

PORT OF JUNEAU MUNICIPAL SHORE POWER PROJECT (SMALL WATER PORT) WORKPLAN

Section 1: Project Summary and Approach

a. Overall Project and Proposed Impact

The City and Borough of Juneau (CBJ) aims to secure funding from the EPA Clean Ports Program: Zero-Emission Technology Deployment Competition. The goal is to install shore power at the city's two downtown cruise ship docks within the Port of Juneau, classified as a "Small Water Port" by the EPA for this funding opportunity.

The Port of Juneau Municipal Shore Power Project will provide renewable shore power for the growing number of cruise ships visiting the small community. This will eliminate the need for ships to use fuel-fired generators while in port, reducing local air and water pollution, as well as greenhouse gas emissions. By powering ships with shore electricity, the project aims to support a sustainable tourism industry and mitigate some of the social and environmental impacts associated with cruise ship visits.

Juneau's downtown hosts two community-owned cruise ship berths, designed for Neo-panamax vessels and inaugurated in 2017. The proposed project, backed by widespread community approval, aims to link these berths to electricity from local hydroelectric plants. This initiative lays the groundwork for transitioning the port to fully zero-emission operations and acts as a catalyst for transformative change in local and regional operations. Crucially, it will significantly reduce vessel emissions, particularly benefiting underserved communities in downtown and near-port areas.

During the summer months in Juneau, Alaska, up to seven ocean-class cruise ships visit daily from April to October. They typically spend 8 to 14 hours in port, during which they run generators to power onboard services. According to cruise line reports, these ships each generate around 4.5 megawatts of power. Juneau's location in a fjord, surrounded by mountains, glaciers, and an ice field, causes emissions from the ships' generators to become trapped, affecting the town due to the natural terrain.

Currently, ships dock at two privately owned piers and two owned by the CBJ. In 2001, the world's first cruise ship shore power facility was installed at one private dock through a successful collaboration with Princess Cruise Lines and the local utility, Alaska Electric Light & Power (AEL&P). This facility, operational since installation, supplies renewable electricity from Juneau's hydroelectric plants to ships at the Franklin Dock. As a result, there has been a notable decrease in fossil fuel usage for onboard generators, leading to reduced carbon emissions.

Through public and private collaborations and partnerships, significant investments have been made in Juneau's port and hydroelectric generation. AEL&P has played a key role by implementing programs to maximize the use of renewable resources, thus reducing the community's carbon footprint. Juneau stands out globally for its environmentally friendly electricity, with the utility boasting "100% hydropower, 99% of the time." Despite this, only 27% of Juneau's community-wide energy consumption is electricity¹ due to the high cost to convert from imported fossil fuel systems.

Aside from rare electrical outages, hydroelectric power fully meets Juneau's community electrical needs. Excess energy from hydroelectric facilities is diverted to non-firm loads, which have alternative generation options. Princess Cruise Lines' ships at Franklin Dock have utilized this arrangement for over two decades. The Juneau Cruise Ship Dock Electrification Project aims to expand on this success by providing renewable hydropower to more ships.

i. Detailed Project Summary

The proposed project includes activities classified as "ZE Infrastructure Serving Mobile Equipment," specifically, "shore power infrastructure for marine vessels." It also includes ZE Technology Deployment Support Activities, to support community engagement, workforce development and air quality monitoring and reporting.

¹ https://juneau.org/wp-content/uploads/2023/08/2021-GHG-reports_08012023_FINAL.pdf

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The project faces two unique challenges not typically encountered in similar projects at other U.S. ports. First, unlike most projects, there's no access to a 12kV distribution voltage power grid; instead, it's directly fed from nearby 69kV transmission lines. None of the available off-the-shelf shore power systems can accept 69kV transmission lines, necessitating the construction of a dedicated CBJ-owned substation to convert to the voltage required for the ships. This novel system mirrors the one at Franklin Dock, operational since 2001, ensuring safety and performance. Lessons from Franklin Dock will inform efficient design and operations at the new docks, especially regarding tidal changes.

Second, the project's location within a fjord, surrounded by steep mountains and deep ocean water, limits available land for port infrastructure. Consequently, the substation must be placed near the transmission lines on the side of Mt. Roberts, rather than within the port. Components directly connecting the ships will be installed on new floating pontoons. The CBJ has extensive experience in designing and constructing pile-supported platforms and floating pontoons, demonstrated by recent projects in this challenging environment, including: *Juneau Cruise Ship Berths* (Completed 2017, Cost \$64 million), *Downtown Waterfront Improvements* (Completed 2021, Cost 12.4 million), and *Marine Park Deckover* (Completed 2023, Cost \$2.5 million).

Electricity will be fed from transmission lines that run along the mountain side above downtown to the ships and will include several components. These are defined below in sequence leading from the transmission lines to the ship connections, see Figure 1.

New Power Conversion Station: A new substation is essential to link the shore power system with the electricity distribution network. It will be situated on the hillside above the docks, adjacent to the existing transmission lines. The term "substation" in this context doesn't denote utility-owned infrastructure for local power distribution. Instead, it refers to CBJ-owned switchgear and transformers, converting the 69kV transmission voltage into ship voltage exclusively for powering the ships. The substation will include two transformers, switchgear, protective relays, and secondary circuit breakers, with each transformer dedicated to powering one cruise ship.

Cables from Substation to the Shore: Twelve 6-inch diameter conduits will descend the hillside, passing under S. Franklin Street before reaching the shoreline. More than half of the necessary conduit route and two vaults have already been installed underground at the Port of Juneau facility. These conduits will house high-voltage cables for electricity and fiber optic cables for instrumentation and control systems. The remaining 600 feet of new conduit will extend from the substation to connect with the existing conduits just uphill of S. Franklin Street.

Submarine Cable to the Electrical Deployment Floats: Submarine cables, designed for underwater use, will be routed from the shoreline vault to the Electrical Deployment Floats (EDF). These cables will rest on the seafloor, extending from the shore until they rise to meet the float. This cable routing approach is essential because of the water depth at the berth, which exceeds 100 feet, and the significant tidal range of up to 25 feet per tide change.

Electrical Deployment Floats and Switchgear: Following the substation, the next significant component of the shore power system will be the two Electrical Deployment Floats (EDFs) and their associated switchgear. Workers will access the floats via gangways attached to nearby approach docks. Each dock will have its own EDF to ensure a consistent level relative to the ships' electrical connection portals, facilitating the handoff and retrieval of shore power cables.

The EDF switchgear will enable shore power technicians to manage the connection and disconnection process in collaboration with the cruise ship's crew. Enclosed in cabinets to shield them from the corrosive marine environment, the switchgear will include disconnect and ground switches to safeguard workers from high voltage during the connection and removal process.

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Cable Deployment Crane and Cables to Cruise Ship: Cable deployment cranes, positioned along the face of the EDFs, will feature extendable booms to reach vessels with differing portal locations. These cranes will assist in supporting the conductors and connections as they are inserted into the ship.

BABA Compliance: CBJ has conducted market research to understand the availability of BABA compliant materials required for the proposed project. All components are available domestically with the exception of the mobile shore power cable management system which is included in the recently published GA Public Interest Waiver for EPA's Clean Ports program.

Project Scalability: This project aims to electrify both municipal cruise ship ports, facilitating a transition to fully zero-emission (ZE) port operations. While initially designed for both ports, the project can scale down to electrify just one dock, still yielding significant community benefits and supporting the shift to ZE operations and renewable energy in the long term. The minimum EPA funding needed to electrify one dock is \$29,165,000.

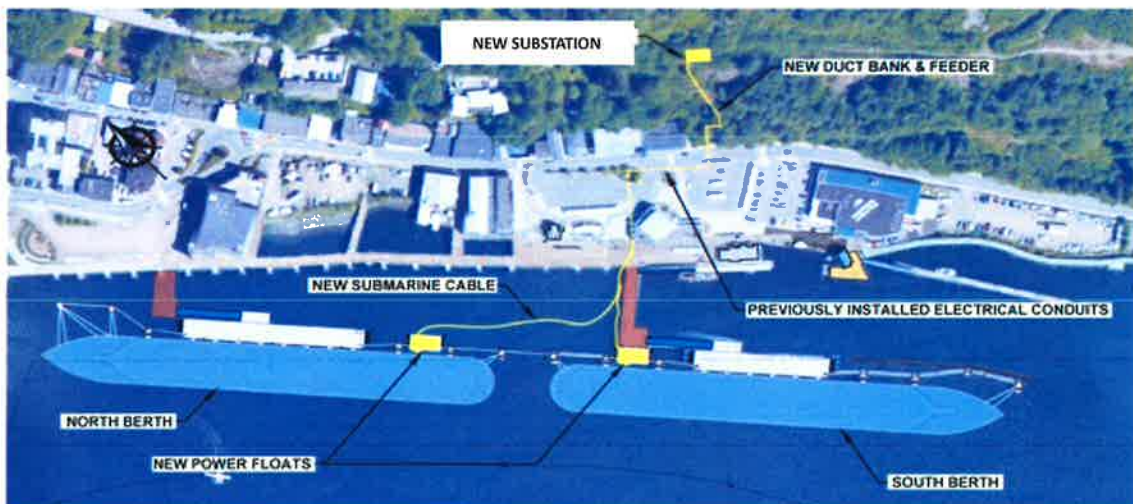


Figure 1. Project Map: The location of the substation designated for this project is identified. This illustrates the locations of the components involved in the electrical deployment system to both docks.

b. Partnerships and Collaboration

The Port of Juneau Municipal Shore Power Project is a collaborative effort between the CBJ, the local electric utility (AEL&P), **IBEW Local 1547**, the Juneau Commission on Sustainability, and community organizations representing the cruise tourism industry, including the Cruise Line Industry of Alaska (CLIA). Each organization has provided commitment letters included in this application.

IBEW will recruit, train, and provide skilled workers for constructing, installing, operating, and maintaining the shore power system. JCOS and CLIA will facilitate communication between CBJ and project stakeholders and affected communities.

