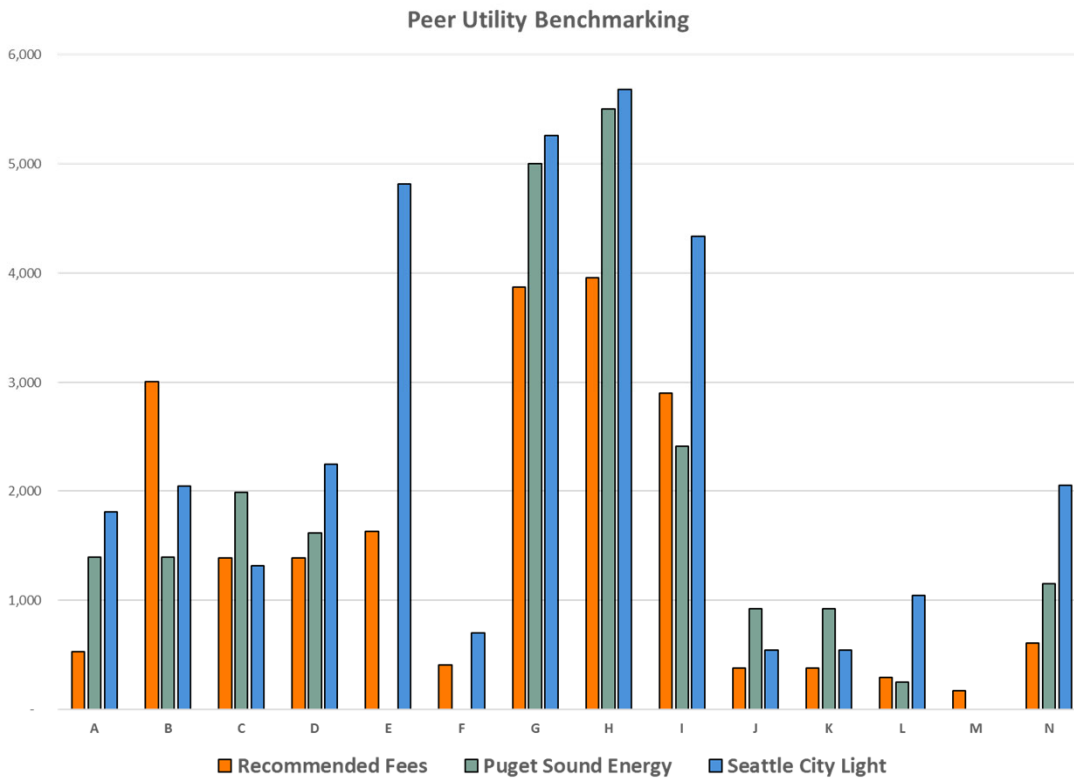
Tacoma Power charges standardized fees for common new services work. These fees were last updated in 2009. Costs have increased such that fee revenue no longer covers costs.

- Fees do not reflect general cost escalation over 10+ years.
- The Washington State Department of Labor and Industries changed electrical service disconnect and reconnect rules in 2017. The new ruling exacerbated the total fixed-fee under-recovery.
- In the 2018/2019 period, under-recoveries averaged about \$640,000.

Utilizing a sample of actual cost from SAP, staff audited and averaged actual costs for each type of service work, then adjusted the results for anticipated cost changes, such as wage increases that are already embedded in union contracts.

Fee under-recoveries increase costs to the general rate base.

New Business Service Fees Update



Because the fees have not been updated in many years, the full-cost update increases range from 15% to 180%. However, they are still competitive with peer utilities.

In order to prevent cross-subsidization of fee work by the general ratebase, Tacoma Power’s long-term goal should be to raise fees to levels sufficient for full cost recovery. Whether or not this is done immediately or in a multi-phase process is a policy decision.

New Business Service Fees Update

| Fee Description | Current Fee | Actual Average Cost | Increase | as % |
|--|-------------|---------------------|----------|------|
| A Connect New 200A Service to an Existing SSB | \$275 | \$530 | \$255 | 93% |
| B Install and Connect New 200A Service and SSB to an Existing Transformer | \$1,075 | \$3,010 | \$1,935 | 180% |
| C Connect New 320A, Single-Phase Service to an Existing Overhead Secondary | \$675 | \$1,385 | \$710 | 105% |
| D Connect New 200A, Three-Phase Service to an Existing Overhead Secondary | \$1,395 | \$1,630 | \$235 | 17% |
| E Connect 200A, Single-Phase Temporary Service to Existing Overhead | \$275 | \$410 | \$135 | 49% |
| F Install New 200A Service, SSB, Conduit, and Wire to an existing Power Pole | \$2,150 | \$3,875 | \$1,725 | 80% |
| G Install New 320A Service, SSB, Conduits, and Wire to an existing Power Pole | \$2,495 | \$3,960 | \$1,465 | 59% |
| H Install New 200A Service and Wire to Existing Power Pole in Customer Conduit | \$1,060 | \$2,895 | \$1,835 | 173% |
| I Connect Street Light Circuit to an OH or UG Secondary Service | \$185 | \$380 | \$195 | 105% |
| J Connect Unmetered Cable/DSL Service to OH or UG Secondary Service | \$185 | \$380 | \$195 | 105% |
| K Maintenance of Cable/DSL Service to OH or UG Secondary Service | \$185 | \$295 | \$110 | 59% |
| L Install Communications Conduits while Installing an SSB | \$140 | \$170 | \$30 | 21% |
| M Install a Rental Light Pole on Private Property | \$532 | \$610 | \$78 | 15% |

