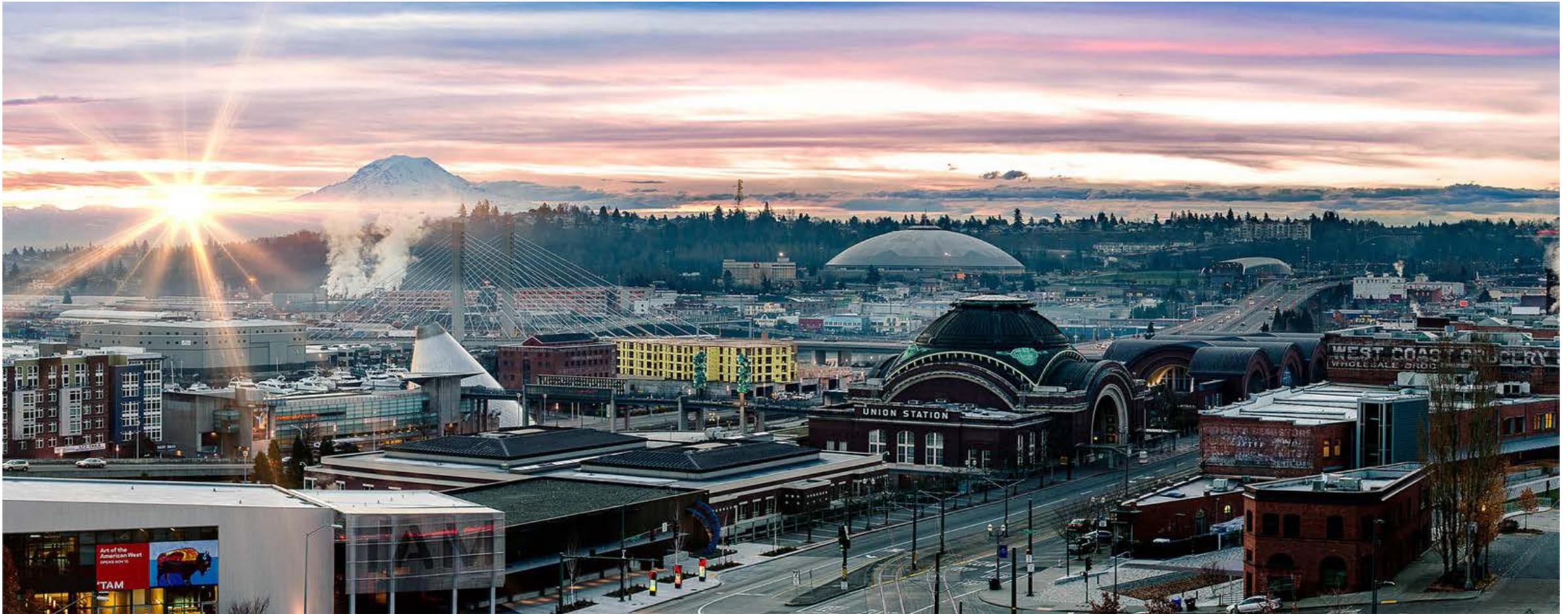


TACOMA  **POWER**
TACOMA PUBLIC UTILITIES

L O N G - R A N G E F I N A N C I A L P L A N
Rates, Planning & Analysis

May 23, 2018



Welcome!

We wrote this document to help you understand many of the key issues affecting the power industry, power utilities, and the future financial performance of Tacoma Power. The purpose of this Long-Range Financial Plan (LRFP) is to help serve as a guide for maintaining low rates while also preserving the utility's financial strength and flexibility. Our goal is to make financial decisions that allow us to provide safe, reliable, and environmentally responsible electric and telecommunications services now and into the future. Making short-sighted decisions, without considering the long-term implications, can put this goal at risk.

This LRFP is available for our customers, employees, the Public Utility Board, City Council, members of the public, and any stakeholder who is interested in learning a little more about us.

This Long-Range Financial Plan

The LRFP is one element of our annual strategic planning process. It identifies and discusses financial risks and opportunities facing the utility in the next ten years. Once we identify the risks and opportunities, we create financial scenarios and a “base case” scenario of the most likely financial outcome. By creating a base case and potential financial scenarios, we can outline strategies to manage future challenges with the objective of providing the most value for the utility's ratepayers at the lowest possible cost.

The strategic planning process is also guided by our biennial budget, rate design, and specific financial policies and goals that are part of Tacoma Power's Electric Rate and Financial Policy discussed further in this document.

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Financial policies
Reserves
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Section 1
The Highlights

**An executive summary of
the 2018 Long-Range Financial Plan**



Before you start

The electric utility business is complicated

On the [first page](#) you learned that this document more simply describes a number of complicated subjects. We hope to make them easier to understand and demonstrate their unique relationship to one another. Before we get into any of the details, here is a quick overview of how our business operates.

