



# Second Party Opinion

## EXECUTIVE SUMMARY

### ISSUER

City of Tacoma, Washington

### OPINION ON

Electric System Revenue Bonds, Series 2021 (Green Bonds)

### GREEN STANDARD AND CATEGORIES



- Renewable Energy

### EVALUATION DATE

July 23, 2021

### SUMMARY

Kestrel Verifiers is of the opinion that the Electric System Revenue Bonds, Series 2021 (Green Bonds) issued by the City of Tacoma, Washington, conform with the four core components of the Green Bond Principles 2021 as follows:

#### ▪ Use of Proceeds

The City of Tacoma intends to use the Series 2021 new money bond proceeds to finance improvements to its electric utilities system, Tacoma Power, through refinancing of the City's Electric System Subordinate Revenue Note, Series 2015A (the "2015 Note"). The Series 2021 Bond proceeds will be used to repay the 2015 Note which was used as a short-term borrowing facility for interim funding of capital projects of the Electric System. These capital improvements support Tacoma Power's 100% renewable hydropower electric system and include but are not limited to: advanced metering infrastructure upgrades, fish passage and dam improvements, and LED streetlighting additions. Capital improvements financed by the 2015 Note (which is to be refinanced by the 2021 Bonds) are eligible green projects as defined by the Green Bond Principles in the project category of *Renewable Energy*.

#### ▪ Process for Project Evaluation and Selection

Tacoma Power utilizes internal Value Criteria to evaluate and prioritize potential capital improvement projects. Several planning documents guide and inform decision-making for electric system projects, including the 2021 Long-Range Financial Plan, Integrated Resources Plan, and the 2015 Climate Report.

#### ▪ Management of Proceeds

Bond proceeds will be used to refinance the outstanding 2015 Note and to pay the costs of issuance of the Series 2021 Bonds. Funds will be temporarily placed in the 2021 construction account and used immediately upon receipt to repay the outstanding 2015 Note. The 2015 Note is callable and there will be no temporary investments of funds.

#### ▪ Reporting

The City of Tacoma commits to posting continuing disclosures to the Municipal Securities Rulemaking Board ("MSRB") annually through the Electronic Municipal Market Access ("EMMA") system. Tacoma Power will provide one post-issuance report at the end of 2022 in tandem with the closing of the fiscal year. This report will be posted on EMMA and Tacoma Public Utilities' investor relations website.

#### ▪ Impact and Alignment with United Nation Sustainable Development Goals

By refinancing capital improvements that support a renewable electric system, the Series 2021 Bonds support and advance multiple UN SDGs, including Goals 7: *Affordable and Clean Energy*, 13: *Climate Action* and 15: *Promote Sustainable Use of Natural Resources*.

▪ Monica Reid, CEO  
monica.reid@kestrelverifiers.com  
+1 541-399-6806

▪ April Strid, Lead ESG Analyst  
april.strid@kestrelverifiers.com  
+1 503-860-1125

▪ Melissa Audrey, Lead ESG Analyst  
melissa.audrey@kestrelverifiers.com  
+1 856-495-5003



# Second Party Opinion

<b>Issuer:</b>	<b>City of Tacoma, Washington</b>
<b>Issue Description:</b>	Electric System Revenue Bonds, Series 2021 (Green Bonds)
<b>Project:</b>	Tacoma Power Projects
<b>Green Standard:</b>	Green Bond Principles
<b>Green Categories:</b>	Renewable Energy
<b>Par:</b>	\$121,855,000
<b>Evaluation Date:</b>	July 23, 2021

## GREEN BONDS DESIGNATION

Kestrel Verifiers, an Approved Verifier accredited by the Climate Bonds Initiative, conducted an independent external review of these Bonds to evaluate conformance with the Green Bond Principles (June 2021) established by the International Capital Market Association.

This Second Party Opinion reflects our review of the uses of proceeds and conformance of the Bonds with the Green Bond Principles. In our opinion, the Electric System Revenue Bonds, Series 2021 (Green Bonds) ("Series 2021 Bonds") are aligned with the four core components of the Green Bond Principles and qualify for green bonds designation.