OH = overhead, UG = underground

Allocation of Rate Increase to Rate Components

- No COSA was performed in preparation for this rate proceeding
- All customer classes proposed to receive the same percent increase (2%)
- The COSA prepared in 2018 suggested that there is some under-recovery for certain classes in fixed charges and demand charges
- The same class revenue percent increase can be put into the fixed charge, the variable charges, or both

Options for Rate Components of Residential

A. 100% to monthly charge

- Customer Charge: +\$1.85 per month each step

B. Same percentage to all rate components (2%)

- Customer charge: +35¢ per month each step
- kWh charge: +0.16¢ each step

C. Half in monthly charge; half in variable charge

- Customer charge: +95¢ per month first step, +90¢ per month second step
- kWh charge: +0.10¢ first step, +0.11¢ second step

D. 100% to kWh charge

- kWh charge: +0.20¢ each step

Options for Rate Components of Residential

| | Current Rates | All Fixed 2021 | Step One | | All Fixed 2022 | Step Two | |
|-----------------------------|---------------|-------------------|----------|-----|-------------------|----------|-----|
| Energy + Delivery (per kWh) | 8.0704 ¢ | 8.0704 ¢ | 0.0000 ¢ | 0% | 8.0704 ¢ | 0.0000 ¢ | 0% |
| Fixed (per month) | \$17.30 | \$19.15 | \$1.85 | 11% | \$21.00 | \$1.85 | 10% |
| | Current Rates | Proportion 2021 | | | Proportion 2022 | | |
| Energy + Delivery (per kWh) | 8.0704 ¢ | 8.2318 ¢ | 0.1614 ¢ | 2% | 8.3964 ¢ | 0.1646 ¢ | 2% |
| Fixed (per month) | \$17.30 | \$17.65 | \$0.35 | 2% | \$18.00 | \$0.35 | 2% |
| | Current Rates | 50/50 2021 | | | 50/50 2022 | | |
| Energy + Delivery (per kWh) | 8.0704 ¢ | 8.1671 ¢ | 0.0967 ¢ | 1% | 8.2725 ¢ | 0.1054 ¢ | 1% |
| Fixed (per month) | \$17.30 | \$18.25 | \$0.95 | 5% | \$19.15 | \$0.90 | 5% |
| | Current Rates | All Variable 2021 | | | All Variable 2022 | | |
| Energy + Delivery (per kWh) | 8.0704 ¢ | 8.2689 ¢ | 0.1985 ¢ | 2% | 8.4717 ¢ | 0.2028 ¢ | 2% |
| Fixed (per month) | \$17.30 | \$17.30 | \$0.00 | 0% | \$17.30 | \$0.00 | 0% |

Residential Bills under Alternative Rate Designs

| SMALL USER | | | |
|--------------|---------------|------------|------------|
| 270 kWh | Current Rates | 2021 Rates | 2022 Rates |
| All Fixed | \$39.09 | \$40.94 | \$42.79 |
| | | +\$1.85 | +\$1.85 |
| | | 4.7% | 4.5% |
| Proportional | \$39.09 | \$39.87 | \$40.67 |
| | | +\$0.78 | +\$0.80 |
| | | 2.0% | 2.0% |
| 50/50 | \$39.09 | \$40.30 | \$41.49 |
| | | +\$1.21 | +\$1.18 |
| | | 3.1% | 2.9% |
| All Variable | \$39.09 | \$39.63 | \$40.17 |
| | | +\$0.54 | +\$0.55 |
| | | 1.4% | 1.4% |

| LARGE USER | | | |
|--------------|---------------|------------|------------|
| 2,000 kWh | Current Rates | 2021 Rates | 2022 Rates |
| All Fixed | \$178.71 | \$180.56 | \$182.41 |
| | | +\$1.85 | +\$1.85 |
| | | 1.0% | 1.0% |
| Proportional | \$178.71 | \$182.28 | \$185.93 |
| | | +\$3.57 | +\$3.65 |
| | | 2.0% | 2.0% |
| 50/50 | \$178.71 | \$181.59 | \$184.60 |
| | | +\$2.88 | +\$3.01 |
| | | 1.6% | 1.7% |
| All Variable | \$178.71 | \$182.68 | \$186.73 |
| | | +\$3.97 | +\$4.06 |
| | | 2.2% | 2.2% |

Average Bill is \$92.23 under current rates, \$94.09 under 2021 rates (all designs), and \$95.93 under 2022 rates (all designs).