CBJ has consulted with AEL&P throughout all project phases, as evidenced by the Utility Partnership Template signed by the electric utility. AEL&P will assist with electrical design and ensure the shore power infrastructure is compatible with the power grid. AEL&P will also communicate any changes to its capacity to provide hydroelectricity while ships are in port.

These partnerships are crucial for public engagement and workforce development, and CBJ has the staffing, experience, and resources to execute the project scope. CBJ will provide all local (non-federal) matching funding. The project does not involve subawards or distribution of funding to collaborating organizations or subrecipients, nor does it include statutory partnerships as described in the NOFO. CBJ will own and be responsible for operating and maintaining all infrastructure and technology funded through this project.

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c. Coordination of Complementary Initiatives

The Port of Juneau Municipal Shore Power project aligns with various local, regional, and global initiatives aimed at reducing greenhouse gas emissions at the port and in supporting port operations, as well as benefiting the broader Juneau community.

Local Initiatives:

The role of dock electrification for economic and environmental reasons has been the focus of several recent initiatives and significant planning efforts with robust public input. Dock electrification is the community-preferred solution to meeting the sustainability goals adopted by the city assembly.

Blueprint Downtown: The City and Borough of Juneau's 2018 - 2024 planning effort known as "Blueprint Downtown" is a 20-year subarea plan and community vision for the downtown area surrounding and adjacent to the public cruise ship docks referenced in this application. The Blueprint Downtown Area Plan includes dock electrification (shore power) as part of its final report, as well as the plan's vision statement: "Juneau has the opportunity to showcase best sustainable practices, focusing on a transition from fossil fuels to renewable hydroelectricity for heating and transportation. Mitigating cruise industry impacts, with steps such as increased shore-side power, is a key element of this shared focus on enhancing renewable energy."² The plan also specifically recommends that CBJ, "Explore feasibility and funding opportunities to provide shore power to docked cruise ships, coordinating with electric companies to ensure adequate electrical capacity."

Visitor Industry Task Force: The Juneau Mayor's Visitor Industry Task Force (VITF) was created with the purpose of providing "helpful advice to the Assembly and to advance community thinking on a range of visitor industry topics." The VITF's 2020 final report mentions shore power specifically, and electrification of transportation generally, in eight places and recommends maximizing use of shoreside power by all cruiselines by assigning shoreside power configured ships to electrified docks.³

Low Emission Revolving Loan Fund: Subsequent recommendations from the VITF propose additional steps to transition the port to zero emissions. This includes encouraging the electrification of tourism vehicles, mainly operating in the downtown port area. In response, the CBJ Assembly endorsed a program to establish a low-interest loan initiative aimed at investing in cleaner energy equipment. CBJ previously succeeded in implementing a similar program in the early 2000s, focusing on converting to quieter float plane engines. Loans will be managed by a third-party economic development organization, with an initial funding of \$1 million from CBJ Marine Passenger Fees.

Juneau's Climate Action & Implementation Plan: Municipal dock electrification directly supports the goals and recommendations of the CBJ's climate action plan. The CBJ adopted the Juneau Climate Action & Implementation Plan (JCAP) in 2011. The JCAP provides an energy and GHG emission inventory and sets a goal of reducing GHG emissions by 25% by 2032. Juneau dock electrification is specifically identified in the plan as significantly contributing to Juneau in meeting this goal.⁴

CBJ has conducted several greenhouse gas emission inventories to guide its efforts to reduce GHG emissions and measure progress. While the 2021 and forthcoming 2023 studies are limited to energy consumed within Juneau's community boundary and thereby provide limited data regarding energy consumption and emissions related to fuel purchased outside of Juneau for cruise ships and barge transport, the 2021 study identifies transportation as the most significant cause of GHG emissions

² <https://juneau.org/wp-content/uploads/2024/02/Blueprint-Downtown-Juneau-Area-Plan.pdf>

³ <https://juneau.org/assembly/visitor-industry-task-force>

⁴ <https://juneau.org/archive/entry/42260>

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(47%)⁵. Given that marine transportation alone contributed 16% of 2021 emissions, reducing cruise ship emissions while in port is a critical step in achieving Juneau's GHG emissions reduction goals.

Juneau Renewable Energy Strategy: The CBJ adopted the Juneau Renewable Energy Strategy (JRES) in 2018. It establishes a goal to have renewable energy provide 80% of Juneau's energy by 2045. Dock electrification (shore power) is identified as an action contributing to the goals.⁶

The 2021 Energy Use & Greenhouse Gas Emissions Inventory for Juneau, Alaska indicates progress toward Juneau achieving its JRES target, with renewable energy (hydroelectricity) providing about 29% of total community energy use in 2021, compared with 20% in 2010, however, the community as a long way to go. Electrifying Juneau's cruise ship docks will provide a meaningful transition to renewable energy use in Juneau.

CBJ Docks & Harbors (D&H) ZE Transition: CBJ Docks & Harbors recently replaced all gasoline-powered port maintenance vehicles with electric vehicles (EVs), including a Cushman Hauler Pro EV purchased in 2023 for facilities maintenance and a Gator Moto Utility EV with the EMS/Rescue package bought in 2019 for emergency response.

Additionally, CBJ provides dockside power to smaller vessels in its four harbors via 400 vessel power pedestals. Without these, vessels would often need to rely on fossil-fuel-powered engines while in port.

Regional & Global Initiatives:

Alaska Energy Authority Funding: In 2023, the Alaska State Legislature allocated \$10 million to the Alaska Energy Authority (AEA) for implementing shore power at a planned cruise ship dock in Whittier, Alaska. The current legislative budget includes a similar \$10 million allocation to the AEA. Discussions with the AEA and members of the Alaska legislature suggest that over 50% of this state funding will be directed towards supporting CBJ's shore power implementation efforts. This demonstrates statewide support for and recognition of the importance of this project. The cruise industry backs the allocation of these funds to CBJ and acknowledges Juneau as the only other port in Alaska ready for implementation.

Southeast Alaska 2025 Economic Plan: The most recent regional economic Comprehensive Economic Development Strategy for the Southeast Alaska region prioritizes beneficial electrification as the #4 economic priority for the region, specifically including dock electrification.⁷

Pacific Northwest to Alaska Green Corridor (PNW2AK) Project: In March 2023, the City and Borough of Juneau signed on as a "First Mover" in the Project Charter⁸ for the Pacific Northwest to Alaska Green Corridor (PNW2AK) project – the first of its kind for the cruise sector. This collaborative partnership between the major cruise lines, homeports, and several ports of call in the Alaska was created to accelerate the deployment of zero GHG emission ships across sectors and decarbonize operations between Alaska, British Columbia, and Washington.

CBJ's proposed shore power project aligns with the PNW2AK project charter's voluntary commitment to "accelerate the pace of maritime decarbonization in the Pacific Northwest and Alaska, thereby demonstrating environmental leadership and sharing lessons learned with the global maritime community,"⁹.

Cruise Industry Global Decarbonization Commitments: The Cruise Line Industry Association represents 120 global cruise lines comprising 95% of the ocean-going cruise capacity. To meet the organization's goal of net-zero emissions across its member cruise lines by 2050, all CLIA member ocean cruise lines

⁵ https://juneau.org/wp-content/uploads/2023/08/2021-GHG-reports_08012023_FINAL.pdf

⁶ <https://renewablejuneau.org/policies-for-renewables/cbj-renewable-energy-strategy/>

⁷ <https://www.seconference.org/publication/southeast-alaska-2025-economic-plan/>

⁸ https://www.portseattle.org/sites/default/files/2023-03/Charter_PNW2AK_Final-ForWeb.pdf

⁹ *Ibis*.

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have committed to equipping all ships that call at ports “capable of providing shoreside power” with the ability to utilize shoreside power by 2035, “or to be able to use alternative low-carbon technologies, as available, to reduce emissions in port.”¹⁰

While nearly half of ocean-going ships are currently shore power enabled, only 2% of ports worldwide have shore power facilities. As is stated in the attached letter of commitment from CLIA, the Alaska cruise industry supports the CBJ’s efforts to provide shore power at the city’s municipally owned cruise ship docks.

d. Project Risk Mitigation

CBJ has made comprehensive efforts to identify, understand and mitigate any potential project risks and/or barriers to successful execution. Details regarding the identified risks and mitigation strategies are outlined below.

- **Technical Risks:** CBJ has evaluated the technical risks and determined that technology behind the proposed high voltage shore power connection (HVSPC) has matured in the 23 years since the first HVSPC in the world was installed on the nearby Franklin Dock. The project will be designed to comply with IEEE/IEC 80005-1-2019 which describes the requirements that high voltage shore power connections must adhere to, thus ensuring ship compatibility and lowering risk.
- **Systems integration:** The local utility (AEL&P) is leading the electrical design process using a grant already provided by CBJ outside the scope of this application. Placing the utility in a leadership role in design ensures that it will be compatible with the utility’s internal systems.
- **Infrastructure & Engineering risks:** CBJ plans to mitigate engineering risks by engaging local design consultants well-versed in the area’s distinct conditions. The project site, characterized by steep terrain, rocky landscapes, and 25-foot tides, presents unique challenges. Local consultants bring decades of experience designing structures tailored to these conditions.
- **Financial Risks:** CBJ utilizes funds from the Marine Passenger Fee Program, collected from the cruise industry, to cover the electrical design and utility connection costs of the shore power system. This program will also provide the 10% match required for the grant. With secured matching funds and ongoing access to Marine Passenger funds, the project faces low financial risks.
- **Cyber security risks:** The project’s controls that integrate with the utility’s systems will meet the Critical Infrastructure Protection Standards approved by the Federal Energy Regulatory Commission. These standards mandate that owners, operators, and users of critical infrastructure adhere to a baseline of cybersecurity measures.
- **Physical security measures:** All grant-funded infrastructure will be installed in secure locations: either within a fenced and monitored substation on the hillside or at the port in an area accessible only to employees with security credentials. None of the infrastructure will be accessible to the public.
- **Organizational Risks:** CBJ has an experienced staff with decades of experience handling projects of this magnitude. Furthermore, CBJ collaborates with several seasoned local engineering consultants specializing in managing large marine projects.
- **Execution Risks:** The project site is situated in a bustling port with a history of continuous development and expansion spanning over a century. The challenges posed by the site conditions are well-documented. The civil/structural designer will scrutinize existing geotechnical reports and conduct investigations to preempt any unforeseen conditions during the construction phase.
- **Project Scheduling:** The project is situated in a port that welcomes 1.6 million cruise passengers annually, from early April to late October. Consequently, all construction activities will occur during

¹⁰ https://cruising.org/-/media/CLIA-Media/StratCom/Charting-the-Future-of-Sustainable-Cruise-Travel_1115_Oct-2023

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the winter months, spanning November to March. To avoid disruption, the project is scheduled over multiple winters. Local contractors are experienced in executing construction projects during the winter season. The two CBJ-owned berths slated to receive shore power connections through this grant were constructed during the winters of the 2015/2016 and 2016/2017 seasons, confirming that scheduling challenges are anticipated and the risk can be managed.