Our mission is to provide safe, reliable, and environmentally responsible electric and telecommunications services now and into the future.

To fulfill this mission, we sell electric and telecommunications services to customers in the City of Tacoma and Pierce County. Selling these services provides us with revenue. As a cost-of-service utility, we charge our customers based on what it costs to provide the services they need. We generally match our revenues to our expenses when we set budgets. When we collect more revenue in a given year, we use that surplus to reduce the amount collected from customers in future years. We also take proactive steps to account for the risks inherent in our business and develop strategies to plan for the future. This LRFP helps us with that.

Many customers don't know that whenever they turn on a light or plug in an appliance, a generator connected to the electric grid must increase its output to provide the needed electricity. This happens in real-time. Providing these services is a 24-hour a day and 365-day a year business. We don't want our customer's lights to ever go out and if they do, we do everything we can to get the lights back on.

The amount of revenue we will receive each year is uncertain. We can't predict how often you will turn your lights on and off or how much electricity you will use. [Section 3](#) has more detail about how we try to plan for this uncertainty in revenue.

Our customer's power comes from [hydroelectric](#) dams that we operate and maintain, or power we purchase through contracts with other power providers. Almost all of our generators create electricity by passing water through a generator. The water comes from rainfall or snow that melts and drains into reservoirs or lakes behind a dam. Trying to predict how often and when it will rain adds another layer of complexity to our business. See [Section 5](#) for more detail on how we plan for this uncertainty.

In providing power services the utility incurs a number of expenses. These are such things as the staff that work here or the trucks and tools used to maintain the electric system. The electric utility business is [capital](#) intensive. This means we have large assets that are expensive to construct, operate, and maintain. Tacoma Power has over \$1 billion in assets and some have been around for a long time. To fund repairs and replacement, we use a combination of cash and [bonds](#). This allows us to spread the payments over the life of the asset, instead of paying in full, up-front. Receiving the best interest rates when we issue bonds requires us to maintain a certain level of cash and the ability to generate sufficient revenue to cover our expenses. In this LRFP, you will find more about how we manage all of these details and how they impact the rates our customers pay.

Financial metrics

What are financial metrics?

The word "metrics" refers to measurement. Financial metrics are one way to measure how well we are managing our resources. Each financial metric conveys a message about one aspect of the utility from a financial perspective. Metrics can be used to compare performance across utilities, identify strengths or weaknesses, and set targets for financial strength. Tacoma Power primarily looks at the three metrics below when projecting future rate increases and has targets, listed in the chart to the right, for maintaining our financial strength. You can find more detail about them in [Section 4](#).

Tacoma Power Metrics	2013	2014	2015	2016	2017
<i>Days of Liquidity</i> (Target: >180 Days)	312	335	215	236	210
<i>Debt Service Coverage Ratio</i> (Target: >2.0x)	1.88x	1.90x	2.01x	2.31x	2.82x
<i>Debt Ratio</i> (Target: <50%)	39%	37%	29%	26%	29%

Days of Liquidity

Liquidity is another way to describe the amount of operating cash we have available. We measure this by the number of days cash we have available to operate the utility. This helps determine Tacoma Power's ability to cover necessary expenses.

Debt Service Coverage Ratio

The debt service coverage ratio measures how many times we can pay the annual interest and principal payments on our debt, or bonds, with our available cash flow for a given year. We target having at least twice as much cash flow needed to pay our annual debt obligations each year.

Debt Ratio

The debt ratio is the proportion of our assets that are financed by debt, or bonds. The lower the percentage, the lower the amount of [debt service](#) payments we are required to make. This provides us with financial flexibility.