Options for Rate Components of Small General

A. 100% to monthly charge

Customer charge: +\$2.95 per month first step, +\$3.00 per month second step

B. Same percentage to all rate components

- Customer charge: +45¢ per month first step, +50¢ per month second step
- kWh charge: +0.16¢ each step

C. Half in monthly charge; half in variable charge

- Customer charge: +\$1.50 per month each step
- kWh charge: +0.09¢ first step, +0.10¢ second step

D. 100% to kWh charge

- kWh charge: +0.19¢ each step

Options for Rate Components of Small General

| | Current Rates | All Fixed 2021 | Step One | All Fixed 2022 | Step Two |
|-----------------------------|---------------|-------------------|-------------|-------------------|-------------|
| Energy + Delivery (per kWh) | 7.9823 ¢ | 7.9823 ¢ | 0.0000 ¢ 0% | 7.9823 ¢ | 0.0000 ¢ 0% |
| Fixed (per month) | \$23.50 | \$26.45 | \$2.95 13% | \$29.45 | \$3.00 11% |
| | Current Rates | Proportional 2021 | | Proportional 2022 | |
| Energy + Delivery (per kWh) | 7.9823 ¢ | 8.1432 ¢ | 0.1609 ¢ 2% | 8.3047 ¢ | 0.1615 ¢ 2% |
| Fixed (per month) | \$23.50 | \$23.95 | \$0.45 2% | \$24.45 | \$0.50 2% |
| | Current Rates | 50/50 2021 | | 50/50 2022 | |
| Energy + Delivery (per kWh) | 7.9823 ¢ | 8.0759 ¢ | 0.0936 ¢ 1% | 8.1725 ¢ | 0.0966 ¢ 1% |
| Fixed (per month) | \$23.50 | \$25.00 | \$1.50 6% | \$26.50 | \$1.50 6% |
| | Current Rates | All Variable 2021 | | All Variable 2022 | |
| Energy + Delivery (per kWh) | 7.9823 ¢ | 8.1721 ¢ | 0.1898 ¢ 2% | 8.3661 ¢ | 0.1939 ¢ 2% |
| Fixed (per month) | \$23.50 | \$23.50 | \$0.00 0% | \$23.50 | \$0.00 0% |

Small General Bills under Alternative Rate Designs

| SMALL USER | | | |
|--------------|---------------|------------|------------|
| 500 kWh | Current Rates | 2021 Rates | 2022 Rates |
| All Fixed | \$63.41 | \$66.36 | \$69.36 |
| | | +\$2.95 | +\$3.00 |
| | | 4.7% | 4.5% |
| Proportional | \$63.41 | \$64.67 | \$65.97 |
| | | +\$1.25 | +\$1.31 |
| | | 2.0% | 2.0% |
| 50/50 | \$63.41 | \$65.38 | \$67.36 |
| | | +\$1.97 | +\$1.98 |
| | | 3.1% | 3.0% |
| All Variable | \$63.41 | \$64.36 | \$65.33 |
| | | +\$0.95 | +\$0.97 |
| | | 1.5% | 1.5% |

| LARGE USER | | | |
|--------------|---------------|------------|------------|
| 3,000 kWh | Current Rates | 2021 Rates | 2022 Rates |
| All Fixed | \$262.97 | \$265.92 | \$268.92 |
| | | +\$2.95 | +\$3.00 |
| | | 1.1% | 1.1% |
| Proportional | \$262.97 | \$268.25 | \$273.59 |
| | | +\$5.28 | +\$5.35 |
| | | 2.0% | 2.0% |
| 50/50 | \$262.97 | \$267.28 | \$271.67 |
| | | +\$4.31 | +\$4.40 |
| | | 1.6% | 1.6% |
| All Variable | \$262.97 | \$268.66 | \$274.48 |
| | | +\$5.69 | +\$5.82 |
| | | 2.2% | 2.2% |

Average Bill is \$147.19 under current rates, \$150.13 under 2021 rates (all designs), and \$153.13 under 2022 rates (all designs).

Alternatives for Large Commercial & Industrial

- **Schedule G**

- The monthly charge was brought to 2018 COSA level last biennium (\$80.00)
- Recommend to keep the customer charge flat, or not raise it more than 2%
- Remainder of rate change in energy (per kWh) and delivery (per kW)

