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December 31, 2014

Kim Kiefer, City Manager  
City and Borough of Juneau  
155 South Seward Street  
Juneau, AK 99801

RE: 2015 Marine Passenger Fee Proposal: \$250,000 Electrification Design and Engineering-for 16B Cruise Ship Berths.

Dear Ms. Kiefer,

Juneau Hydropower, Inc. (JHI) an independent power producer and private Juneau corporation developing the Sweetheart Lake Hydroelectric Facility located in the City and Borough of Juneau. The Federal Energy Regulatory Commission has accepted JHI's license application for this hydroelectric project. JHI expects to begin construction in 2016 creating several dozen construction jobs and providing Juneau's economy an additional 19.8 Megawatts (MW) of cost effective electrical energy capacity and 116,000,000 kilowatt hours (kWh) for Juneau in late 2017 early 2018. Sweetheart Lake hydroelectricity will provide sustainable energy security for the Capital City for the next 100 years and insulate Juneau from fossil fuel and natural gas volatility. Therefore, we believe it is a strategic community value to begin planning to migrate, over time, fossil fuel consumption to lower cost and locally sustainable hydropower electricity. Engineering and design of our 16B cruise ship berths is essential to ensure that Juneau's cruise facilities take full advantage of our new capacity and sustainable energy to lower cruise ship industry port costs, now and into the future, while simultaneously providing economic benefits, expansion of Juneau's economy and job base while providing the environmental benefits that are associated with shore to ship electrification.

The construction contract for our new 16 B cruise docks has been issued and construction will soon be underway. Many citizens of Juneau, through an informal poll, believe that these docks, based on past public discussions, would be electrified to allow cruise ship electrification. This is not exactly the case and there is confusion in the community. The CBJ needs to clarify and explain that contrary to what has been previously expressed or implied from various sources that the 16 B docks are **NOT** currently being planned for electrification during construction and are **not** designed for shore to ship electrification. In fact, only conduit and shore planning has occurred but **not** the requisite dock engineering and design required to ensure that our floating dock system will safely, reliably and securely handle the weight loads of an electrical festoon shore to ship connection cable system, as well as properly mate electrical appurtenance systems with cruise ships safely to industry standards. Therefore, perhaps it would be a prudent investment to protect our larger community investment in our 16B dock system to ensure and safeguard that the 16B design can safely and proactively enable future shore to ship power connections.

**Request.** Per your call for public proposals for use of 2015 Marine Passenger Fees, I would like to submit for community review and Assembly consideration for an investment up to \$250,000 dollars for shore to ship electrical design engineering to enable electrification for the 16B berths as part of our new waterfront upgrade and expansion. An additional \$250,000 engineering and design investment compared to the overall \$53.4 million budget equates to a mere additional .05% increase in cost...a very inexpensive proactive piece of insurance to ensure that our new dock system can be effectively electrified and provide the social, economic and environmental benefits to our community in the near future.

Designing and then electrifying Juneau's upcoming waterfront cruise dock upgrades would provide:

A. Improved Juneau Visitor Experience- Maximize the downtown Juneau tourist experience providing: the public benefit of less visual smoke, emissions and vibratory noise in our downtown area during the tourist season while also providing economic benefits to Juneau's tourist shops and eating establishments. Less noise, vibration, and emissions would promote Juneau's community values while providing an improved visitor experience.

B. Reduction of-port costs for the cruise industry while making the Juneau Port more competitive to the cruise industry. Shore the Ship power saves the cruise line operators several hundreds of thousands of dollars in documented savings over the course of a tourist season. Displacing more expensive fossil fuel burned in port with cleaner, locally produced and lower cost Juneau generated hydropower; provides substantial cost savings to cruise line operations.

C. Increases CBJ tax receipts. Additional revenue and receipts for electrical sales made in Juneau are taxed in Juneau whereby this money (and sales tax) stays and circulates in the Juneau economy. Less vibratory noise and emissions in our downtown area could result in long term property value increases for properties adjacent to cruise ship berths.

D. Creates family wage jobs. The connection and disconnection of shore to ship power requires skilled and professional labor. These additional skilled labor job activities create employment opportunities and furthers adds these wages to the Juneau economy.