- **Procurement Concerns:** CBJ understands the extended lead times for custom electrical components. A new shore power transformer for the nearby Franklin dock was procured by CBJ almost two years ago and is set to arrive this fall for installation during winter. The project's construction schedule accounts for these lead times, with provisions for delays, including a six-month contingency period.
 - **Construction/Permitting:** Local contractors are well-versed in winter construction conditions, while CBJ's experienced design consultants will conduct thorough site investigations to prevent delays. In terms of permitting, CBJ is experienced in obtaining permits for large construction projects and foresees no issues with permitting for this project.
 - **Utility Provider Capacity and Interconnection Timelines:** The utility's capacity to supply power to cruise ships hinges on rainfall, as the electrical grid relies solely on hydroelectric plants. In the short term, rising rainfall and temperatures associated with climate change improve the utility's ability to cater to visiting ships. In the long term, there are plans to construct additional hydroelectric plants to enhance capacity.
 - **Availability of qualified personnel:** Qualified personnel to operate the High Voltage Shore Power System are ensured by mandating the use of union electricians and linemen who are qualified to maintain and operate the shore power equipment.
- e. **Applicant Fleet and Infrastructure Description**
Please see the "CBJ Shore Power Infrastructure Description" included in the "Other Attachments."

Section 2 - Environmental Results—Outcomes, Outputs and Performance Measures

The proposed Port of Juneau Municipal Shore Power project supports both Goal 1, Objective 1.1 and Goal 4, Objective 4.1 of the EPA's FY 2022-2026 Strategic Plan by reducing greenhouse gases, increasing energy efficiency and the use of renewable energy, thereby reducing air pollution in our local and regional community to provide healthy air quality for our people and the environment.

a. Expected Outputs and Outcomes

Anticipated Outputs and Outcomes		
Activities	Outputs	Outcomes
Electrification of two (2) public cruise ship docks	Two (2) shore power pedestals installed with 11kV capacity each (6.6 kV options)	Reduction of GHG and NOx/SOx/PM2.5 air emissions in Juneau by nearly 33,500 metric tons; Displacement of 3 million gallons of diesel fuel used over a 20-year period; Increase in number of port visits utilizing shore power by 100-200%; Improvement or air quality for disadvantaged communities and near-port residents, decarbonization of critical sector of the local economy; creation of 10-20 high-quality positions to install, staff and maintain the shore power infrastructure
	Main Switchgear which is controlled remotely to energize or disconnect the shore power system.	
	Capacitor Bank which protects the electrical grid by providing power factor correction.	
	Conduits, Conductors and Vaults which transmit power from the transmission lines to the port.	
	Grounding Switchgear shorts the system to ground to protect personnel handling the cables.	
	Electrical Interconnection to direct power to each of the two floating docks.	
	Floating Dock supports cable management crane.	

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	Movable Cable Management Crane handles the cables and make the final connection to the ship.	
<i>Community engagement activities to ensure meaningful participation and understanding of the benefits of the installation, implementation and performance of the project</i>	One project specific website to serve as a central resource for project information and collecting feedback;	An increased understanding of the environmental or economic effectiveness of the shore power infrastructure; Public awareness of project and results
	300+ local residents and impacted organizations participating in community outreach efforts involving the planning, installation and performance of the project	
	Printed and digital materials communicating the status/benefits of the project and opportunities to provide feedback	
	Dissemination of project information via CBJ and partner listservs, social media, news outlets, outreach events	
	Project updates and opportunities to gather feedback at public meetings of both the CBJ and other community organizations (minimum 7)	
<i>Development of a workforce training program to support safe operation and maintenance of the shore power infrastructure</i>	The designer of the shore power system will be contracted to produce an Operations and Safety Manual, serving as the foundation for at least two training sessions for the workforce responsible for constructing and installing the shore power infrastructure.	Development of a safe workforce skilled in the effective installation, operation and maintenance of shore power equipment and infrastructure
	3-6 trainings provided to CBJ staff, AELP staff, longshoremen and workers hired to operate and maintain the shore power infrastructure.	
<i>Conduct one (1) Baseline Port Mobile Source Inventory</i>	One publicly available inventory of port mobile source greenhouse gas emissions, PM2.5 and/or NOx	Baseline community understanding of port mobile source emissions; accurate tracking and reporting of project benefits as they relate to emissions reduction air quality improvements
<i>Project Reporting</i>	Seven (7) semi-annual and one final report	Timely, comprehensive and publicly available reporting on project status, success and resulting benefits, as well as any potential setbacks or delays.

b. Performance Measures and Plan

CBJ will measure and track the progress of each of the proposed project activities using existing data (and the to-be completed mobile source inventory) as a baseline, and measuring emissions, participation and energy use efficiencies to calculate and report on its success.

i. Performance Measures:

Shore Power Infrastructure at the Alaska Steamship and Cruiseship Terminal Docks

1. Performance will be measured by the efficiency and effectiveness of the competitive bidding processes for the construction of the project; the management of the selected contractor(s) and their ability to meet the proposed implementation timeline. A critical measurement of progress will be whether construction can begin in the spring of 2026.
2. Performance will also be measured by the efficiency and effectiveness of the design and construction processes themselves. A key measurement of design progress will be whether the

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transformers can be procured by early 2026; key for construction will be whether and when the cruise ship(s) can plug in to the dock(s) for the summer 2028 cruise season.

3. Following construction, performance will be measured primarily by fuel use savings which, given that electrical power comes from renewable ZE hydroelectricity, will be translated to GHG reductions. Performance will also be measured via direct air quality monitoring:

- a. To track and report on diesel fuel use reductions, CBJ will estimate the reduction of onboard diesel fuel usage by converting the electrical power usage in kW into equivalent values in gallons of diesel fuel. This calculation will utilize ship specific fuel efficiency information when available, and average fleet efficiency information otherwise.
- b. To track and report on emissions reductions and air quality improvements, CBJ will utilize the existing Alaska Department of Environmental Conservation's Air Quality Index data as well as the new sensors proposed in Section 5.a. of this application.
- c. Calculated emissions reductions and air quality improvements will be communicated via the project web page and other relevant communications tools (Docks and Harbors newsletters, social media etc.), as well as the semi-annual and final reports required by this funding program.
- d. Performance of community engagement activities will be measured by the number and frequency of communications and the diversity of the audience reached via all proposed communications channels.

Long Term Performance Measures

In serving as a leader and "First Mover" in the conversion to ZE technology, CBJ hopes to serve as a model for other port communities in Southeast Alaska and the broader Pacific Northwest. We also hope that the port conversion to shore power may lead to broader acceptance of ZE technologies and beneficial electrification in the maritime sector as well other sectors of our community.

Long-term performance in this area will be measured by the number of other docks in Southeast Alaska committing providing shore power or other sources of renewable energy, as well as the conversion of the cruise and cargo fleets visiting Southeast Alaska to shore power and/or ZE technologies.

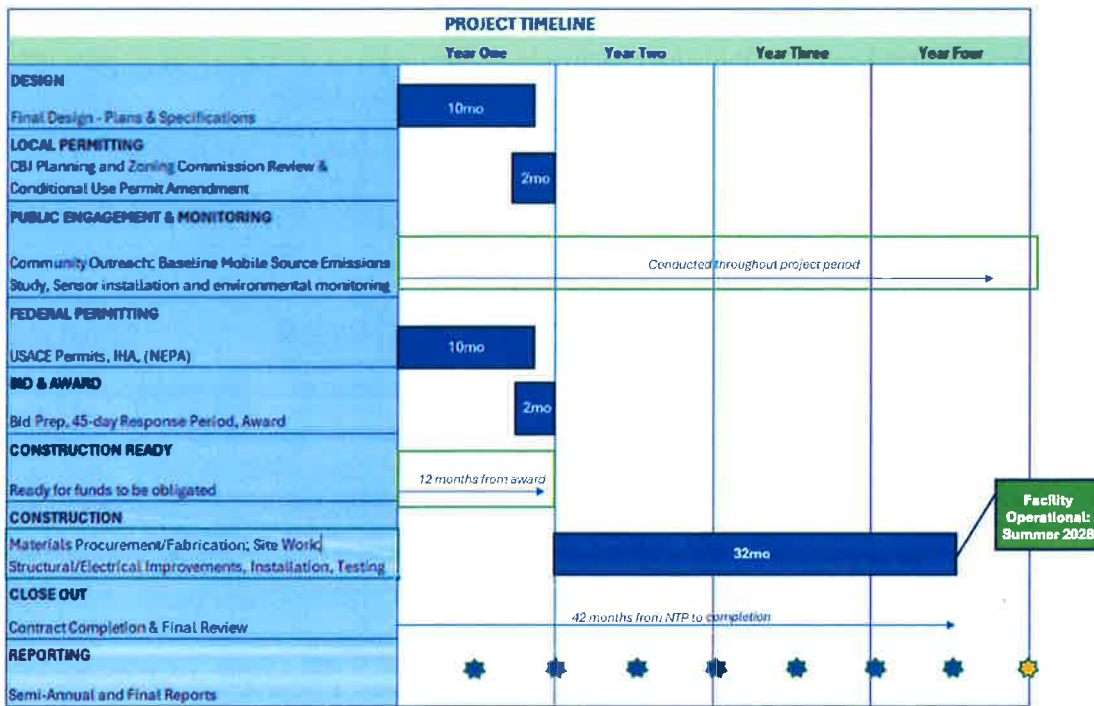


Figure 1: Project Timeline & Milestones

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c. **Timeline and Milestones**

The anticipated schedule for this project spans a 42-month timeframe, with time intervals measured from the Clean Ports Program award obligation date. Per section II.F of the NOFO, CBJ anticipates an estimated project start date of December 1, 2024. This schedule will easily accommodate the four year “estimated period of performance for awards,” and includes six months of contingency to account for any unexpected delays so that funds are not at risk of expiring prior to being obligated.