## ABOUT THE ISSUER

The City of Tacoma is the third largest city in the state of Washington. Within the City government (the "City"), Tacoma Public Utilities is the largest department and includes Tacoma Power, Tacoma Water, and Tacoma Rail. Tacoma Power was originally formed in 1893 after the City purchased water and electric utility properties from the former Tacoma Water and Light Company. Tacoma Power is now the fourth largest public power utility in Washington and is divided into the following units: (1) Generation, (2) Power Management, (3) Power Shared Services, (4) Transmission and Distribution, (5) Rates, Planning and Analysis, and (6) Utility Technology Services.

Tacoma Power's first hydroelectric generation facility was built in 1912. As of 2021, Tacoma Power's hydroelectric system operates through four hydroelectric generation projects with seven hydroelectric dams. The Cowlitz River Project includes the Mayfield Dam and the Mossyrock Dam; the Nisqually River Project includes the Alder Dam and LaGrande Dam; the Cushman Hydro Project consists of two dams located on the Skokomish River; and the Wynoochee River Project consists of a powerhouse and flood-controlled dam. These hydroelectric projects are located on four rivers in Washington with dams storing and releasing water through turbines which generate electricity for customers that is 100% clean hydroelectric power.

Tacoma Power maintains licenses issued by the Federal Energy Regulatory Commission for its projects. Tacoma Power operates 352 miles of transmission facilities distributed over 2,034 miles to provide contracted wholesale transmission to small utilities and serves approximately 183,000 retail customer accounts in nine cities with 717 employees. In 2020, Tacoma Power's hydroelectric resources provided approximately 38% of the utility's total energy supply and are a stable, low-cost portion of Tacoma Power's portfolio. To meet energy demands, Tacoma Power also acquires power through power purchase contracts

and market purchases. Tacoma Power demonstrates a strong commitment to reducing emissions from energy generation by purchasing renewables such as hydropower and wind. In 2019, Tacoma Power’s fuel mix was 97% carbon free.

In addition to supplying electricity, Tacoma Power supports responsible natural resource management through maintaining fish passages and preserving over 20,000 acres of protected wildlife habitat. Tacoma Power’s Habitat Conservation Plan outlines capital projects that support fish passages, enhance water flow for fish survival, and monitor native fish species. There are four ongoing wildlife and watershed protection projects to ensure healthy habitats for native animals and plants:

- Cowlitz Wildlife Area is a designated wildlife area owned by Tacoma Power that covers about 14,000 acres of forests, wetlands, lowland valleys, and riparian habitats with the 20-mile-long Peterman Hill Trail for recreational use;
- Nisqually River Project Wildlife Lands includes various protections to the Nisqually River Basin, including preservation of the river corridor downstream of LaGrande Dam, and visual markers on power lines for birds;
- Wynoochee River Project enhances 1,000 acres of high-quality forage area for elk; and
- Cushman Project Wildlife Lands conserve almost 3,000 acres of habitat for birds and other wildlife.

**ALIGNMENT TO GREEN STANDARDS**

*Green Bonds are any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bond Principles (International Capital Market Association definition).*

**Use of Proceeds**

Proceeds from the Series 2021 Bonds will be used to refinance the City’s Electric System Subordinate Revenue Note, Series 2015A (the “2015 Note”) and to pay the cost of issuance of the Series 2021 Bonds. Proceeds of the 2015 Note were used to finance various capital improvements to the Tacoma Power Electric System. These capital improvements support Tacoma Power’s hydropower system—a renewable system that has minimal greenhouse gas emissions, prioritizes climate resiliency and environmental restoration, and expands community access to electricity. Tacoma Power integrates fish passage and watershed stewardship to minimize environmental risks associated with hydroelectric facilities. The bond-financed improvements are eligible green projects as defined by the Green Bond Principles project category *Renewable Energy*.\*

Tacoma Power’s operations and bond-financed capital improvements support the hydroelectric system, which provides renewable electric service to approximately 183,000 customers throughout Tacoma, Fircrest, University Place, Fife, Steilacoom, Lakewood, Joint Base Lewis-McChord and Pierce County. Several capital improvements have significant environmental benefit and are highlighted in Table 1 in Appendix B. Hydropower is a green alternative to fossil fuel power generation and thus supports climate change mitigation. Although some hydropower systems have been associated with negative environmental impacts, Tacoma Power ensures that the system mitigates risks to surrounding natural land and wildlife through various initiatives and projects, some of which were directly financed by the 2015 Note to be repaid with the Series 2021 Bonds.