E. Provides nexus for a cleaner more productive work environment. Creates a cleaner and better working conditions for shop owners, visitor industry workers, longshoremen, non-visitor industry workers in the downtown area and Juneau library visitors by reducing particulates and vibratory noise in the 16 B dock areas.

F. Supports and implements action steps toward meeting the community target of reducing Green House Gas (GHG) emissions by 25% by 2032 established in CBJ Resolution 2593 Climate Action and Implementation Plan.

G. Electrification of 16B helps market Juneau to our visitor industry. Juneau was the first port in the world to pioneer and provide electrification at the Franklin dock in 2001. Electrifying all cruise line berths with sustainable and renewable shore power and the design, engineering and electrification of 16B can assist Juneau in its community marketing efforts as a world class port.

H. This is a Marine Passenger Fee investment request, not an expenditure. This key investment will yield multiple short and long term health benefits and financial dividends for a wide spectrum of community interests while supporting our “community values”.

**Historical Background and Context:** Not so long ago, Juneau led the world in the development of and first use of this shore to ship power technology. In 2001, Princess Cruise Line with AEL&P assistance made history in creating the first shore to ship power installation of its kind in the world. This Juneau borne initiative and ground-breaking technology has now grown to include systems in Seattle, Vancouver, Los Angeles, San Diego and San Francisco, New York, Brooklynn, Halifax and other ports that have made commitments to shore power programs<sup>1</sup>.

Over the past decade many ports in Europe and other cruise destinations have followed Juneau’s lead and have electrified their ports with shore to ship electrical service. Many studies conducted by port authorities have found that shore to ship power not only provides cleaner air and reduction of smoke contributing to an overall improved tourist experience, but it also saves the cruise lines and vessel owners savings when the cost of port electricity is less expensive than operating onboard generation.

It is perhaps time for Juneau to reassert its historical leadership by committing to electrify all cruise ship berths in the capital city.

**Economic and Environmental Benefits.** The economic and environmental benefits for shore to ship power are significant and are compelling for an investment consideration in using Marine Passenger Fee monies to enable Juneau to attain and realize these simultaneous benefits. Consider that with shore-to-ship power connection technology, a large cruise ship can cut fuel consumption by up to 20 metric tons and reduce CO2 emissions by 60 metric tons during a 10-hour stay in port – equivalent to the total *annual* emissions of 25 passenger vehicles<sup>2</sup>. Consider that number of potential cruise vessel shore connections on an annual basis and the environmental benefit becomes substantial in assisting Juneau in meeting its GHG reduction target. Additionally, onshore power supply has an additional advantage over other emissions abatement technologies in that it also reduces both noise and vibration in port areas adding greater benefit to tourists, workers as well as improving the aura and atmosphere of our downtown tourist and port district. Shore power derived from Juneau generated hydropower also provides clear economic savings to cruise lines and ship owners as the cost of hydropower electricity is far lower than the cost of electricity generated on board from fossil fuels. It is estimated that the electrification of the Franklin dock saves Princess Cruise line several hundred thousand dollars annually<sup>3</sup>. Further, installing shore to ship power at our berth facilities provides a hedge against current and future fossil fuel inflation and volatility further economically strengthening Juneau as low cost port

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<sup>1</sup> Princess Cruise Lines [http://www.princess.com/news/backgrounders\\_and\\_fact\\_sheets/factsheet/Princess-Ships-Clear-the-Air-with-Shore-Power-Connections.html#.UsJyPJ1vzIU](http://www.princess.com/news/backgrounders_and_fact_sheets/factsheet/Princess-Ships-Clear-the-Air-with-Shore-Power-Connections.html#.UsJyPJ1vzIU)

<sup>2</sup> ABB Shore to Ship power conversion [http://www05.abb.com/global/scot/scot232.nsf/veritydisplay/97fd4a31fbcedcc8c1257aa9007160f0/\\$file/Shore-to-ship%20power.pdf](http://www05.abb.com/global/scot/scot232.nsf/veritydisplay/97fd4a31fbcedcc8c1257aa9007160f0/$file/Shore-to-ship%20power.pdf)

<sup>3</sup> JHI November 13, 2014 PowerPoint presentation to CBJ Docks & Harbors Committee, slide 34

destination. Higher fuel costs (that have risen significantly in the last decade and even with temporary decreases will continue to do so) could assist cruise lines to make decisions to opt to stay longer in ports (like Juneau) that can lower their operating costs. Juneau becomes more competitive as a port destination within the Southeast region as well as in the world cruise destination market.