- d. **Scrappage** While CBJ intends to continue replacing its port vessels and vehicles with ZE models, there are currently no CBJ vehicles which meet the scrappage requirements for this funding program.

Section 3 -Programmatic Capability and Past Performance

a. Past Performance & Reporting Requirements

CBJ has the programmatic capability and successful past performance of federal and non-federal assistance agreements from numerous awarding agencies. Several recent assistance agreements which CBJ is currently performing or has performed in the last three years are included below. The first three of the five examples provided include federal award agreement procedures, progress reporting requirements, procurement rules and other project and fiscal management processes which would directly relate to those outlined as part of the Clean Ports Program ZE Technology Deployment Competition. The fourth example (NREL Waste-to-Energy Technical Assistance Program) required project coordination and information sharing between the CBJ service departments (Engineering and Utilities), which is relevant to the needs of this application.

FY2022 FHWA Safe Streets and Roads for All (SS4A) Action Plan Grant

Project Title: *SS4A Action Plan Grant to the City & Borough of Juneau*

Assistance Agreement Number: *NA*

Agency and Listing/CFDA number: *USDOT FHWA, 20.939*

Description: *CBJ received SS4A funding to conduct a full road safety analysis, taking inventory of all previous crashes, historical trends, conditions, severity of injuries, community and partner input and other factors across the entire jurisdiction. The safety analysis will produce a list of projects prioritized by these data points to guide implementation of the Comprehensive Safety Action Plan.*

CBJ has a history of meeting all reporting requirements under our assistance agreements and of submitting acceptable final technical reports for those that are completed. CBJ worked closely with the FHWA to complete the grant agreement process and is reporting progress on the project in a timely manner and in accordance with the grant agreement guidelines.

FY2021 FTA Buses and Bus Facilities Projects Grant (5339b)

Project Title: *Reducing Harmful Emissions by Running on Rain; Capital Transit Harnesses Local Hydro Power to Fuel Electric Buses and Charging Infrastructure for a Resilient Capital City.* (Assistance Agreement Number: *2511-23-0200*)

Agency and Listing/CFDA Number: *Federal Transit Authority/ 20.526*

Award amount: *\$1,446,827*

Description: *The City and Borough of Juneau (Capital Transit) received funding to purchase on-route EV charging equipment for the Juneau Valley Transit Center to support the transition diesel to electric buses. This project will improve air quality as well as safety and reliability for the 32,000 residents who live in Alaska's capital city.*

FY2020 Low or No Emission (Low-No) Bus Program Project Grant (5339c)

Project Title: *Strengthening Renewable Energy with a Fleet of Clean Hydropower Fueled Electric Buses and Charging Infrastructure for a Resilient Capital City, Juneau, Alaska*

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Assistance Agreement Number: 2511-20-0700

Agency and Listing/CFDA Number: *Federal Transit Authority / 20.526*

Award amount: *\$5,014,400*

Description: *The City and Borough of Juneau received funds to purchase new electric buses to replace aging diesel buses and associated charging infrastructure.*

Progress on the two active FTA agreements described above is being reported in a timely manner and includes progress on achieving expected outputs and outcomes.

FY2023 NREL Waste-to-Energy Technical Assistance Program

Project Title: *Biosolids Incineration and PFAS Destruction*

Assistance Agreement Number: *NA*

Agency and Listing/CFDA number: *National Renewable Energy Laboratory (DOE)*

Description: *NREL assisted CBJ by providing 40 hours of technical assistance to investigate whether a biosolids Waste-to-Energy incinerator would also be able to destroy or significantly reduce PFAS in the final waste product from CBJ's wastewater treatment facility as well as economic and logistical feasibility for selected technologies.*

CBJ worked collaboratively to provide all information and meet all designated timelines for the technical assistance program and received the final report from NREL for the project in May 2024.

FY2023 Alaska DOT&PF Harbor Facility Grants Program

Project Title: *Aurora Harbor Rebuild Phase III*

ADOT&PF Grant Agreement Number: *23-HG-004*

Agency and Listing/CFDA number: *Alaska Dept of Transportation & Public Facilities*

Award Amount: *\$2,000,000*

Description: *The project includes the third phase of the Aurora Harbor Rebuild project, which replaces a float system that was demolished in 2020 after becoming unsafe with age. The project includes floats, piling, all-season potable water system, fire suppression system, ground fault protected electrical system, lighting, and safety equipment.*

CBJ D&H managed and executed the project utilizing the D&H engineering team, to perform design, project management and construction inspection for the \$4.25 million project. Progress on the active award agreement described above is being reported in a timely manner and in accordance with the grant agreement guidelines. Reporting includes progress on achieving expected outputs and outcomes under the agreement."

CBJ and the relevant divisions have the technical, legal, and financial capacity to successfully deliver on the above-described active projects as demonstrated by fulfilling all the grant requirements for each respective funding opportunity. Through inter-agency and interdepartmental collaboration, CBJ is adeptly managing all aspects of the grants to manage the funds legally and in a fiscally responsible manner according to the respective grant agreement guidelines.

CBJ has a history of meeting all reporting requirements under our assistance agreements and of submitting acceptable final technical reports for those that are completed. Progress on the above-mentioned agreements is being reported in accordance with each respective assistance agreement, in a timely manner and includes discussion of progress on achieving expected outputs and outcomes. Project reporting is a collaborative effort between CBJ's finance, procurement, engineering, legal departments, and the department leading the project management. CBJ believes close and transparent communication with the awarding agency is key to successful award management.

b. Staff Expertise

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The City & Borough of Juneau encompasses 19 departments offering various services and expertise to support this project's success. These include the legal department, engineering division, finance department with purchasing, procurement divisions, and grant controller services. CBJ's Docks & Harbors (D&H) staff, including those involved in this project, have managed over \$180 million worth of infrastructure projects since 2012, covering conception through construction and operation, with extensive work at the Port of Juneau.

Regarding project execution, D&H Port operations staff possess extensive knowledge of the Alaska Steamship and Cruise Terminal docks, as well as the electrified Franklin dock. They will collaborate with project designers, contractors, and managers to efficiently achieve milestones and address potential operational impacts or scheduling conflicts.

Beyond D&H staff, CBJ has a team of experienced professionals for communication, community engagement, procurement, financial management, and project outcome monitoring and reporting. CBJ will adhere to EPA-compliant procurement guidelines, ensuring an open and competitive process to contract for electrical, civil, and utility engineering, design, and construction services alongside CBJ staff.

Project Team (CBJ Staff):

Carl Uchytel P.E.: Port Director, M.S. University of Rhode Island, B.S. United States Coast Guard Academy, 13 years with CBJ subsequent to retirement from the US Coast Guard where he served 4 tours aboard Polar Icebreakers, culminating as Commanding Officer of the USCGC Polar Sea from 2007-09.

Matthew Sill P.E.: Port Engineer, B.S. University of Alaska Fairbanks, 3 years with CBJ, 18 years of marine/waterfront engineering experience including condition assessment, civil/structural design, project management and construction inspection.

Matthew Creswell: Harbormaster, 7 years with CBJ subsequent to retirement from the US Coast Guard. Mr. Creswell oversees the daily operations of CBJ's marine facilities, which include a team of 50 employees and an annual budget of \$7m.

Alexandra Pierce, PMP: Visitor Industry Director; B.A. at University of British Columbia; MBA at Norwich University, 8 years with CBJ, 17 years' experience in project management, tourism management and development, grant administration, and public outreach.

Dianna Robinson: Environmental Project Specialist; BA Michigan State University; MSc Environmental Sustainability, University of Edinburgh; 13 years' experience in the sustainability field.

Denise Koch: Director of Engineering and Public Works; BA from University of Virginia; MS Public Health at University of Washington; 22 years' experience in environmental science and public health.

Ashley Heimigner: Grants Manager; BA Willamette University, 15 years' experience in community engagement, public communications, and federal grant management.

Section 4 – Environmental Justice and Disadvantaged Communities

The Port of Juneau is centrally located, and any emissions generated in the port impact nearby residents, students, year-round and seasonal workers, travelers, longshore and cruise ship workers. The City and Borough of Juneau contains two census block groups in port and near port communities that are at or above the 90th percentile for multiple EJScreen Supplemental Indexes when compared to the nation or state. Importantly, neither of the tools specified regarding the first criteria for defining "disadvantaged communities" in this program (EJScreen and CEJST) include data for PM_{2.5} or Ozone, simply stating "Data not available," in the provided maps and reports.

EJScreen: Census Blockgroup 021100005003 – including the physical project area – is shown at the 90th percentile for Toxic Releases to Air. As noted, EJScreen does not include any data for PM_{2.5} or Ozone.

CEJST: The Climate and Environmental Justice Screening Tool (CEJST) is also "Missing Data" on PM_{2.5} for the borough and fails to accurately represent tribal lands in the area.

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Tribal Lands: The City and Borough of Juneau acknowledges that our community is built the on the traditional homelands of the Áak'w Kwáan and T'aaku Kwáan Tlingit peoples represented by the tribal government and sovereign entity, Tlingit & Haida, as well as the Douglas Indian Association. The EJScreen tool represents these tribal lands with two small green dots representing a "one-mile ring" in Blockgroup 021100005002 (Central Council of Tlingit & Haida Indian Tribes of Alaska – Tlingit & Haida) and Blockgroup 021100006002 (Douglas Indian Association).