Besides financing maintenance and improvements to renewable energy generation infrastructure, the 2015 Note financed energy efficiency projects and fish passage for migratory fish. The 2015 Note financed efficiency projects including LED lighting upgrades and advanced metering infrastructure that improve energy management capabilities. The 2015 Note also financed projects that protect migrating fish and their habitats.

Green Standard



The Green Bond Principles

Eligible Project Categories:

- Renewable Energy

\* Some financed activities fall under the Green Bond Principles project category *Pollution Prevention and Control*.

Bond-financed capital improvements fall under the following categories defined by Tacoma Power: Transmission and Distribution, System Reliability and Modernization, Natural Resource Management, Power Generation and Management, and General Plant Facilities. Projects in these categories include, but are not limited to:

- Distribution network improvements (i.e., underground cable replacement, pole and overhead replacements)
- Advanced metering infrastructure
- Substation work
- Transformer purchases and upgrades
- Fish facility and hatchery projects at the Cushman Hydro Project, and Cowlitz Falls Fish Facility
- Modification of the Mayfield Fish Passage
- Modernization of water treatment system at the Cowlitz Trout Hatchery
- Voltage optimization at substations for energy savings
- Debris removal at certain reservoirs
- Barrier dam repairs
- LED lighting projects
- Security upgrades

### **Process for Project Evaluation and Selection**

Tacoma Power utilizes internally-defined Value Criteria, established in 2020, to evaluate and prioritize potential capital improvements and projects. Each project in the biennial budget is given a weighted score from 0 to 10 on each criterion based on the degree the project contributes to Tacoma Power's defined strategic goals. The criteria are: Safety, Customer and Employee Experience, Reliability, Compliance and Stewardship, and Rate Affordability and Economic Development. A project's final score is an aggregate of the criteria scores. The Value Criteria ensure projects align with Tacoma Power's mission and long-term planning trajectories. A portion of the capital improvements and green projects have been assigned value criteria scores. The Advanced Metering Infrastructure projects were in the top two highest scoring projects for the 2020-2021 budget (cumulative score: 3.74).

In addition to using Value Criteria, Tacoma Power's Capital Steering Committee evaluates and selects capital improvements and green projects based on financial feasibility, consumer behavior, environmental requirements laid out by the State of Washington, and "Monte Carlo" simulation risk analysis. Moreover, several planning documents guide the selection and evaluation process for capital improvements and projects, including the Long-Range Financial Plan, 2020 Integrated Resources Plan, and the 2015 Climate Report. These guidance documents account for financial opportunities and risks, including those posed by climate change. The capital improvement plan is refreshed annually to account for new data and information. Subsequently, projects are prioritized by financial feasibility as well as strategic directives provided by the Tacoma Power's management team. One of the strategic directives is decarbonization of the electric utility system and transportation electrification. The purpose, associated values, and measurements associated with the strategic directive to decarbonize are included in Appendix C. The decarbonization strategic directive is also formalized in Resolution U-11193 adopted by the Public Utility Board and supported by the City of Tacoma Resolution 40016.

Tacoma Power is aware of the potential impacts of climate change on the hydroelectric system, including changes in precipitation and temperatures. A 2016 Climate Change Resilience Study by the City of Tacoma's Environmental Services Department considers climate risk for Tacoma Public Utilities, including Tacoma Power. In 2015, Tacoma Power contacted the Climate Impacts Group to run an analysis on watersheds, water supply and quality, and streamflow into reservoirs against two greenhouse gas scenarios. Both of these reports guide Tacoma Power's capital planning and budgeting for hydroelectric power operations and conservation projects.