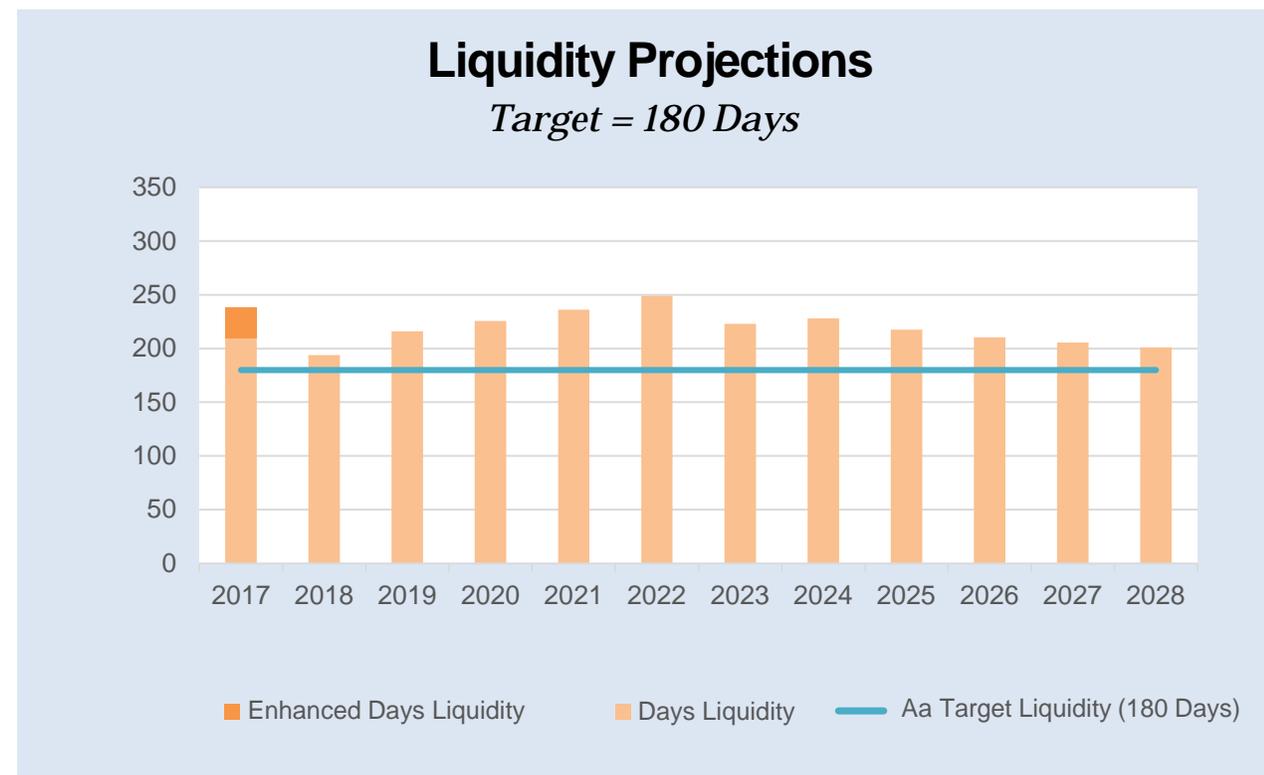
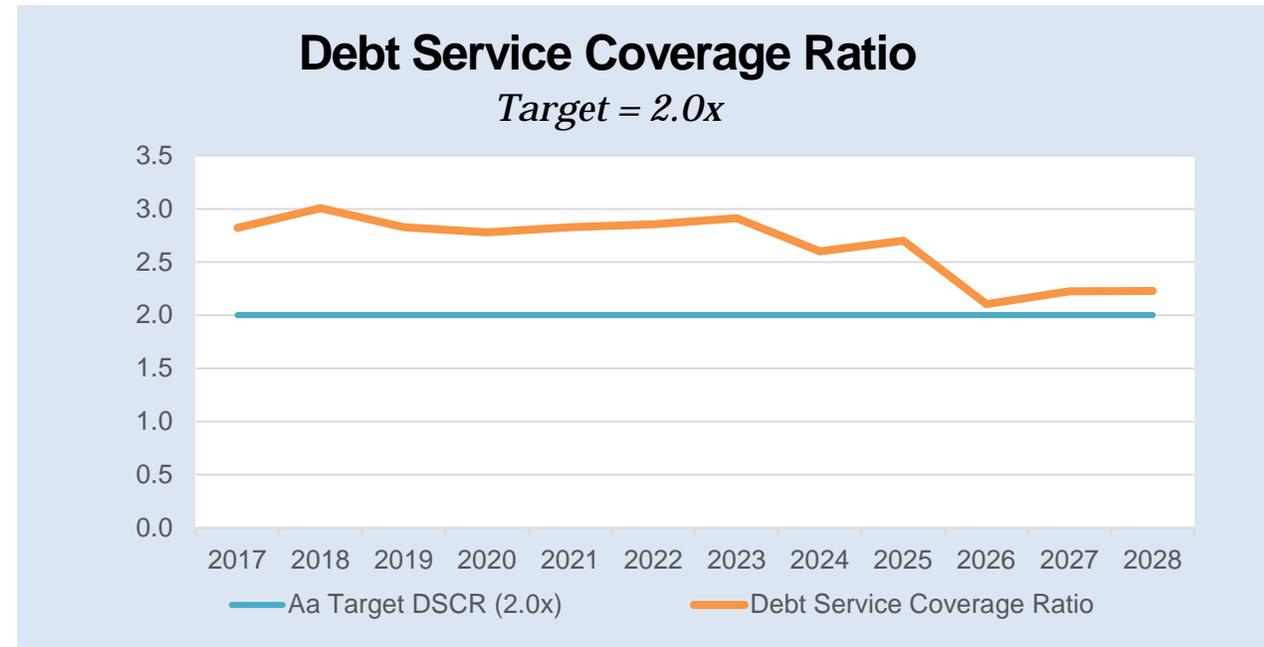
Financial metrics

Why are financial metrics important?