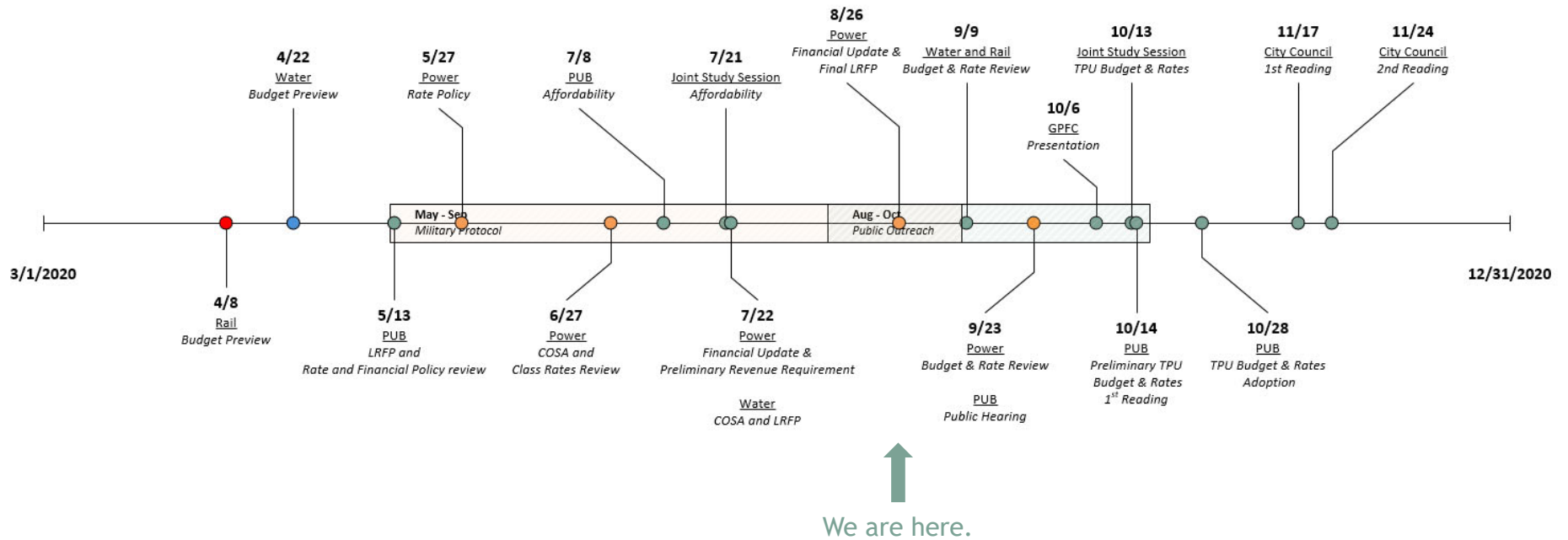
- **Schedule HVG/CP**

- Increase all rate elements proportionately

Section 4

Next Steps

Rates and Budget Timeline



Open Questions or Feedback from the PUB

Introduced May 27th:

- ✓ Residential Prepayment rate
- ✓ Shore Power rate
- ✓ Distributed Generation (DG) rate
- ✓ Non-Firm rate
- ✓ New Large Load rate

Discussed Today:

- ✓ Open Access Transmission Tariff (OATT) update
- ✓ New business service fees update
- ✓ Rate component attribution of increase

Tacoma, Washington

Electric System Revenue Bonds

The rating reflects Tacoma Power's typically very strong, but volatile financial performance, revenue source characteristics, which include a component of variable wholesale revenue. Given the utility's reliance on hydroelectric power for the majority of its power supply, financial performance fluctuates within a certain range with hydrological conditions.

Fitch Ratings' analysis incorporates our expectation the electric system will experience weaker margins and financial performance periodically. Performance was weaker in 2019, as water levels reached some of the lowest levels on record, resulting in reduced energy production from Tacoma Power's resources, higher purchased power costs and lower wholesale revenue. However, results for 2020 are expected to recover.

The Stable Outlook reflects average water conditions to date in 2020; an electric rate increase of 2% implemented on July 1, 2020, delayed three months for coronavirus considerations; and the commencement of a lease of the telecom business. Fitch expects the financial profile will recover to more typical levels in 2020.

The rating continues to reflect strong rate flexibility and Tacoma Power's ongoing commitment to annual rate increases. The city of Tacoma (AA/Stable) has the independent ability to set rates for the electric utility and rate affordability is considered very high. Service area characteristics are considered stable with moderate customer growth and unemployment levels that are declining but still higher than the national level. The utility's operating cost burden is very low, despite a consistent 7.5% transfer to the general fund, which was established by voter approval.

Coronavirus Considerations

The coronavirus pandemic and related government containment measures create an uncertain environment. Coronavirus-related effects to date at the utility are limited and do not indicate credit impairment. The utility revised expectations in 2020 to reflect a retail load decline of approximately 5% for the balance of the year and a three-month delay in the rate increase.

Retail revenue is expected to end the year lower than budget but the effects are projected to be partially mitigated through higher wholesale revenue and management's implementation of mid-year expenditure cuts. For planning purposes, Tacoma Power is assuming load will remain lower as a result of the pandemic through mid-2022.

While credit effects are limited to date, material changes in revenue and cost profile are occurring across the public power sector and may worsen in the coming months as economic activity suffers and government restrictions are potentially maintained or expanded.

Our ratings are forward looking, and Fitch will monitor developments related to the severity and duration of the virus outbreak, and incorporate revised expectations for future performance and assessment of the Key Rating Drivers.

Key Rating Drivers

Revenue Defensibility: 'a'; Midrange Service Area and Variable Wholesale Sales: The utility derives a large majority of revenue from retail electric service that Fitch believes is monopolistic in terms of demand characteristics. The electric system serves a gradually growing, non-concentrated, customer load located in and around the city of Tacoma. However, revenue from competitive sources, including market sales of wholesale electricity, typically accounts for 12%–13% of revenue and can be variable, limiting Fitch's Revenue Defensibility Assessment.