The CEJST tool designates census tract 02110000500 (which encompasses the project area) as "Partially Disadvantaged," noting that the "The 2 Alaska Native Villages in this tract that are Federally Recognized are considered disadvantaged." This mapping mistakenly restricts the tribal lands of both entities, and does not include the Douglas Indian Association in the area of Douglas Island (02110000600).

a. **Disadvantaged Communities: Nonattainment Areas**

While the City and Borough of Juneau is not included in the list of counties that meet the disadvantaged community's definition based on meeting the criterion that they contain ozone or PM_{2.5} nonattainment or maintenance areas as noted on the Clean Ports Program website, the community has areas of air quality concern in port and near-port areas.

While docked in Juneau, cruise ships operate in hotel mode and continue to produce air pollution. 651 cruise ship voyages are expected to visit in 2025. The air quality enjoyed by residents in the community is at times degraded by cruise ship stack emissions. Downtown Juneau and the port area are periodically subject to air inversion that trap emissions in the area as well as to light winds that can bring cruise ship emissions up Gastineau Channel and concentrate them against the mountains. In a 2019 ambient air monitoring study conducted by the Alaska Department of Environmental Conservation, several Purple Air (PA) particulate monitors (PM_{2.5}) and passive sulfur dioxide monitors were placed within close proximity of the cruise ship docks. Throughout the cruise season (mid-April – early October 2019), the monitors observed hourly concentrations reaching levels that were "Unhealthy" and "Unhealthy for sensitive groups" on numerous occasions. According to the study, while emissions events were typically brief, "Short term emissions plumes from cruise ships were detected by the monitors in the form of widespread elevated PM2.5 concentrations affecting multiple sites simultaneously."¹¹

b. **Disadvantaged Communities: Areas with Air Toxics Concerns**

While the City and Borough of Juneau is not included in the list of counties that meet the disadvantaged community's definition based on meeting the criterion that they contain areas with air toxics concerns, the community does have areas of air quality concern as are noted in the EJScreen "Toxic Releases to Air" supplemental index described above.

c. **Community Engagement Prior to Application and During Project**

i. ***Community Engagement Prior to Application:*** The Port of Juneau Municipal Shore Power project has been a community priority for over a decade, as outlined in multiple community plans developed through extensive public input processes. Beginning with the Juneau Climate Action and Implementation Plan in 2011, numerous plans and initiatives have specifically referenced shore power or "dock electrification." These references are detailed in Section 1.c "Coordination with Complementary Initiatives" on page 5 of this workplan.

Input from potentially affected stakeholders and communities has informed the project's prioritization through various public engagement activities and processes.

Discussions about the Port of Juneau Municipal Shore Power project have taken place at numerous public meetings of the city assembly, as well as various appointed boards, committees, and task forces.

¹¹ <https://dec.alaska.gov/air/air-monitoring/guidance/data-summaries/cruise-ship-monitoring/>

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These discussions have focused on the project's benefits to the community, local financial commitments, and the associated grant applications.

- The Juneau Commission on Sustainability (JCOS) consists of nine members appointed by the CBJ Assembly, and is dedicated to promoting community sustainability, primarily by advising the assembly. JCOS holds regular meetings and subcommittee sessions each month, open to the public, where discussions, recommendations, and activities related to shore power and dock electrification are frequently conducted. (See attached letter of support)
- The CBJ Docks & Harbors Board, comprising nine citizens appointed by the CBJ Assembly, plays a crucial role in the shore power discussion as the manager of the Docks and Harbors enterprise fund. The board, representing stakeholders, has consistently shown support for the project, both in writing and financially. They funded the 2016 Shore Tie Feasibility Study and the 2023 Juneau Cruise Ship Dock Electrification Study. Reports from these studies, along with public comments, were shared through community meetings and documents.
- The Juneau Assembly, comprising nine elected members, governs the city and borough. It holds regular public meetings and subcommittee sessions, ensuring accessibility and offering opportunities for public comment. The electrification of Juneau's public cruise ship docks has been extensively deliberated at meetings of the Assembly Finance Committee, the Public Works and Facilities Committee, the Lands, Resources & Economic Development Committee, and the Committee of the Whole.
- Marine Passenger Fees: Every year, CBJ invites project proposals from city departments and the public to allocate cruise ship Marine Passenger Fee (MPF) proceeds for the upcoming year. These recommendations are compiled into a draft proposal and made available for public feedback. All proposals and comments are then submitted to the Assembly for review during the budget cycle. Since FY23, the Assembly has deliberated and endorsed two requests for MPF appropriation for cruise ship dock electrification, including the approval of \$5 million in May 2024 for the FY25 budget.¹².

Other Community Engagement Practices Prior to Application: A top cruise ship destination, Juneau anticipates hosting 1.64 million cruise visitors in 2024, underscoring the sector's substantial economic influence on the community. Through collaborative efforts between the local visitor industry and CBJ, various community engagement initiatives have been implemented to gather input. This feedback is crucial for ensuring the sustainability of economic benefits and addressing potential environmental or other adverse impacts.

- Tourism Best Management Practices (TBMP): Established in 1997, the TBMP is a collaborative effort among Juneau residents, the visitor industry, and CBJ aimed at minimizing the impacts of tourism while addressing both residents' and industry concerns. Residents can voice their concerns through a designated phone line, email hotline, or online form available at www.traveljuneau.com/tbmp/hotline. These concerns are categorized and published on the TBMP website. Notably, feedback often includes concerns about cruise ship emissions, which are formally reported to the Alaska Department of Environmental Conservation (ADEC) air quality program. According to ADEC's 2023 Air Compliance Annual Report, the ten-year average for public complaints was 34.8 per year, despite minimal cruise visitorship in 2020 and 2021 due to the pandemic.
- Visitor Industry Task Force and Public Surveys: (mentioned in Section 1.c) advised CBJ to conduct periodic public surveys on tourism impacts. In the 2023 telephone survey, which involved over 500 randomly selected Juneau residents, 36% of respondents indicated they were "somewhat" or "very

¹² <https://juneau.org/manager/marine-passenger-fee-program>

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affected" by "Air emissions from cruise ships." Additionally, when asked to prioritize various CBJ tourism activities, shore power ranked second, with 40% of respondents considering it a "High Priority."¹³

- **CBJ and Docks & Harbors Stakeholder Communications:** Consistently disseminates information about upcoming and current projects, including shore power, through diverse channels. These include social media, websites, traditional media, public notices, email newsletters, printed materials like posters and flyers, and text message updates.

For this application, CBJ Docks & Harbors organized a "Juneau Harbors Infrastructure Fair" in April 2024. The public was invited to learn, ask questions, and voice concerns about proposed harbor projects, including cruise ship shore power. This widely promoted event, held at a central location, featured tables, project briefings, and a Q&A session. It attracted a diverse audience, including harbor users, local leaders, regulatory agencies, trade unions, and indigenous organizations like the Central Council of Tlingit & Haida Indian Tribes of Alaska, the Douglas Indian Association, and Goldbelt, Inc.

Additionally, JCOS hosted a Sustainability Session focused on the cruise ship shore power project. This panel discussion and Q&A session, held at the local library with virtual participation options, included representatives from CBJ, JCOS, and the local electric utility, AEL&P.¹⁴

Community members were invited to complete a survey to provide input on the project's priorities and benefits. The majority of respondents (55%) were from the downtown port area, of whom 82% supported dock electrification. Additionally, 79% agreed or strongly agreed that electrification would improve their quality of life. They identified benefits such as reduced greenhouse gas emissions, improved air quality, lower electricity costs, and job creation. CBJ also reached out to key stakeholders representing low-income and underserved groups, including Tlingit & Haida, Bartlett Regional Hospital, and Southeast Alaska Regional Health Corporation (SEARHC), among others. Goldbelt Corporation, an Alaska Native Urban Corporation, highlighted the emission impacts on their Native shareholder workers and downtown Juneau businesses in their letter of support.

"First and foremost, dock electrification provides environmental benefits and sustained reduction of smog, particulates, and harmful emissions that diesel exhaust can cause our shareholders and employees who work in the Juneau tourism industry.

The Goldbelt Tram (a Tlingit culture focused excursion) is an iconic part of Juneau's downtown tourism industry, and it is an electrically powered tramway located steps away from the public cruise ship terminals slated for electrification. Dock electrification eliminates all the cruise ship smoke and emissions, thereby significantly improving the visitor experience on our Tram and providing a healthier work environment for our shareholders and employees."

- McHugh Pierre, Goldbelt President and CEO

ii. **Community Engagement During Project**

If awarded, the project and corresponding funding appropriation will be reviewed, discussed and adopted by the Assembly at no less than two public meetings with opportunity for public testimony. All funding appropriations are also reviewed by the Systemic Racism Review Committee¹⁵ before adoption.

During the planning and prior to the implementation of the project, the CBJ will develop a robust communications plan including multi-channel outreach to key stakeholders as well as the broader community impacted by the project.

¹³ <https://juneau.org/wp-content/uploads/2023/12/CBJ-Tourism-Survey-2023-Report-12.11.23.pdf>

¹⁴ <https://juneau.org/newsroom-item/learn-about-dock-electrification-at-jcos-sustainability-session-on-april-18>

¹⁵ <https://juneau.granicus.com/boards/w/c9bbc06356d368e8/boards/38038>

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Central to this plan will be the distribution of project updates and invitation for community input via an expansion of the successful communication tools and techniques deployed prior to the application.