### **Management of Proceeds**

Proceeds from the Series 2021 Bonds will be used to refinance the outstanding 2015 Note, which financed capital improvements to Tacoma Power's electric system, and to pay the costs of issuance of the Series 2021 Bonds. Funds will be temporarily placed in the 2021 construction account and used immediately to

refund the outstanding 2015 Note in full. The 2015 Note Purchase Agreement is callable and there will be no temporary investments of funds.

Reporting

The City has committed to submitting continuing disclosures to the Municipal Securities Rulemaking Board (“MSRB”) so long as the Series 2021 Bonds are outstanding. The City anticipates as part of its regular operations providing publicly available periodic updates on the operating status of capital improvements and also in the event of material developments of the hydropower electric system. Reporting on strategic directives that have been adopted by the Board is expected, including reporting on progress towards decarbonization. Tacoma Power will provide one post-issuance report specific to the Green Bonds at the end of 2022 in tandem with the closing of the fiscal year. This report will be posted on the Electronic Municipal Market Access (“EMMA”) system operated by the MSRB and on Tacoma Public Utilities’ investor relations webpage:

[www.mytpu.org/about-tpu/investors/tacoma-power-investor-information/](http://www.mytpu.org/about-tpu/investors/tacoma-power-investor-information/). Tacoma Power does not anticipate producing additional post-issuance reports because the Series 2021 Bond proceeds will be allocated immediately after closing and proceeds from the 2015 Note to be repaid have already been allocated to eligible capital improvements.

IMPACT AND ALIGNMENT WITH UN SDGS

Tacoma Power’s bond-financed projects are helping to address UN SDGs 7, 13, and 15 by ensuring access to renewable energy through hydroelectric power. Several projects support Tacoma Power’s transmission and distribution system and help maintain a modern and clean electric system, which supports Target 7.1. The City, Tacoma Public Utilities, and Tacoma Power incorporate forecasting for water supply and climate change impacts on the system when prioritizing capital improvements, which addresses Target 13.2. Tacoma Power’s mission to conserve quality habitat for wildlife and dedication to preserving fish passages advances Target 15.4.

A comprehensive list of targets and background on UN SDGs 7, 13, and 15 are available on the United Nations website: [www.un.org/sustainabledevelopment](http://www.un.org/sustainabledevelopment)



<div>7</div> <div>AFFORDABLE AND CLEAN ENERGY</div> <div></div>	<div>Affordable and Clean Energy (Target 7.1)</div> <div>Possible Indicators</div> <div><ul style="list-style-type: none"><li>Proportion of service area with access to electricity</li><li>Proportion of service area with primary reliance on hydropower electricity</li></ul></div>
<div>13</div> <div>CLIMATE ACTION</div> <div></div>	<div>Climate Action (Target 13.2)</div> <div>Possible Indicators</div> <div><ul style="list-style-type: none"><li>Hydroelectric system’s greenhouse gas emissions per year</li></ul></div>
<div>15</div> <div>LIFE ON LAND</div> <div></div>	<div>Promote Sustainable Use of Natural Resources (Target 15.4)</div> <div>Possible Indicators</div> <div><ul style="list-style-type: none"><li>Proportion of fish passages completed and preserved</li></ul></div>

CONCLUSION

Based on our independent external review, the Series 2021 Bonds (Green Bonds) conform, in all material respects, with the Green Bond Principles (2021) and are in complete alignment with one eligible project category: *Renewable Energy*. Tacoma Power’s stewardship of natural resources and operation of hydropower facilities demonstrates a clear commitment to regional climate change mitigation and resiliency. Bond-financed capital improvements directly support the renewable hydroelectric system and several stand out as having enduring positive environmental impacts.

## ABOUT KESTREL VERIFIERS



For 20 years Kestrel has been a trusted consultant in sustainable finance. Kestrel Verifiers, a division of Kestrel 360, Inc. is a Climate Bonds Initiative Approved Verifier qualified to verify transactions in all asset classes worldwide. Kestrel is a US-based certified Women's Business Enterprise.