Operating Risk: 'aa'; Very Low Cost, Primarily Hydroelectric Power Supply: Power supply needs are met through very low cost, primarily hydroelectric generation, resources that are both owned and contracted. The contracted portion is largely supplied by Bonneville Power Administration (BPA), which provides approximately half of Tacoma Power's needs under a long-term contract that expires in 2028.

Ratings

Outstanding Debt

| | |
|---|-----|
| Electric System Revenue Refunding Bonds | AA- |
| Electric System Revenue Bonds | AA- |
| Electric System Revenue Refunding Bonds (Taxable) | AA- |

Rating Outlook

Stable

Applicable Criteria

Public Sector, Revenue-Supported Entities
Rating Criteria (March 2020)

U.S. Public Power Rating Criteria (March 2020)

Related Research

Public Power – Fitch Analytical Comparative Tool (FACT) – 2020 (June 2020)

U.S. Public Power: Peer Review (June 2020)

Fitch Ratings Updates 2020 Sector Outlooks to Reflect Coronavirus Impact (March 2020)

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Operating Cost Flexibility is considered 'Weaker' due to the concentration in a single fuel type, hydroelectric generation, but the weakness does not constrain the Operating Risk Assessment. Ongoing capital investment is needed and is expected to be primarily debt financed.

Financial Profile: 'aa'; Weaker Financial Performance in 2019: The Financial Profile is considered 'Very Strong' based on historical performance. Weaker financial metrics in 2019 resulted from unusually low water conditions. Our rating incorporates the expectation financial performance will fluctuate based on hydrology. Recovery to historical levels is anticipated in 2020, notwithstanding a degree of further financial pressure introduced by the coronavirus pandemic. Overall, leverage, measured as net adjusted debt/adjusted funds available for debt service, is expected to be below 7.0x at YE 2020.

Rating Sensitivities

Factors That Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade:

- Positive rating action is unlikely in the current recessionary environment and in Tacoma's specific financial recovery situation following 2019.

Factors That Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade:

- Failure of the system's leverage ratio to fall below 7.0x in 2020, assuming average water conditions.
- Rate action for the upcoming biennium budget, 2021 and 2022, does not support a return to performance consistent with historical levels or the utility's own financial policies.

Credit Profile

Tacoma Power is a unit of the city of Tacoma under the city's Department of Public Utilities. The power utility includes vertically integrated electric services to roughly 178,000 customers. The electric utility serves approximately 180 square miles in the city and surrounding area of Pierce County. In addition, Rainier Connect provides cable television and internet services on the system leased from the utility. Tacoma Power's financial statements present the electric and prior telecommunications operations on a consolidated basis.

Revenue Defensibility

The large majority of Tacoma's revenue is provided by energy sales to retail customers. However, Fitch's assessment of the utility's revenue source characteristics also incorporates Tacoma's exposure to more competitive revenue from excess energy sales into the wholesale power market. These nonfirm sales are subject to variability in hydrological conditions and market prices. Wholesale revenue typically accounted for between 12% and 13% of total operating revenue but declined to 8% in 2019, due to unusually low water conditions.

Operational Lease of Telecommunications Business

In addition to revenue from variable wholesale electric sales, revenue from Tacoma's telecom business previously accounted for another roughly 6% of operating revenue, which Fitch generally considers more volatile to competitive revenue. However, Tacoma Power's telecom business, Click! Networks, did not generate sufficient revenue to cover its full operating and capital expenses. The telecom business was, therefore, not considered a risk to revenue defensibility and was instead considered in the operating cost burden and financial profile.

Tacoma began a process in 2018 to seek a public private partnership model for the telecom business and reached a long-term lease agreement in 2019 with Rainier Connect, a third-party telecom provider, to take over operations of the telecom utility. Tacoma continues to own the telecom system but the operating agreement addresses litigation regarding Tacoma's historical expenditures on the telecomm business and is designed to eliminate the electric system subsidy.

Rainier Connect took over providing high-speed internet, cable television and phone service to all existing customers on Tacoma's Click! Network as of April 1, 2020. The effect in 2020 financials will include a reduction in both telecom revenue and expenditure for nine months of the year and reduced capex in the future. Rainier will be obligated to make an annual lease payment and invest in necessary improvements in the system infrastructure to keep pace with industry standards and competitive offerings in the region.

Bond Rating History

| Rating | Action | Outlook | Date |
|--------|----------|---------|---------|
| AA- | Affirmed | Stable | 8/14/20 |
| AA- | Upgraded | Stable | 6/17/10 |
| A+ | Affirmed | Stable | 5/06/04 |
| A+ | Assigned | — | 5/24/94 |

Service Area Characteristics

The utility's service area exhibits stable demographic trends, while economic conditions are hindered by an unemployment level that continues to trail the national level by a wide margin at 146% of the national average. Median household income for the city of Tacoma is roughly equal to the national average, benefitting from access to the solid economic profile of the greater Puget Sound region.

Customer growth is modest with average annual growth at just over 1% in the last five years, although the utility projects a continued decline in overall energy sales as the growth driven from economic development in the service area is not expected to outperform efficiency gains. Residential customers account for approximately 40% of revenue and there is no customer concentration in the largest electric customers.