**Public Policy: Code, Comprehensive Plan and Climate Action and Implementation Plan Support.**

Not only is this proposal a win-win use of the Marine Passenger Fee fund for which it was created for, but there is also substantial public policy to support this proposal. It would be difficult to find a more appropriate use or more beneficial use for the Marine Passenger Fee fund considering our stated CBJ public policies. Under CBJ Marine Passenger Fee Chapter 69.20 section 69.20.120: Use of Proceeds (a) (1) Design, construction, operation, or maintenance of capital improvements to relieve impacts on marine passenger ships and marine passengers;  
(3) Projects and programs that promote safety, environmental improvements...

Support for electrifying our dock upgrade systems can also be found in our CBJ Comprehensive Plan (2013 Update) Under Policy 5.6 and Development Guideline 5.6-DG2; Policy 6.11 and Implementing Action 6.11-IA3: Policy 12.3, and Standard Operating Procedure 12.3 SOP1, and Development Guideline 12.3 - DG1

*Policy 5.6. To encourage tourism, convention and other visitor-related activities through the development of appropriate facilities and services, while protecting Juneau's natural, cultural and economic attractions for local residents and visitors alike, and to participate in the accommodation of the future growth of tourism in a manner that addresses both community and industry concerns.*

Development Guideline 5.6 - DG2 When considering capital improvements and when reviewing permit applications for tourism related developments, assess the costs and benefits of the proposed projects against the policies of this *Comprehensive Plan* and any CBJ-adopted Tourism Management Plan or BMPs.

*Policy 6.11. To encourage industrial and commercial users to be as efficient as possible in their use of energy, to use renewable energy sources, and to make energy by-products available for use elsewhere in the community.*

Implementing action 6.11 – IA3 Require the use of renewable and environmentally-sensitive energy sources for energy intensive projects, where cost effective.

*Policy 12.3. To encourage the provision of an adequate supply of hydroelectric energy and other renewable source electrical generating facilities to provide for the continued growth and development of the community.*

Standard Operating Procedure 12.3 - SOP1 Encourage the continued development of clean, efficient hydro- and other renewable-source electrical generating facilities to provide for future community needs and to reduce dependence upon the use of fossil fuels for energy.

Development Guideline 12.3 - DG1 In reviewing permits for businesses that use heavy energy loads, seek implementation of Best Management Practices that conserve and/or re-use energy loads, minimize the use of fossil fuels, and maximize renewable energy sources in its operations.

In addition to Marine Passenger Fee CBJ Code language and supporting public policy from the CBJ Comprehensive Plan, there is also guiding public policy language in our 2011 Climate Action and Implementation Plan:

Strategy T6-A. Work with recreational and commercial boaters to reduce emissions and energy use associated with marine transportation.

... **new commercial docks to provide electric plug-ins for cruise ships and other commercial vessels, and require that ships use electric power whenever it is available.**

**Conclusion.** Lastly, Juneau is on a positive trajectory for growing hydropower electrical capacity and energy security with the Sweetheart Lake Hydroelectric Facility that is now planned for construction. It is therefore timely to begin the process to install full shore to ship power resources during initial construction of our 16B waterfront dock upgrade to maximize construction efficiencies, construction dollars and advance our community values.

This proposal is a request for “investment” to help create positive public-private partnership benefits between the community of Juneau and the Cruise line industry while also providing significant economic and environmental steps to ensure that Juneau remains today, and in the future, a marquee world class cruise destination port. Please do not hesitate in contacting me at 907-789-2775 if you would like to discuss this proposal in further detail or would like to receive a personal presentation of the PowerPoint presented to the CBJ Docks and Harbors Board on November 13, 2014. Follow up letters of support from other parties to follow.

Regards,

A handwritten signature in black ink, appearing to read 'Duff Mitchell', written over a horizontal line.

Duff Mitchell  
VP & Business Manager