These tactics include but are not limited to the following:

- Project briefings at public meetings, including all those noted in the previous section (Assembly, JCOS, Docks & Harbors Board) related to key project milestones noted in this application,
- Coordination with AELP (electric utility) to communicate project updates and benefits to their customers, including Cost of Power Adjustment credits¹⁶,
- Coordination with Travel Juneau, the Cruise Line Industry Association (CLIA), the Juneau Chamber of Commerce and the Downtown Business Association to communicate project updates and benefits to their membership,
- Continued monitoring of the TBMP hotline for community concerns and input,
- Creation of project-specific webpage and contact form to serve as the primary contact page and source of information for the project,
- Ongoing outreach via established CBJ and Docks & Harbors communications channels including social media, traditional media outreach, public notices, email newsletters, printed posters and flyers, and text messages and webpage updates.
- In addition to the budget for public engagement and outreach outlined for this application, the CBJ City Manager's Office and Docks & Harbors both have staffing and financial resources committed to the community engagement efforts noted above.

d. Long-Term Community Engagement

CBJ will employ various communication channels to update the community on the project status, benefits, and outcomes during and for at least five years after its completion. Community engagement is a priority for CBJ, exemplified by the Docks & Harbors division and outlined in Section 4.c. CBJ has established advisory committees like the Docks & Harbors Board and the Juneau Commission on Sustainability (JCOS) to facilitate two-way engagement with residents. These committees will be instrumental in sharing project outcomes and gathering feedback for ongoing improvement. However, CBJ recognizes the need to enhance the accessibility and inclusivity of its engagement methods. The City Manager is committed to enhancing meaningful, inclusive, and accessible community engagement efforts across all CBJ departments, including port operations, by increasing resources and implementing a formal communications and public outreach strategy. This expansion of resources will provide additional training and tools for the Docks & Harbors division and the shore power project.

Section 5 – Project Sustainability

The Port of Juneau Municipal Shore Power Project is a critical step forward in ongoing and future emission reduction planning. Existing and forthcoming studies and decarbonization plans will help to ensure that emission reduction planning continues to be a standard practice at the port.

a. Baseline port mobile source inventory for greenhouse gases, PM2.5 and/or NOx (5)

Existing data sources, including real-time data from the Alaska Department of Environmental Conservation (ADEC) Air Quality Index, offer insights into air quality at the Port of Juneau, supporting the rationale and objectives of this project. However, a comprehensive post-2019 baseline port-specific mobile source inventory for greenhouse gases (PM2.5 and NOx) is currently lacking. CBJ commits to completing this baseline inventory in alignment with EPA Port Emissions Inventory Guidance at least one year before the project period ends.

¹⁶ <https://www.aelp.com/Energy-Conservation/Cost-of-Power-Adjustment>

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CBJ has successfully employed qualified contractors to conduct emissions inventories, exemplified by the multi-year Energy Use & Greenhouse Gas Emissions Inventories for the entire borough. However, these inventories only cover the energy purchased by cruise ships while in Juneau, which is limited as most ships refuel at the start of their voyage. To fulfill the port mobile source inventory, CBJ will follow a competitive procurement process to select a contractor, with a budget allocated for this activity in the project budget.

Additionally, CBJ will install sensors in strategic locations near the port to monitor gas emissions. While ship emissions combine with local heating and vehicle emissions, the primary method involves recording electrical energy consumption when ships are connected to the grid, providing more accurate emissions data. These recordings will include details such as Dock, Ship Name, Time in Port, Time Connected to Shore Power, Peak Power Demand, and Energy Consumed, submitted to the EPA at the end of each season.

Daily reports on emissions in downtown Juneau, including environmental conditions like precipitation and forest fire smoke, will be collected and submitted alongside electrical energy consumption reports. Sensors will be installed at least one year before shore power connections commence to establish baseline conditions.

b. Plan to reduce port mobile source emissions

CBJ has the public support, staffing and commitment to promote and continue its efforts to reduce port emissions even after EPA funding for this project has ended. Several existing publicly available plans commit the CBJ and Port of Juneau to reducing port mobile source emissions. These plans and specific emissions targets will be revised and updated prior to the end of the project period as is noted below.

The Juneau Climate Action and Implementation Plan (JCAP) outlines targets for reducing greenhouse gas (GHG) emissions by 25% by 2032 and provides recommendations for achieving these goals, including measures aimed at decarbonizing Juneau's marine sector.

In addition to the planned port-specific mobile source inventory mentioned earlier, CBJ is finalizing the third year of a three-year Energy Use and Greenhouse Gas Emissions Inventory covering 2021 to 2023. This inventory aims to understand the community's energy and emissions landscape post-pandemic and assess its alignment with the 2011 JCAP targets.

The results of these inventories will inform a revision of the JCAP, incorporating updated targets for reducing greenhouse gases, PM2.5, and/or NOx emissions. CBJ is committed to completing this revision by December 2028.

Comprehensive Plan for the City & Borough of Juneau: The Comprehensive plan is a long-range blueprint designed to guide the growth, development, and conservation of valued resources over a 20-year period. It was adopted in 2013 following a collaborative multi-year process incorporating input from diverse sectors of the community with the support of, and coordination by, CBJ staff¹⁷. The Comprehensive Plan encompasses various aspects such as sustainability, air quality, transportation, port operations, and renewable energy. It incorporates recommendations from the JCAP aimed at reducing Juneau's energy consumption and carbon footprint.

CBJ plans to initiate a revision of the Comprehensive Plan in the summer or fall of 2024, accompanied by a multi-year public engagement process to gauge community needs and priorities. This update will integrate insights from recently published and revised plans and studies, including the updated JCAP and related research mentioned earlier. CBJ aims to finalize the Comprehensive Plan Update well before the project period concludes.

¹⁷ <https://juneau.org/community-development/comp-plan-2013>

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Pacific Northwest to Alaska Green Corridor (PNW2AK): The PNW2AK First Mover group is currently in the first phase of a multiphase feasibility study. The Project Charter envisions that the study will ultimately result in the establishment of specific decarbonization commitments and investments from First Movers and other stakeholders to implement identified targets and actions needed to bring about a green corridor. Phase 2 of the feasibility study will “identify targets and actions needed” and Phase 3 will “establish commitments and investments needed by First Movers and other stakeholders. These phases and resulting targets and commitments are anticipated for completion prior to the end of the project period.”

Section 6 – Job Quality and Equitable Workforce Development

Juneau, a remote and rural community, relies heavily on its maritime resources due to its lack of road connectivity with the rest of the state. Maritime infrastructure plays a crucial role in the local economy and is essential for sustaining and growing tourism. The proposed Port of Juneau Municipal Shore Power project is pivotal in achieving these objectives and in preserving and expanding jobs in the tourism sector. By introducing new and modified port operations, the project will facilitate the creation of high-quality, family-sustaining jobs within Juneau's port community, aligning with the goals outlined in Executive Order 14082 and Section 133 of the CAA.

a. Supporting High Quality Jobs

CBJ is dedicated to fostering high-quality, family-sustaining jobs, in line with the US Department of Labor (DoL)'s Good Jobs Initiative, which includes supporting the right to join a union freely and fairly. Collaborating with local unions, such as the International Brotherhood of Electrical Workers (IBEW) Local 1547, is crucial for the success of not only this project but also future energy efficiency and beneficial electrification initiatives in the port and across the community. By demonstrating a shift from imported fuels to locally-produced electricity, this project encourages further investment in Juneau's clean and abundant energy resources, along with the specialized, well-paying jobs they offer.

The labor required for local energy projects in Juneau consists of family-wage earning trade and unionized jobs, reflecting the vision of expanding the workforce by ensuring equitable access to high-quality training, education, and services that lead to promising careers within the community. These trade and utility positions are filled through apprenticeships and on-the-job training, accessible to all with prevailing wages and benefits from day one.

Worker and Labor Engagement:

As noted in the attached letter of commitment from the IBEW Local 1547, CBJ has partnered with union-labor on many successful projects that benefit the community and were executed in a timely manner. CBJ will also partner with the IBEW in the proposed shore power project. As an example of CBJ's commitment to supporting union labor, CBJ crafted and approved an ordinance that addresses use of union labor on complex projects that have a construction estimate of \$4.6M or greater. The Project Labor Agreement ordinance was developed and implemented to foster and support the growth and retention of skilled trade workers in the Juneau community. CBJ also follows all State of Alaska requirements for wage rate compliance and includes Alaska Department of Labor wage rate compliance regulations in all contracts over \$25,000... Utilizing IBEW Local 1547 members throughout the life of this and related projects will help CBJ meet its zero emissions goals.”

Training workers on new equipment and infrastructure:

The workforce expansion necessary to support shore power connections at the two CBJ docks involves adding workers to operate the deployment system and coordinate connections with ships. Since multiple cruise lines use the CBJ docks, it's essential to train and employ a unified group to ensure smooth operations and safety.

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The project is expected to create 10-15 new full-time equivalent seasonal positions for operating equipment and managing shore power infrastructure. CBJ will outsource staffing management, with local organizations capable of fulfilling this role including Alaska Native and minority owned businesses. Funds allocated in the project budget will support workforce development and training programs for both contracted staff and CBJ personnel managing the contract.

CBJ port staff will receive specialized training from the shore power equipment manufacturer, project engineers, and AEL&P. This includes developing an operations and maintenance manual and training materials for all workers involved in shore power operations.

Training for personnel involved in shore power connections will be conducted by AEL&P and the equipment manufacturer. AEL&P will provide training on connecting medium voltage equipment and synchronizing it with the utility grid, prioritizing safety throughout. Additional operators will be required to manage shore power connections at the CBJ docks, likely employed seasonally to cover nearly full-time hours.

Overall, safety and efficient operations will be ensured through comprehensive training provided by both AEL&P and the equipment manufacturer, facilitating smooth implementation of shore power connections at the CBJ docks.

Pay and benefits:

To ensure fair compensation, the project installation and operation will comply with Title 23 regulations, including the Davis-Bacon Act and prevailing wage requirements. These standards guarantee appropriate pay for workers and support a high-quality workforce. All project contracts must adhere to these guidelines as per CBJ procurement requirements.

Union labor will be utilized for the project, ensuring workers receive family-sustaining wages and benefits. CBJ also maintains high standards for its government workforce, with employees represented by various collective bargaining units. The staff supporting this project are represented by the Marine Engineers' Beneficial Association (MEBA) and receive family-sustaining wages and comprehensive benefits, including health coverage, retirement contributions, predictable schedules, paid time off, and more.

Additionally, CBJ provides relevant OSHA and health and safety training to address workplace hazards, along with anti-harassment training and protections for all employees.

Worker Safety:

In addition to the relevant OSHA, health and safety trainings noted, CBJ and our contracted partners will deploy a number of measures to ensure worker safety.