Rate Flexibility

Tacoma Power is a division of the Tacoma Department of Public Utilities, which is governed by a public utility board appointed by the mayor and confirmed by the city council. The board has approval authority for most department business, although the biennial budget, rates, and bond issues must also be approved by the city council. In practice, the board adopts the biennial budget and rates for the two-year period concurrently. The next adoption will take place in fall 2020 for the 2021–2022 biennial budget. Approved rates and charges are not subject to external regulatory approval.

Tacoma's retail electric rates are competitive at 95% of the state average, as of the most recent U.S. Energy Information Administration data, and electric service is highly affordable at 1.9% of the city's median household income. While the declining trend of both retail loads and wholesale electric revenue necessitated the current environment of rising retail electric rates, rate competitiveness and affordability remain very strong.

Recent rate adjustments at 2% per year in 2019–2020 were lower than the 3.0%–5.9% rate increases enacted in all but one year between 2011 and 2018. Tacoma delayed implementation of the 2% rate increase in 2020 from the scheduled implementation date of April 1 to July 1, 2020, due to the economic disruptions related to the coronavirus pandemic. Tacoma updates its long-range financial plan each August, which includes projected rate increases for planning purposes. The 2019 financial plan indicates continued base rate increases of 2% annually.

Operating Risk

Tacoma's portfolio of largely hydroelectric resources, both owned and contracted, produces a very low operating cost burden, which increased to approximately 8.0 cents per kWh in 2019 from around 6.0 cents in prior years. This reflects a 34% decline in wholesale MWh sales and higher operating costs. Both events were prompted by one of the lowest hydrological years on record and operating cost burden is expected to return closer to the historical average. Operating costs will be lower in 2020 due to an \$8 million mid-year reduction in expenditures and introduction of the operating lease for the telecomm business, which will remove operating expenses no longer incurred for the Click! Network.

Additionally, Tacoma Power pays a 7.5% gross earnings tax to the city's general fund, which Fitch includes in the electric cost burden metric. The gross earnings tax formula is fixed through 2025 by voter approval but the total transfer is also limited to 8% by state law.

Operating Cost Flexibility

As with most Pacific Northwest public power providers Fitch rates, the Operating Cost Flexibility is assessed as 'Weaker' due to the concentration of the utility's generating mix in a single fuel type: hydroelectric generation. The reliance on hydroelectric power for nearly all of its power supply creates the potential for future operating challenges or cost effects.

The utility's power supply is projected to be sufficient to meet retail needs through 2037 under "near-critical" water conditions, where critical water is 5th percentile, or the worst water year on record in the last 80 years. Owned and contracted resources largely consist of low-cost, well-established, Pacific Northwest hydropower resources.

Owned resources include five hydroelectric projects that account annually for just under half of the system's power supply needs. Positively, these owned resources offer flexibility in operations in that the dams with significant reservoirs allow the utility to manage flow releases and maximize the value of the resources.

The resources are geographically distributed allowing for some diversification benefits in terms of watershed and water conditions. The system serves as its own balancing authority and owns and operates 351 miles of transmission facilities to serve its retail loads.

BPA Contract

Just over half of Tacoma Power's energy needs are purchased pursuant to a long-term contract with BPA that expires on Sept. 30, 2028. The contract was amended in 2011 to include a slice program in addition to the block program. The block product provides a guaranteed energy amount with blocks varying month-to-month based on the seasonal variations existing in Tacoma Power's load. The slice product provides for Tacoma Power to receive a specific percentage (2.97%) of BPA's actual output, causing the utility to bear additional hydro-volatility risk depending on water conditions. The slice portion annually accounts for the larger percentage of the power Tacoma purchases from BPA.

Environmental Considerations

The State of Washington's renewable portfolio standard (RPS) was approved by voter initiative in 2006 and requires utilities serving more than 25,000 customers to obtain 15% of their load from renewable resources by 2020. Eligible resources include incremental hydro, wind, solar or renewable energy credits (RECs). Large hydro, the majority of Tacoma Power's generation portfolio, is not eligible to meet the state's RPS requirements. Instead, the system meets the requirements through a combination of incremental hydro projects and the purchase of RECs. Management estimates the utility will remain in compliance through 2025 with already secured resources, including banked RECs.

Washington also passed the Clean Energy Transformation Act in 2019, which requires the state to achieve a power supply free of carbon emissions by 2045. The utility is well positioned, given the predominantly carbon-free power supply provided by hydroelectric reserves and its BPA contract that includes hydroelectric and nuclear energy.

Capital Planning and Management

Tacoma Power's capital planning and management assessment reflects the utility's high lifecycle investment needs and increasing age of plant, calculated by Fitch at 23 years. The five-year capital improvement plan (CIP) totals approximately \$332 million for 2020-2024, and is consistent with recent levels of spending. Over the previous five years capex averaged 115% of depreciation signaling a healthy amount of investment. The utility generally funds more than half of its capital investment from debt. The capital plan includes a potential \$150 million debt issuance in 2021 to refinance short-term lines of credit borrowing used to finance capex.