Financial metrics, such as our [debt service coverage ratio](#) and [days liquidity ratio](#) are important because they indicate our ability to meet our financial obligations as a business. Financial metrics are comparable across other utilities and are used by [rating agencies](#) as part of their rating process when they rate us. Some rating agencies have more stringent requirements than others and we adjust our calculations to be better than the minimum levels. We target metrics that keep us in the AA rating category.

We use these ratings when we issue bonds to help pay for capital improvements. Investors buy Tacoma Power bonds and we pay those bonds back over a period of up to 30 years. (See our existing debt repayment profile on [page 46](#).) To get the best interest rates possible when we issue bonds, we must maintain healthy financial metrics. Our credit rating impacts the interest rates paid on borrowed funds. As a result, the better our [credit rating](#) is, the less we will likely pay when we issue debt. Being financially healthy, like we currently are, benefits customers and provides flexibility to address unexpected challenges.

The charts to the right illustrate a possible projection for our future debt service coverage levels and liquidity levels. These are subject to various assumptions, including projections for rate increases, expenses, and revenues which you are explained further in [Section 4](#).

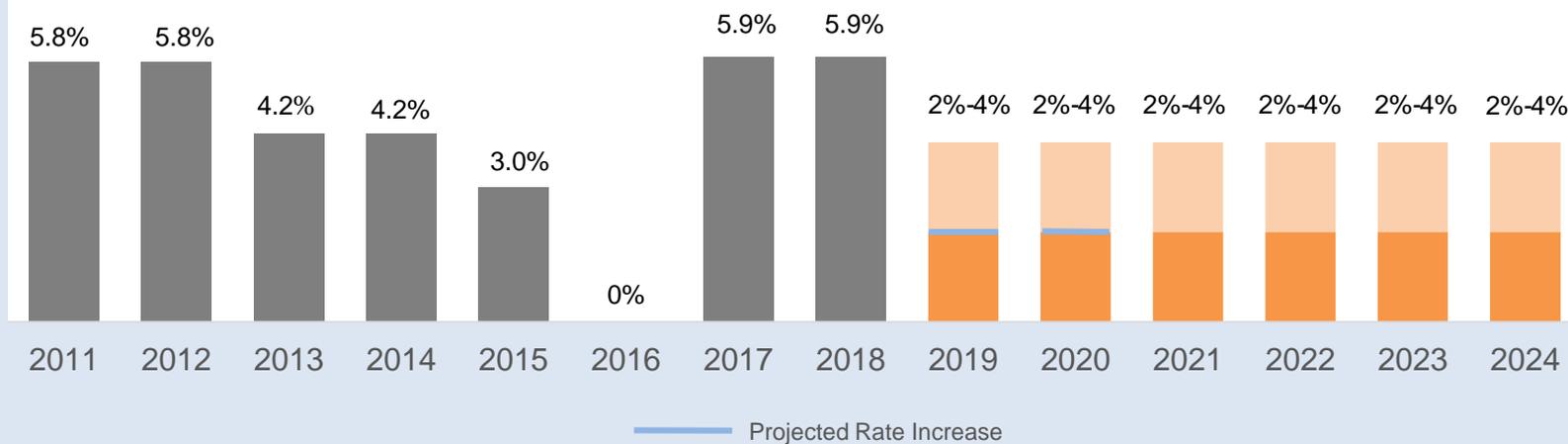


Before explaining anything else, we've put our current projections of rate increases for the next five years here, right up front. This document explains how we came up with these projections.

Historical & Projected Rate Increases

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

Light shading in future years represents uncertainty associated with revenues and expenses, mostly due to potential for adverse or critical water conditions, changes to sales projections, and future debt service.*



The further out in time we forecast, the more uncertainty there is. We have modeled some scenarios addressing potential future conditions that may impact us. The results of these scenarios indicate that doing a 0% rate increase in the next biennium would place upward pressure on future rate increases. The results of several scenarios can be found later in the document, in [Section 6](#).

These projections like other parts of this plan will change. Actual rate increases may fall outside of this range and are dependent upon market conditions, financial performance, and the actions we may take in future years. You can read about some of the actions already underway starting on [page 18](#).

