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December 31, 2013

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

RE: 2014 Marine Passenger Fee Proposal: Electrification Availability Option for Passenger Cruise Ships

Dear Ms. Kiefer,

I would like to submit for community review and Assembly consideration a win-win proposal to use an allocation of up to \$1,000,000 dollars from the Marine Passenger Fees for the 2014 budget to electrify the cruise ship berths as part of our new waterfront upgrade and expansion. This proposal would include detailed design, engineering, equipment specification and identification, cost estimate and purchase of substation located on Gastineau Avenue as well as make substantial progress to fully install shore to ship power connections for Juneau's proposed waterfront expansion. The total estimated cost to electrify our downtown berth facilities is approximately \$2.5 M. Remaining funds required to complete this initiative would come from future Marine Passenger Fee receipts until the project is completed and to have services available when the cruise line dock upgraded berths are completed.

This proposal to electrify Juneau's upcoming waterfront cruise dock upgrades would provide maximum benefits to the Juneau tourist experience providing: the public benefit of less visual smoke, emissions and vibratory noise in our downtown area during the tourist season; provide economic benefits to Juneau's cruise line partners in providing an opportunity for the cruise industry to displace more expensive fossil fuel burning with lower cost Juneau generated hydropower; provide additional revenue and receipts for electrical sales made in Juneau whereby this money stays and circulates in the Juneau economy; and creates a marketing niche for Juneau Docks and Harbors and Juneau Convention and Visitors Borough the ability to market Juneau as the first port in the world to provide all cruise line berths the option of using clean and renewable shore power.

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 and is planned to roll out in other ports that have made commitments to shore power programs¹.

¹ Princess Cruise Lines http://www.princess.com/news/backgrounders_and_fact_sheets/factsheet/Princess-Ships-Clear-the-Air-with-Shore-Power-Connections.html#.UsJyPJ1vzIU

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.

The economic and environmental benefits for shore to ship power are significant and are compelling for 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 vehicles². Consider that number of potential cruise vessel shore connections on an annual basis and the environmental benefit becomes overwhelming. Additionally, onshore power supply has an additional advantage over other emissions abatement technologies in that it reduces both noise and vibration in port areas adding greater benefit to tourists, workers as well as improving the atmosphere of our downtown tourist and port district.

Shore power derived from Juneau generated hydropower also provides 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. Further, installing shore to ship power at our berth facilities provides a hedge against current and future fossil fuel inflation. Higher fuel costs (that have risen significantly in the last decade and 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.

Now that Juneau has committed and will expand our waterfront portage and dock infrastructure to welcome and make more accommodations for the post Panamax class of cruise liners a unique opportunity presents itself for Juneau to maximize governmental efficiencies and construction dollars to plan for and install complete (as opposed to partial) shore power systems to these new docks. The port of Juneau with Princess Cruise Line in collaboration with AEL&P has led the world in shore to ship technology. All current and future ships are being built to accommodate shore power due to Juneau's pioneering of shore to ship power systems. Now is the time for Juneau to consider regaining its prominence and assert our marquee reputation as a leading international port by fully electrifying our cruise ship docking berths.

² 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)

Juneau has already begun the planning and construction process to lay conduit to enable future dock electrical connections. However the cost of purchasing cable, installing cable and building a dedicated substation to serve the cruise industry would require perhaps a multi-year financial payoff if undertaken solely by our local utility and cruise industry. Purchasing and installing these dock appurtenances now and installing these upgrades during dock construction will not only save construction dollars but will provide access for immediate shore to power operations once our new docks are upgraded and available. Further, these shore power upgrades should appropriately be provided by the Marine Passenger Fee program for such purposes in which the program was intended for.

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.

Lastly, Juneau is on a positive trajectory for growing hydropower electrical capacity with the Sweetheart Lake hydroelectric facility that is now planned for construction. Additionally, AEL&P has long term plans to explore the feasibility and construction of Lake Dorothy II at some point in the future. There is hydropower capacity available today with average and high water years as well as growing capacity enabling Juneau to market itself as a fully electrified port on a world wide scale. The timing is now to install full shore to ship power resources during initial construction of our waterfront dock upgrade to maximize construction efficiencies and construction dollars.

This proposal is submitted 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 world marquee 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.

Regards,

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

Duff Mitchell
VP & Business Manage