For more information, visit [www.kestrelverifiers.com](http://www.kestrelverifiers.com)

## DISCLAIMER

This Opinion aims to explain how and why the discussed financing meets the ICMA Green Bond Principles based on the information which was available to us during the time of this engagement (July-August 2021) only. By providing this Opinion, Kestrel Verifiers is not certifying the materiality of the projects financed by the Green Bonds. It was beyond Kestrel Verifiers' scope of work to review issues relating to regulatory compliance and no surveys or site visits were conducted. Furthermore, we are not responsible for surveillance on the project or use of proceeds. Kestrel Verifiers relied on information provided by the issuer and publicly available information. The Opinion delivered by Kestrel Verifiers does not address financial performance of the Green Bonds or the effectiveness of allocation of its proceeds. This Opinion does not make any assessment of the creditworthiness of the Issuer, or its ability to pay principal and interest when due. This is not a recommendation to buy, sell or hold the Bonds. Kestrel Verifiers is not liable for consequences when third parties use this Opinion either to make investment decisions or to undertake any other business transactions. This Opinion may not be altered without the written consent of Kestrel Verifiers. Kestrel Verifiers reserves the right to revoke or withdraw this Opinion at any time. Kestrel Verifiers certifies that there is no affiliation, involvement, financial or non-financial interest in the issuer or the projects discussed. Language in the offering disclosure supersedes any language included in this Second Party Opinion.

Use of the United Nations Sustainable Development Goal (SDG) logo and icons does not imply United Nations endorsement of the products, services or bond-financed activities. The logo and icons are not being used for promotion or financial gain. Rather, use of the logo and icons is primarily illustrative, to communicate SDG-related activities.

## Appendix A.

### UN SDG TARGET DEFINITIONS

#### **Target 7.1**

By 2030, ensure universal access to affordable, reliable and modern energy services

#### **Target 13.2**

Integrate climate change measures into national policies, strategies and planning

#### **Target 15.4**

By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development

## Appendix B.

### SELECT CAPITAL IMPROVEMENTS


Table 1. Select capital improvements with significant environmental benefit receiving bond proceeds

Project	Description of Environmental Benefit	Category	Project Status	Cost
<b>Cowlitz Falls Downstream Fish Passage</b>	Through relicensing of the Cowlitz River Project, Tacoma Power has agreed to improve downstream fish passage. Funding for this project will be used for costs supporting the following fish passage survival goals: 1) Achievement of 95% Fish Passage Survival (FPS) to contribute to effective downstream passage and collection at or near Cowlitz Falls and/or to be constructed downstream of Cowlitz Falls Dam at Riffe Lake; 2) Implementation of additional downstream passage facility improvements with the best available technology and reports at 18 month intervals until the and achieved at least 75% FPS for all species.	Natural Resource Management	Closed/ Closing	(\$12,443,464.19)
<b>City of Tacoma LED Street Lights/ PE17-0224F</b>	This project will provide funding for approximately 16,400 "Cobrahead" and "Shoebox" LED fixtures to replace the City of Tacoma's current sodium vapor (HID) streetlight lamps. An estimated 15,300 Cobrahead and 1,100 Shoebox streetlights are targeted for replacement. Tacoma Power will contract with third parties for the LED replacement of the current HID lamps. After replacement, the COT will be responsible for routine maintenance.	Modern Energy Efficient Infrastructure	Closed/ Closing	(\$4,582,133.71)
<b>Advanced Metering Infrastructure</b>	Tacoma Power is deploying Advanced Metering Infrastructure (AMI) for all Tacoma Power and Water meters across the service territory and to retire existing automated metering solutions that have reached end of life. Cost consideration also includes planning, design, technical and business process, change management, and vendor selection. AMI infrastructure will improve reliability of meters through faster outage and leakage detection, which ultimately saves costs for customers and reduces overall energy consumption.	Modern Energy Efficient Infrastructure	Closed/ Closing/ Ongoing	(\$23,474,726.64)
<b>Cowlitz Salmon Hatchery Barrier Dam Repair</b>	The Barrier Dam, located below the Cowlitz Salmon Hatchery on the Cowlitz River, serves the following purposes: builds head for the water supply intake pumps for the Cowlitz Hatchery, provides an upstream barrier to the migrant fish, and directs returning adult fish into the hatchery fish ladder. The goal of this project is to repair the erosion around the Barrier Dam and alter the shape of the dam to reduce future damage.	Power Generation and Management	Ongoing	(\$1,482,560.14)