Financial Profile

Weak 2019 Financial Performance; Recovery Expected in 2020

The utility's Financial Profile is assessed at 'aa' but performance is heavily influenced by hydrological conditions. The 2019 water year in the northwest was one of the lowest water years on record and Tacoma's key ratios all weakened as a result. Deterioration in the utility's financial performance in fiscal 2019 was expected at the time of Fitch's review in 2019.

However, the magnitude of decline was greater than expected and has some potential to weaken the rating, given the ongoing potential for additional volatility and general economic uncertainty imposed by the coronavirus in 2020. Substantial cash reserves, average hydrological conditions, expenditure reductions to date in 2020 and planned annual rate increases of at least 2% should protect financial performance in the near term.

Operating margin declined in 2019 to 0% from more than 10% in 2017 and 2018. Lower cash flow resulted in Fitch calculated coverage of full obligations (COFO) of just below 1.0x in 2019 and an increase in the system's leverage ratio to 9.7x from 5.0x in 2018.

Tacoma used \$10 million in reserves from its rate stabilization fund (RSF) and the balance in the reserve declined to \$38 million from \$48 million, to offset the decline in wholesale revenue. Retail revenue remained healthy in 2019 with usage up 1.3% from 2018 levels and a 2.0% retail rate increase. Expenses experienced greater pressure than revenues due to the expense of replacing lower hydroelectric output with purchased power as operating expenses increased 18% compared with 2018 levels.

Adequate Liquidity

Fitch assesses the Liquidity Profile of the utility as 'Neutral' given the cash reserves on hand that account for 161 days cash, even though COFO declined to just below 1.0x in fiscal 2019. Although cash balances declined from 222 days at YE 2018, reserves are robust, including the RSF, and necessary to protect against the type of water year that occurred in 2019. Debt service coverage (DSC) was approximately 2.0x in 2019, down from 4.3x in 2018, but still supportive of a neutral liquidity profile and ultimately, the rating. DSC, as measured by bond covenants, including the transfer in of deferred revenue, remained healthy at 2.17x.

The RSF transfer was the first transfer since the fund's inception in fiscal 2012. The fund was established to offset or minimize the need for large rate increases in any given year. The RSF is designed to provide liquidity and flexibility to manage revenue and expenditure volatility inherent in the utility's hydroelectric power supply. Management does not forecast another draw on the RSF over the next five years, given the planned 2% annual rate increases.

Tacoma has additional liquidity in the form of a \$150 million line of credit, which can be used to fund working capital. Inclusion of the available balance resulted in a total liquidity cushion of 229 days at YE 2019. The utility secured a \$100 million Note Purchase Agreement in May 2020 with KeyBank N.A. (A-/Negative), largely in response to the pandemic, to provide general credit and additional liquidity should it be required for operational purposes. Management does not anticipate drawing on this facility at this time. This new liquidity facility will function as a revolving line of credit and adds approximately 90 days of liquidity.

Fitch Analytical Stress Test

The Fitch Analytical Stress Test (FAST) base case is largely driven by Tacoma's pro forma financials including a slight decline in energy sales in 2020, minimal load growth in the subsequent four years and a 2% annual retail base rate increase. The base case also considers the lease of the telecom unit in April 2020, 'adverse' water conditions assumed in 2021-2024, and planned capex of approximately \$75 million to \$80 million per year financed primarily from debt.

The base case indicates leverage should remain below 8.0x over the next five years, which Fitch considers adequate for the rating. Leverage is expected below 7.0x at YE 2020 with COFO at or above 1.4x. While the rate increase was delayed by three months, average water conditions in 2020 and the utility's targeted \$8 million in mid-year expenditure reductions should help restore financial margins even with retail load softening from the coronavirus.

Thereafter, assuming adverse water assumptions, leverage rises to 8.0x in 2021 and trends lower through 2024. The use of 'adverse' water planning assumptions in the base case is conservative. While adverse water years do occur, it is highly unlikely the utility would experience four such years in a row. Fitch, therefore, considers the FAST base case as more relevant in its analysis than our standard stress case.

We also considered a coronavirus sensitized base case in our analysis that models a 9% decline in energy sales in 2020 with a recovery in sales occurring in the following three years. While a decline of this magnitude is in excess of what Tacoma is currently experiencing, the sensitized case is designed to evaluate the effects of major setbacks in containing the virus and the potential for the extension or re-imposition of lockdowns. In this scenario, the system's leverage ratio rises to nearly 9.0x in 2020 and 2021 but moderates to levels closer to 7.0x, given the recovery in energy sales. Pressure on liquidity in this scenario could necessitate slightly higher rate increases in 2021 and 2022 to preserve cash balances in compliance with financial policies.

Debt Profile

The utility's Debt Profile is 'Neutral' to the rating. The utility had \$373.6 million in long-term debt outstanding at YE 2019. Outstanding revenue bonds are entirely fixed rate, with final maturity in 2047. Tacoma has short-term variable-rate debt in the form of a line of credit used on an interim basis to fund capex. There was \$75.2 million outstanding at YE 2019, which will be refinanced as long-term, fixed-rate debt, currently planned to occur in 2021. Debt service is not level but includes some spikes in the structure in the outer years. Tacoma is planning to address the spike through an early defeasance of the debt in order to create a more level debt service schedule.