* If you are not familiar with any of these terms, there is a [Glossary](#) in the back that defines some of these key concepts

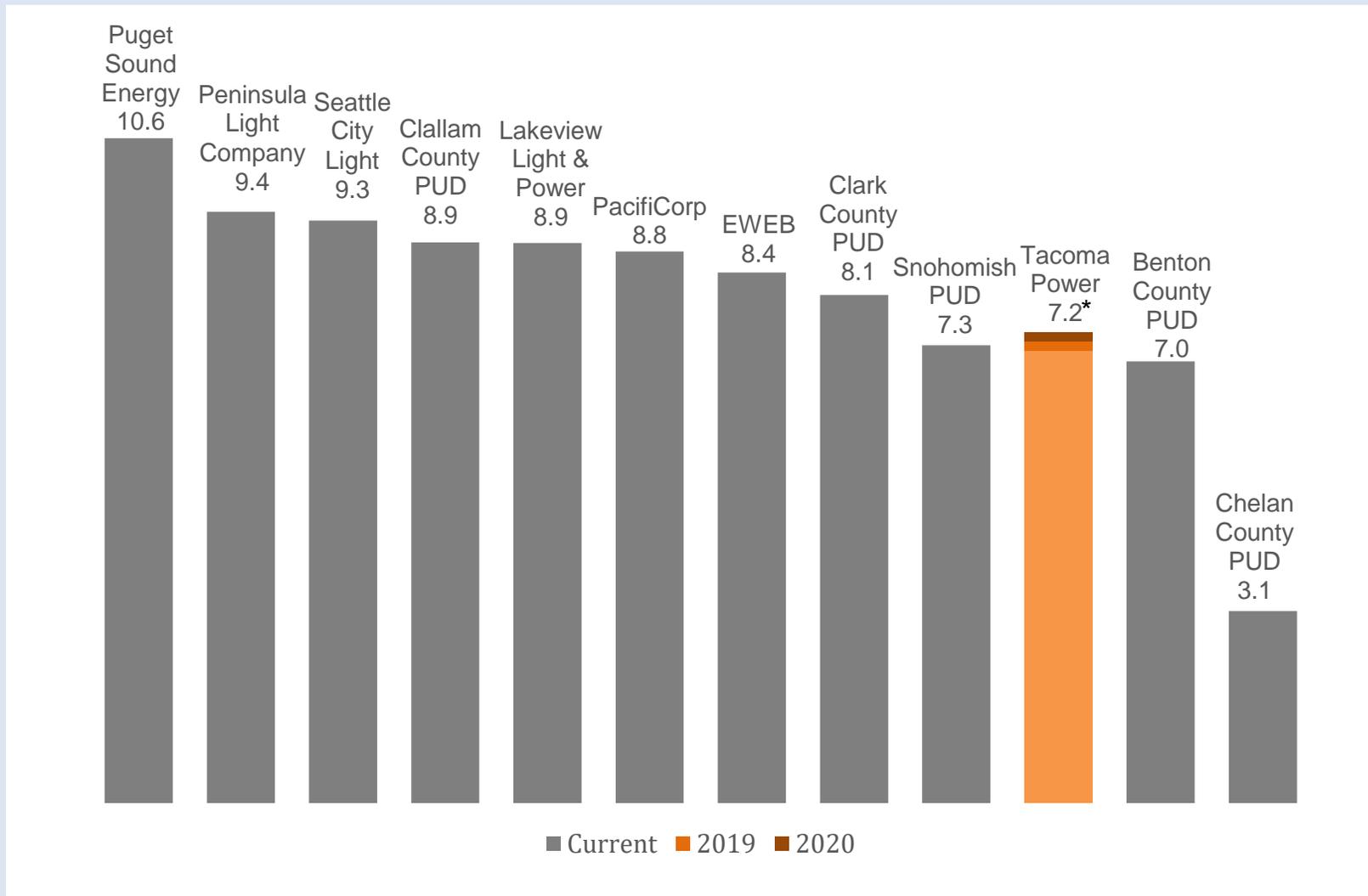
Rates Remain Low and Competitive

How do our rates compare to other power providers in the Northwest?

Our rates remain low relative to our peers. This table compares monthly electric rates of major public and private utilities in our region to those of Tacoma Power.

We are a municipal utility that establishes rates only to recover costs, not to create a profit. We set rates with the goal of minimizing rate impacts to customers while maintaining the safety and reliability of the electric system. Tacoma Power has been able to maintain low rates in comparison to state and national averages. Most other utilities face many of the same challenges described in later sections of this document and we expect to remain price competitive in the future. Rates are established by the Public Utility Board and approved by the Tacoma City Council.

Comparative System Average Rates (cents/kWh)



* Shaded area is the potential additional cents per kWh from a 2% annual rate increase in 2019 & 2020.

Why must rates go up?

Your next logical question might be, “how did you come up with those rate increases?” Or perhaps, “Why would the rates need to go up at all?”

We can’t just point to one factor. Determining what a rate increase needs to be takes a thorough understanding of how the utility works and what it needs to operate successfully.