- CBJ requires all contractors to comply with all local, state and federal OSHA and other safety requirements as applicable, and will include the same requirements for the installation, operation and management of this project and resulting infrastructure.
- Licensed and certified linemen and electricians will conduct all maintenance and operations that may involve working with high-voltage equipment. They will receive specialized training from the deployment system manufacturer and AELP prior to any work on the project.
- While workers that are only responsible for operating the cable management system when ships connect and disconnect will not directly handle high voltage equipment, they will be trained on the dangers and safety measures and PPE required as a precaution.
- All workers operating over water at the port will receive marine safety training and be provided the necessary PPE and equipment required to ensure their safety.
- CBJ and Port of Juneau staff will regularly communicate with contracted staff and/or their representatives to ensure confidence in worker safety and respond to any concerns or feedback.

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b. **Expanding access to high-quality jobs, including for people in low-income and disadvantaged near-port communities**

To foster diversity and inclusivity in contracted projects, all project solicitations will actively encourage participation from Disadvantaged Business Enterprises (DBEs). Local union partners, along with their registered apprenticeship and training programs, engage in outreach efforts, such as attending job fairs and career programs facilitated by local tribal organizations, to increase participation from underrepresented and disadvantaged populations. This approach ensures equal opportunities for individuals from all backgrounds to access workforce development opportunities and high-quality jobs.

CBJ's recruitment, hiring, and employee retention programs align with the Department of Labor's Good Jobs Principles. Job postings are shared with local minority-owned and operated organizations to encourage applications from members of those communities. CBJ also addresses barriers to employment by providing free bus passes, offering six weeks of paid parental leave, and providing up to \$5000 in childcare financial assistance to employees.

By prioritizing fair compensation, training opportunities, and promoting inclusivity through DBE participation and outreach efforts, the project demonstrates its commitment to job quality in Juneau. These measures contribute to economic growth, job creation, and the empowerment of underrepresented groups, fostering a more inclusive and prosperous community.

Section 7 – Project Resilience to Climate Impacts

CBJ will employ skilled contractors, integrate regional and local best practices, and utilize climate impact modeling to ensure the proposed shore power infrastructure meets its objectives amidst changing climate conditions.

Regarding land-based climate impacts, Juneau faces potential risks from landslides, avalanches, and flooding due to increased frequency and severity of heavy precipitation events. These risks were considered during site selection and design. To mitigate flooding hazards, floating structures designed to withstand expected water levels and currents generated by tsunamis will be utilized. Additionally, comprehensive geotechnical investigations and use of historically stable ground will mitigate mass wasting risks.

Despite concerns about rising sea levels elsewhere, Juneau experiences isostatic rebound, where its land masses are rising relative to sea levels at a rate of about 1/2 inch per year. This process, ongoing since the ice age, is expected to continue for another 10,000 years. Therefore, at the end of the project's 50-year design life, fixed structures will be approximately 25 inches higher relative to mean sea level compared to their initial construction. While this adjustment is factored into the design, it is considered negligible at the Port of Juneau, where tidal fluctuations reach up to 25 feet.

Section 8 – Budget

CBJ is requesting \$58,330,000 in EPA Clean Ports ZE Technology Deployment Competition funding in the small water ports category (Tier B) for the final design, construction and installation of shore power at two municipal cruise ship docks in the Port of Juneau. CBJ will provide \$6,570,236 in non-federal cost share, which is 10.12% of the total proposed project cost (\$64,900,236).

Non-federal cost share funding will be provided by the City and Borough of Juneau, as was committed by Assembly Resolution 3060, adopted on May 13, 2024. These funds were collected as Marine Passenger Fee proceeds and allocated by the CBJ Assembly to this project in FY23 and FY25. The following table outlines the program costs by specified category:

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Line Item & Itemized Cost	EPA Funding	Non-Federal Cost Share
Personnel		
(1) Port Engineer @ \$61/hr x 5 hrs/wk x 208 wks	\$0.00	\$63,440.00
(1) Deputy Port Engineer @ \$45/hr x 12 hrs/wk x 182 wks	\$0.00	\$98,280
(1) Admin Officer @ 1hr/wk x 208 wks	\$0.00	\$0.00
Contract Specialist @ \$60,000/yr x 1hr/week x 30 wks	\$0.00	\$0.00
Community Engagement Staff @ 0.5hr/wk x 182 wks	\$0.00	\$0.00
TOTAL PERSONNEL	\$0.00	\$ 161,720.00
Fringe Benefits		
Full-time Employees @ 30% of Salary and Wages x Total Personnel - Retirement, Health Benefits, FICA	\$0.00	\$48,516.00
TOTAL FRINGE BENEFITS	\$0.00	\$48,516.00
Travel		
	\$0.00	\$0.00
TOTAL TRAVEL	\$0.00	\$0.00
Equipment		
(1) Shore Power Transformer, 16MVA, 69kV Pri/11 & 6.6kV Sec, w/ALTC, liq. Filled, fan cooled – Alaska Steamship Dock	\$5,000,000.00	\$0.00
(1) Shore Power Transformer, 16MVA, 69kV Pri/11 & 6.6kV Sec, w/ALTC, liq. Filled, fan cooled – Cruiseship Terminal Dock	\$0.00	\$5,000,000.00
TOTAL EQUIPMENT	\$5,000,000.00	\$5,000,000.00
Supplies		
Printed materials for public outreach and engagement	\$0.00	\$4,500.00
Printed materials for Workforce Development/Training	\$0.00	\$4,500.00
TOTAL SUPPLIES	\$0.00	\$9,000.00
Contractual		
Civil & Structural Design (Cable Deployment, floats, etc.)	\$2,955,000.00	\$0.00
Baseline Port Mobile Source Inventory for GHG, PM _{2.5} , NO _x	\$0.00	\$10,000.00
Environmental Monitoring and Sensor Installation	\$0.00	\$100,000.00
Workforce Development & Training	\$0.00	\$95,500.00
Public Engagement & Outreach	\$0.00	\$45,500.00
TOTAL CONTRACTUAL	\$2,955,000.00	\$251,000.00
Construction		
2 x Shore Power Main Switchgear (11kV & 6.6kV)	\$2,400,000.00	\$0.00
2 x Power factor correction capacitor bank	\$2,000,000.00	\$0.00
2 x Shore Power 11 kV & 6.6kV conduits, conductors feeder conduit bank	\$2,000,000.00	\$0.00
2 x Neutral Grounding and Earthing Switch	\$1,900,000.00	\$0.00
4 x Neutral Grounding Resistors (2 per dock)	\$300,000.00	\$0.00
2 x Neutral Grounding Resistor Selector Switch Gear	\$900,000.00	\$0.00
2 x Electrical Interconnection btwn shore power delivery floating docks	\$300,000.00	\$0.00
2 x Echelon movable shore power outlet connection interface assembly	\$1,500,000.00	\$0.00
2 x Shore Power Cable Manager Crane Unit	\$0.00	\$500,000.00
2 x Concrete Electrical Vaults	\$0.00	\$200,000.00
2 x Shore Power Cable Delivery Floating Dock (2 floats at 2100sf each)	\$3,000,000.00	\$0.00
Materials for Shore Power switchgear & transformer concrete pads, access road and site improvements	\$3,000,000.00	\$0.00
10 x Piles, including frame, transition plates, pile anodes	\$750,000.00	\$0.00
Steel catwalk & ramps to connect the shore power delivery to floating docks (\$5000/linear ft x 125 LF)	\$625,000.00	\$0.00
Shore Power System (Civil/Structural) Labor & Installation costs	\$7,960,000.00	\$0.00

PORT OF JUNEAU MUNICIPAL SHORE POWER PROJECT (SMALL WATER PORT)

WORKPLAN

<i>Shore Power System (Electrical) labor and Installation costs</i>	\$23,740,000.00	\$0.00
TOTAL CONSTRUCTION	\$50,375,000.00	\$700,000.00
Other		
Permit Applications	\$0.00	\$400,000.00
TOTAL OTHER	\$0.00	\$400,000.00
Indirect Charges		
	\$0.00	\$0.00
TOTAL INDIRECT	\$0.00	\$0.00
TOTAL FUNDING	\$58,330,000.00	\$6,570,236.00
TOTAL PROJECT COST		\$64,900,236.00

a. Budget Detail:

- **Personnel:** The attached budget spreadsheet above notes CBJ staff, salaries and estimated hours that are anticipated to work on the project. There are \$0 budgets associated with several positions will contribute to the project, but for which are not requesting funding for their time on the project. The Port Engineer will serve as the project manager, assisted by the Deputy Port Engineer, throughout the duration of the project. The Port Engineer will coordinate with the EPA and other agencies and CBJ divisions and departments to ensure project success and timely reporting of project status and community benefits. The Deputy Port Engineer will serve as the on-the-ground project coordinator, working closely with contractors throughout the construction and Installation.
- **Fringe Benefits:** The attached budget spreadsheet notes Fringe Benefits for the staff that are anticipated to work on the project and for whom we anticipate requesting CPRG funding for time spent on the project. These numbers were calculated at a rate of FTE x 30% of salary.
- **Travel:** CBJ does not anticipate incurring or requesting funding for any travel costs for this project. Inspection of construction materials prior to arrival on site will be performed by members of the contracted design team whose specialized knowledge will be required for inspection.
- **Equipment:** CBJ will directly procure two transformers required to link the shore power pedestals and supporting infrastructure to the electricity distribution network. One transformer will be financed using non-federal matching funds for the Alaska Steamship Dock, while the other will be funded through requested EPA funds for the Cruiseship Terminal Dock. These transformers, totaling \$5,000,000 each, are not classified as "grid upgrades" as they will be owned, operated, and maintained by CBJ, exclusively for the municipal shore power system in this project. All other equipment purchases exceeding \$5000 will be acquired through selected contractors for installation at the project site, as specified in the Interim General Budget Development Guidance for Applicants and Recipients of EPA Financial Assistance. These costs are encompassed in the "Construction" category.
- **Supplies:** To support the proposed workforce development and training activities, CBJ has budgeted \$4,500 in non-federal matching funds for printed materials. These may include but are not limited to recruitment and training event promotional flyers, printed operation and maintenance manuals and other condensed instructional guides.
- To support the proposed public outreach and engagement activities, CBJ has budgeted \$4,500 in non-federal matching funds for printed materials. These may include but are not limited to community event promotional flyers and posters, mailed Informational pieces to AELP customers and impacted community organizations, printed brochures and other materials describing the project and opportunities to participate for distribution at community events.
- **Contractual:** CBJ anticipates conducting five (5) contract activities as part of this application:
 1. Civil and Structural Engineering and Design
 - a. Estimated Cost: \$2,955,000 (EPA Funding)