ESG Considerations

The highest level of Environmental, Social and Corporate Governance (ESG) credit relevance, if present, is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or to the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

Financial Summary

| | 2016 | 2016 | 2017 | 2018 | 2019 |
|---|----------------|----------------|----------------|----------------|----------------|
| (\$ 000, Audited FYE Dec. 31) | | | | | |
| Net Adjusted Debt/Adjusted FADS (x) | 5.34 | 5.87 | 5.03 | 5.01 | 9.68 |
| Net Adjusted Debt Calculation | | | | | |
| Total Short-Term Debt | – | – | 250 | – | – |
| Total Current Maturities of Long-Term Debt | 12,730 | 12,730 | 11,575 | 10,095 | 9,365 |
| Total Long-Term Debt | 457,602 | 457,602 | 417,800 | 461,339 | 470,425 |
| Total Debt | 470,332 | 470,332 | 429,625 | 471,434 | 479,790 |
| + Capitalized Fixed Charge – Purchased Power | 304,406 | 304,406 | 325,974 | 323,084 | 386,613 |
| + Total Pension Obligation (GASB Fitch-Adjusted NPL + FASB PBO) | – | 125,542 | 117,411 | 62,944 | 127,622 |
| – Total Unrestricted Cash | 214,474 | 214,474 | 195,176 | 198,827 | 177,471 |
| – Restricted Funds for Debt Service | 27,162 | 27,162 | 26,176 | 25,047 | 24,207 |
| Adjusted FADS for Leverage Calculation | | | | | |
| Total Operating Revenue | 418,614 | 418,614 | 446,343 | 455,291 | 461,366 |
| Total Operating Expense | 388,220 | 388,220 | 403,210 | 389,242 | 459,566 |
| Operating Income | 30,394 | 30,394 | 43,133 | 66,050 | 1,801 |
| + Adjustment for Deferred and Subsidy Revenue | 3,684 | 3,684 | 3,688 | 3,824 | (6,407) |
| + Depreciation and Amortization | 55,702 | 55,702 | 57,231 | 53,869 | 48,700 |
| + Interest Income | 2,405 | 2,405 | 2,251 | 3,720 | 7,607 |
| + Other Non-Cash Charges | – | 6,492 | 7,519 | 8,233 | 9,205 |
| FADS | 92,186 | 98,678 | 113,823 | 135,696 | 60,906 |
| + Adjustment for Purchased Power | 38,051 | 38,051 | 40,747 | 40,386 | 48,327 |
| – Total Transfers/Distributions | 30,460 | 30,462 | 34,142 | 34,385 | 33,985 |
| + Pension Expense | – | 5,860 | 9,170 | (15,162) | 6,602 |
| Coverage of Full Obligations (x) | 1.37 | 1.46 | 1.65 | 1.97 | 0.94 |
| FADS | 92,186 | 98,678 | 113,823 | 135,696 | 60,906 |
| + Adjustment for Purchased Power | 38,051 | 38,051 | 40,747 | 40,386 | 48,327 |
| – Total Transfers/Distributions | 30,460 | 30,462 | 34,142 | 34,385 | 33,985 |
| Full Obligations Calculation | | | | | |
| Cash Interest Paid | 20,014 | 20,014 | 19,416 | 20,060 | 21,294 |
| Prior Year Current Maturities | 14,735 | 14,735 | 12,730 | 11,575 | 10,095 |
| Total ADS | 34,749 | 34,749 | 32,146 | 31,635 | 31,389 |
| + Adjustment for Purchased Power | 38,051 | 38,051 | 40,747 | 40,386 | 48,327 |
| Liquidity Cushion (Days) | 235 | 262 | 318 | 272 | 229 |
| Unrestricted Cash (Days) | 235 | 240 | 210 | 222 | 161 |
| Liquidity Calculation | | | | | |
| + Total Unrestricted Cash | 214,474 | 214,474 | 195,176 | 198,827 | 177,471 |
| + Total Borrowing Capacity | – | 100,000 | 100,000 | 100,000 | 150,000 |
| – Amounts Unavailable | – | 80,250 | 250 | 55,300 | 75,250 |
| Cash Operating Expense Calculation | | | | | |
| Total Operating Expense | 388,220 | 388,220 | 403,210 | 389,242 | 459,566 |
| – Depreciation and Amortization | 55,702 | 55,702 | 57,231 | 53,869 | 48,700 |
| – Other Non-Cash Charges | – | 6,492 | 7,519 | 8,233 | 9,205 |
| Cash Operating Expense | 332,518 | 332,518 | 345,979 | 335,373 | 410,865 |

FYE – Fiscal year end. FADS – Funds available for debt service. GASB – Governmental Accounting Standards Board. NPL – Non-performing loan. FASB – Financial Accounting Standards Board. PBO – Pension benefit obligation. ADS – Annual debt service.
Sources: Fitch Ratings, Fitch Solutions, Lumesis, U.S. Energy Information Agency, Tacoma, Washington.

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