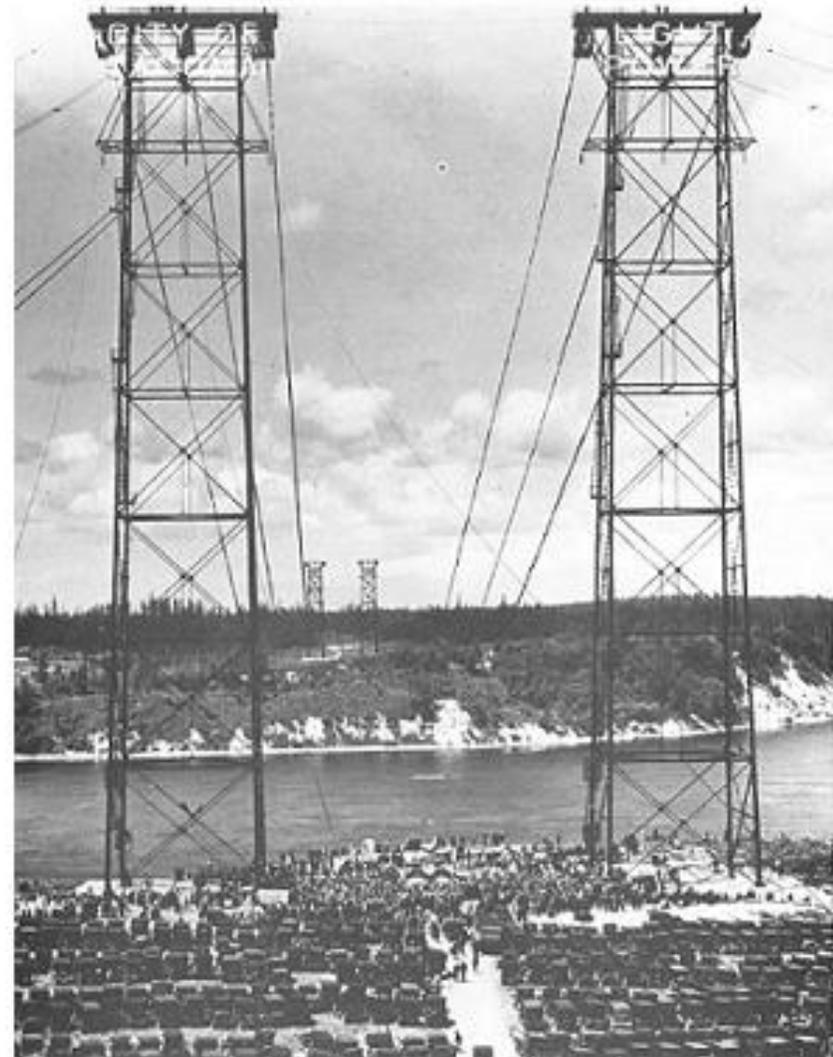
Here are a few of the many factors that impact future rates. These examples and others need to be considered when determining what the rate increases need to be:

Increases in Operating Expenses and Purchased Power Expenses

See [Section 3](#) on the [Background](#) to get a better understanding of these.

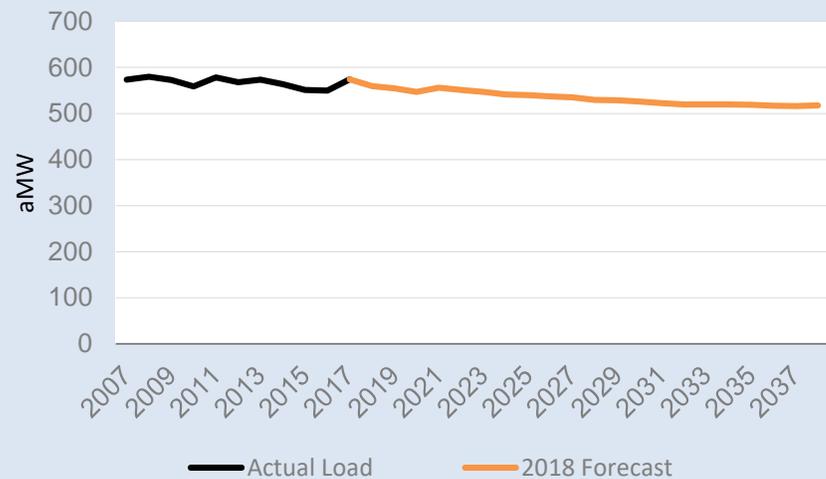
Decreases in Wholesale Revenue due to changing market conditions

See [Section 5](#) on the [Risks](#) to get a better understanding of some of the things affecting our revenue.