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WORKPLAN

- b. Proposed Duration: 10 months
 - c. Proposed Procurement Method: Competitive
 - d. Description: *CBJ will conduct a competitive procurement process aligned with EPA Best Practice Guide to engage a design consultant to provide civil and structural engineering and design for the deployment of the municipal shore power infrastructure. This includes the design of the access road, cable deployment system, floating pontoons, piles, ramps and catwalks needed to access and deploy the shore power. Electrical design is in progress and being completed through a separate contract utilizing local (non-federal) funds outside of the scope of this proposal but will be completed in concert with the coordinating civil and structural components. Resulting designs will be used to procure the specified transformers and draft bid documents for the Construction aspect of the project. Design will utilize BABA compliant equipment and materials, as is required for Clean Ports program funding.*
2. Baseline Port Mobile Source Inventory for GHG, PM2.5, NOX
- a. Estimated Cost: \$10,000 (Non-federal Match)
 - b. Proposed Duration: 7-12 months for study and final report
 - c. Proposed Procurement Method: Competitive
 - d. Description: *CBJ will contract with a qualified organization to complete an inventory of port mobile source emissions for completion a minimum of one year prior to the project completion.*
3. Environmental Monitoring Sensor Equipment and Installation
- a. Estimated Cost: \$100,000 (Non-Federal Match)
 - b. Proposed Duration: Ongoing through the life of the project.
 - c. Proposed Procurement Method: Competitive
 - d. Description: *CBJ will contract with a qualified organization to identify locations and install sensors to monitor air quality. We anticipate that the \$100,000 estimated cost will cover the installation of sensors and the first year of data collection. Subsequent annual costs are expected to be readily covered by local funding.*
4. Workforce Development & Training
- a. Estimated Cost: \$95,500 (Non-Federal Match)
 - b. Proposed Duration: 9-12 months to develop program, conduct initial trainings
 - c. Proposed Procurement Method: Competitive
 - d. Description: *CBJ will conduct a competitive procurement process aligned with EPA Best Practices Guide to engage a qualified consultant to develop and comprehensive operations and maintenance manual and safety training program to develop the workforce required to operate and maintain the shore power infrastructure. The contract will include "Train the trainer" training so that CBJ and it's partners can train new staff after the project period concludes.*
5. Public Engagement and Outreach
- a. Estimated Cost: \$45,500 (Non-federal Match)
 - b. Proposed Duration: 12-24 months to develop outreach plan, materials, coordinate community events
 - c. Proposed Procurement Method: Competitive
 - d. Description: *CBJ will conduct a competitive procurement process aligned with EPA Best Practices Guide to engage a qualified consultant to develop a strategic public engagement plan and communication materials that prioritizes meaningful participation*

PORT OF JUNEAU MUNICIPAL SHORE POWER PROJECT (SMALL WATER PORT) WORKPLAN

from impacted communities throughout the project period. This contract will be supported by and utilize the communications efforts and channels of the CBJ and Docks & Harbors staff.

- **Construction**

Total Construction Cost: \$51,075,000.

CBJ will use the design and engineering provided by the chosen consultant to create and advertise construction bid documents, seeking construction bids through a competitive process. Bidding will allow ample time for the contractor to purchase long lead-time materials and equipment, ensuring readiness for construction the following summer. The selected contractor will handle all site improvements, including constructing an access road to the power conversion station for connection to the 69kV electrical network. They will also procure necessary equipment and install shore power pedestals, deployment systems, and infrastructure upgrades from the electrical distribution network to the docks' floating pontoons and cable management systems.

All equipment needed for the project's construction will be procured by the selected contractor(s) and listed in the Construction budget category. Detailed descriptions of these items, which include two of each for both docks, are provided in the following section.

2x Shore Power Main Switchgear provides the main on/off switch which controls power to the shore power system. The main switchgear is capable of being monitored and controlled remotely by the Utility to connect and disconnect the ships.

2x Power Factor Correction Capacitor Bank provides the means adjust the AC power frequency to sync between the power grid and the ship electrical system.

2x Shore Power 11 kV & 6.6 kV Conduits & Conductors provides the cables between the power conversion station and the port. Conductors will be installed in conduits for physical protection and personnel safety.

2x The Neutral Grounding and Earthing Switch connects all shore power conductors to the ground, safeguarding personnel from high-voltage exposure in case of accidental energization. The ship's electrical engineer ensures the system is grounded before handling cables.

4x Neutral Grounding Resistors (2 per dock) will limit grounding currents to safe levels should the system be energized during connection.

2x Neutral Grounding Resistor Selector Switch Gear will connect the grounding resistor during ship connection and disconnect when all cables are connected.

2x Echain movable shore power outlet connection interface assembly provides the means for the cable manager crane unit to move freely without chafing the electrical conductors.

2x Shore Power Cable Manager Crane Unit handles the electrical conductors and conveys the electrical connectors to the portal on the side of the ship where the connection takes place.

2x Concrete Electrical Vaults are located on shore to provide a location to transition from the conductors used onshore and the heavy-duty conductors used offshore.

2x Shore Power Cable Delivery Floating Dock provide a location alongside the ship for the cable management crane units to be installed.

Shore Power switchgear & transformer concrete pads, access road and site improvements relate to the civil engineering improvements required to install the switchgear and transformers.

10x Piles, including frame, transition plates, pile anodes are required to fix the two floating docks alongside the ships. The anodes prolong the life of the pilings installing in the ocean.

Steel catwalk & ramps to connect the shore power delivery to floating docks provide operator access to the two floating docks to operate and maintain the system.

PORT OF JUNEAU MUNICIPAL SHORE POWER PROJECT (SMALL WATER PORT) WORKPLAN

Construction labor costs and installation associated costs are separated into two categories – Electrical system construction and Civil/Structural construction. These items include the requisite costs to support the successful construction of both docks.

Other + Indirect Costs

CBJ anticipates \$400,000 in permitting costs for the project. These include hiring an experienced consultant to manage the NEPA process as well as preparing the permit application for the USACE permits required for in-water work.

CBJ does not anticipate incurring or requesting funding for any Indirect costs for this project.

b. Expenditure of Awarded Funds

CBJ's finance and contracts department, well-equipped and experienced, issues about forty qualifications-based selection (QBS) solicitations for professional services each year through the Public Works and Engineering Department. These solicitations vary in value and complexity, ranging from simple planning reports to intricate design proposals for construction projects.

Federal grant funding often adds complexity to the procurement process. CBJ handles this adeptly, managing roughly four to six procurements annually that require compliance with applicable Federal CFR provisions and contract requirements. CBJ project managers collaborate closely with the EPA and the finance and contracts teams to ensure timely and efficient fund utilization within the grant period, adhering to guidelines outlined in 2 CFR 1500.10.

c. Reasonableness of Costs

A detailed breakout of project costs and justifications of requested funding are outlined in the budget table and narrative in Section 8.a of this application, as is a description of the source and amount of non-federal matching funds committed to the project.

The project meets the target apportionment among cost categories, with expenses related to the purchase and installation of shore power infrastructure making up 94% (\$61,075,000) of the total project budget. All costs related to the purchase and installation of shore power infrastructure are noted in italics in the budget table of this section. The costs proposed will comply with the municipality's purchasing procedures and all procured costs will comply with 2 CFR 1500.10.

Section 9 – Attachments

Please see the files included in the "Other Attachments" form, including the Supplemental Application Template, Utility Partnership Template, Letters of Commitment and CBJ Assembly Resolution 3060.

Attachments:

Form Name / Attachment File Name (Click to Download PDF Attachments)

File Size

FORM: Application for Federal Assistance (SF-424) [V4.0]

FORM: Budget Information for Non-Construction Programs (SF-424A) [V1.0]

FORM: EPA Form 4700-4 [V5.0]

FORM: EPA KEY CONTACTS FORM [V2.0]

FORM: Grants.gov Lobbying Form [V1.1]

FORM: Other Attachments Form [V1.2]

Attachments-2024-clean-ports-supp-applic-template-2024-04_CBJ Port of Juneau Shore Power.xlsx

Attachments-Res3060_Clean_Ports_Grant_Program_Final-SIGNED.pdf

Attachments-Signed 2024-clean-ports-uti-partner-agreement-2027-04-30_AELP.pdf

Attachments-AELP Letter of Commitment for CBJ Clean Ports 2024.pdf

Attachments-JCOS Clean Ports Letter of Commitment .pdf

Attachments-05212024 Juneau Shore Power Letter_CLIA.pdf

Attachments-2024-05-17 Delegation EPA Grant Support Dock Electrification.pdf

Attachments-2024 Dock Electrification CBJ Support Letter_Goldbelt.pdf

Attachments-AMML - CBJ Clean Ports Grant LOS.pdf

Attachments-TH LOS for CBJ EPA Clean Ports Grant.pdf

Attachments-Clean Ports Grant Commitment Letter Carnival - Executed - 20May24.pdf

Attachments-Port of Seattle CPP Support Letter for CBJ_SPM Signed.pdf

Attachments-Clean Ports Support Letter_BRH.pdf

Attachments-CBJ Clean Ports Grant_Support Letter_SEARHC_SIGNED.pdf

Attachments-IBEW Letter of Commitment -Clean Ports Grant Program - 5-28-2024_1.pdf

FORM: Project Narrative Attachment Form [V1.2]

Attachments-Workplan_CityandBoroughofJuneau_CleanPorts.pdf

1.3 MB

963.5 KB

1.2 MB

294.6 KB

153.0 KB

109.3 KB

197.5 KB

97.2 KB

174.4 KB

304.1 KB

142.2 KB

81.3 KB

154.6 KB

188.8 KB

914.0 KB

890.2 KB