# Appendix C.

## TACOMA POWER'S STRATEGIC DIRECTIVE: DECARBONIZATION

 <p>PUBLIC UTILITY BOARD POLICY</p>	
<p>Category: <b>Strategic Directive</b></p> <p>Date of Adoption: <b>September 9, 2020</b></p> <p>Resolution No.: <b>U-11193</b></p> <p>Revision Date:</p>	<p>Title: <b>Decarbonization</b></p> <p>Policy Number: <b>SD-11</b></p>

### Purpose

Tacoma Public Utilities seeks to be a leader in decarbonization of the electric utility system and transportation electrification and to promote Tacoma Power's renewable and nearly carbon free generation portfolio as a driver of economic development and a competitive advantage for existing customers.

### Values

1. TPU is committed to advancing decarbonization of the electric utility system and transportation electrification where technically and economically feasible to meet these challenges today and into the future.
2. Electrification of transportation can produce new markets for TPU and can provide added revenue from surplus power that can help keep rates down for all customers.
3. The TPU Board joins the Tacoma City Council in supporting Council Resolution 40509, relating to the reality of climate change, and Council Resolution 39427, the Environmental Action Plan.
4. TPU believes that decarbonization is a vital tool to address the public emergency of climate change, and will help to minimize harm to current and future generations.
5. The Public Utility Board and senior management encourage measured risk taking while balancing opportunity and benefits to ensure that decarbonization and transportation electrification is pursued with strict discipline through analysis, sound technical data and good management oversight.
6. TPU is committed to educating our customers on the benefits of decarbonization and transportation electrification.
7. TPU is committed to decarbonizing our own operations and transitioning to electrified transportation as much as economically and operationally feasible.

## Outcomes

1. Decarbonization and transportation electrification activities are identified, deployed, and supported with financial investment.
2. TPU will promote and support decarbonization efforts which benefit our customers, reducing their costs as well as reducing rate pressure. TPU will seek opportunities to make pro-active capital investments to accommodate anticipated customer electrification and decarbonization efforts.
3. TPU will be ready to act on opportunities as they arise by researching our customers' needs and barriers with regards to transportation electrification and collaborating with federal, state, and local governments, private business, and other stakeholders.
4. TPU will leverage its abundant natural resources to support decarbonization through the development of carbon credit projects.
5. TPU will seek opportunities to reduce greenhouse gas emissions in our own activities where operationally appropriate by replacing energy using devices with electric alternatives.
6. TPU will partner with and support the City of Tacoma in their greenhouse gas reduction efforts.
7. TPU will encourage electrification of transportation and decarbonization in the community and support with programs and initiatives in alignment with TPU business objectives and statutory authority.
8. TPU will support a legislative agenda that improves Tacoma Power's ability to advance decarbonization through increased electrification of energy use.
9. Decarbonization efforts are made transparent through reporting.

## Measurements

1. Track progress on related Tacoma Environmental Action Plan and participate in City's Greenhouse Gas Inventory.
2. Adhere to the Transportation Electrification Strategic Plan.
3. Decarbonization goals will be reflected in long term planning such as the Power Integrated Resource Plan.
4. Track community outreach and communication activities related to decarbonization and transportation electrification.
5. Report to the Utility Board on organizational work groups who are focused on innovation, research and development, and modernization projects.
6. Individual work groups track and report progress.
7. Agree on simple metrics that can be tracked and reported. These metrics should map directly to an established value profile.

## Reporting

1. Frequency: Annually
2. Reporting Method: To Be Developed.