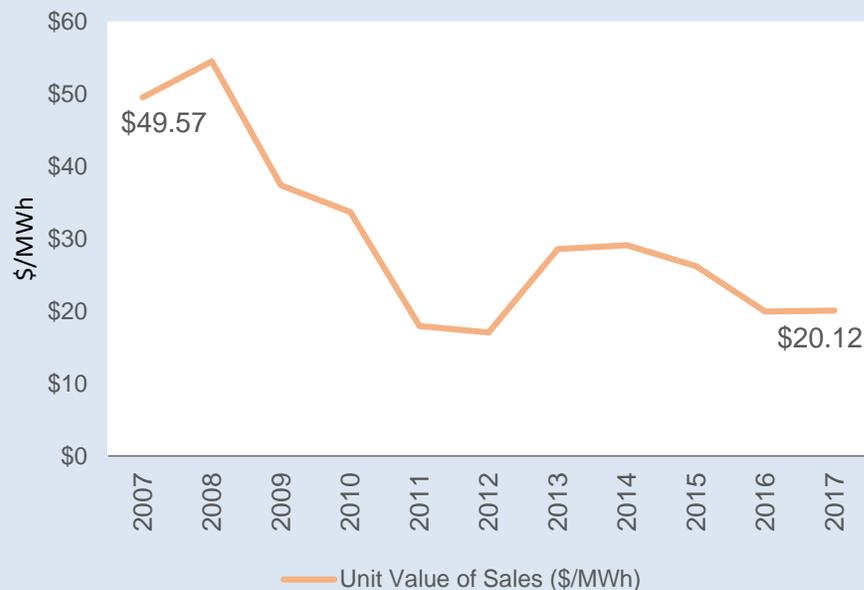
This is a picture of the 1926 commissioning of the transmission lines connecting to our Cushman hydro project. Our utility has operated since 1893 and has a lot of infrastructure to maintain. We maintain and replace our assets with steady capital investments. You can find out more about that those capital investments in [capital expenses of Section 3](#). For determining how we fund capital investments, see [Section 7](#).

Load Forecast with Conservation



*This chart shows a downward projection for our load. **Load** refers to energy consumption. Our system average load is projected to decline at a rate of approximately 0.8% per year.*

Annual Value of Wholesale Electric Sales (\$/MWh)



This chart shows a downward trend in the value for each MWh sold, from \$49.57/MWh in 2007 to \$20.12/MWh in 2017.

Declining Retail and Wholesale Revenue

The charts to the left show two major impacts to our revenue: declining retail and wholesale revenue. (Read more about each of them in the explanation on revenues in [Section 3](#).) The top chart illustrates how our most recent [load forecast](#) has changed in the last year. We see increases in conservation and declines in customer consumption, driving a decrease in our expectations for overall load.

The bottom chart illustrates the declining value for each MWh of electricity sold in the wholesale electric markets. The more wholesale revenue we have, the more we can reduce future rate increases. There are many drivers for this decline which you can read about in the [Section 5: risk factors](#).

Can we change the projected rate increases?

Managing the future

The cost of electricity in Washington is just about the lowest of any state in the nation. Additionally, our customers have access to clean, renewable, and reliable electric service at a cost lower than many of our local peers (see [page 13](#) and [page 25](#) for a comparison).

Despite the low rates we currently have, we don't feel any better about the projected rate increases than you do. We devote a lot of time and effort into developing and executing strategies to mitigate risk, reduce expenses, and increase revenues.

The data in this LRFP feeds directly into Tacoma Power's Strategic Plan. The picture on the right is our Strategy Map – a high level summary of our Strategic Plan. In that plan, we are working on executing strategies we believe will help us reduce future rate increases. A few of the objectives that directly relate to these strategies are Optimize Wholesale Revenue and Maintain Our Financial Strength.



Active Debt Management

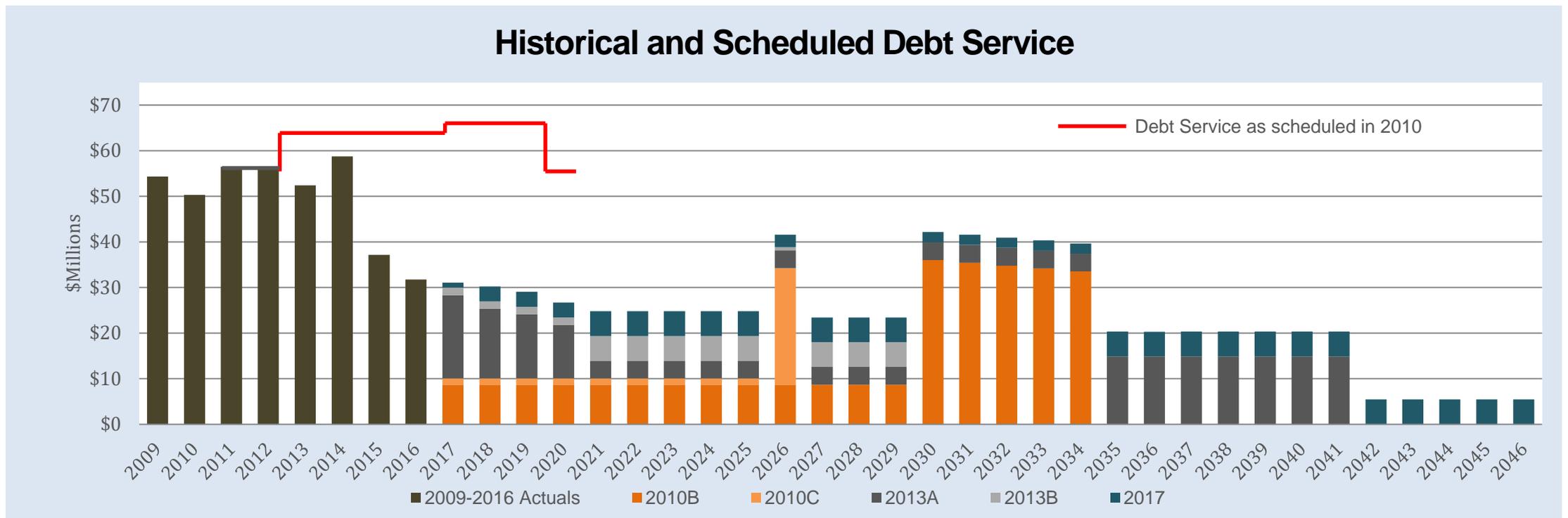
Managing Debt Service has produced significant savings

Tacoma Power sells bonds to help fund capital improvements. Much like a home mortgage, we can structure this debt to pay it back over 30 years or other intervals. You can see from our existing profile below that bonds we have issued in different years has been structured in different ways. We actively manage this debt profile and have made a number of changes since 2009.

Between 2009 and 2013, Tacoma Power defeased \$79 million and refunded \$137 million in outstanding bonds. In 2015,

Tacoma Power used \$122 million in cash to call the 2005B Bonds. You can read more about this on [page 48](#). In fact, in 2010 our debt service payment in 2018 was projected to be over \$66 million. After the many changes we have implemented in the last few years, our debt service payments this year will be less than \$31 million.

This represents significant savings for Tacoma Power's customers. In 2016, we were able to not have a rate increase at all and this is largely because of the reduced debt service payments.



Actions

The Strategic Plan mentioned previously includes initiatives to manage expenses, such as our Strategic Asset Management Initiative and our Capital Project Portfolio Management Office Initiative.

Other initiatives, such as our Managing Rates Initiative and the Concurrent Consideration of Budget and Rates, are things we are doing now to find efficiencies and improve our processes. A brief summary of these and other actions we can take to minimize future rate increases are provided to the right and in more detail in [**Section 8: Making it Happen.**](#)

Managing Rates Initiative *(in progress)*

Tacoma Power's Rates, Planning, and Analysis group has established a process to meet with every section and identify a list of cost savings or revenue enhancement initiatives the utility can implement. The list of opportunities will be prioritized and executed according to a developed timeline.

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Concurrent Consideration and Approval of Budget and Rates *(in progress)*

Tacoma Power will develop a new process for the concurrent adoption of rates and the 2019/2020 budget. Our previous process involved adoption of a budget first, and then receiving approval of the rates to support the budget at a later date. There are many steps involved in the budget and rates approval process that will need to be adjusted moving forward.

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Strategic Asset Management *(in progress)*

Tacoma Power is launching a strategic asset management program to lower the overall cost of managing our physical infrastructure. The objective is data driven and risk-based asset spending decisions with a focus on whole life cost planning. The results of the program include optimized maintenance programs and infrastructure replacement plans developed with objective, repeatable analysis. The strategic asset management program will provide input for both O&M and Capital spending programs. We expect the Asset Management Program will help reduce the size of our Capital budgets and future O&M.

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Capital Portfolio Management Office *(in progress)*

The development of a Capital Project Portfolio Management Office will provide utility project managers with centralized data and common tools regarding capital projects. We will use common project management techniques to facilitate more informed decision making at Tacoma Power.

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How Stakeholders Might Use the LRF

	Education	Financial Planning	Strategic Planning	Decision-Making	Competitive Position
Public Utility Board	✓	✓	✓	✓	
City Council	✓	✓	✓	✓	
Management	✓	✓	✓	✓	✓
Customers	✓	✓			
Financial Community	✓				✓
Employees	✓	✓	✓	✓	
Public	✓				
Other Stakeholders	✓				