

December 29, 2015

City and Borough of Juneau  
Attn.: Ms. Kim Kiefer  
155 S. Seward Street  
Juneau, Alaska 99801

DEC 31 2015

RE: FY17 Marine Passenger Fee Proceeds

CBJ Manager's Office

Dear Ms. Kiefer,

The Juneau Commission on Sustainability (JCOS) recommends adding a project to the FY 17 Marine Passenger Fee Proceeds list to provide for the infrastructure to make shore-to-ship electricity available for use by cruise ships at the new city docks. We identified this project as a priority in our comments on the Capital Improvements Projects (CIP) list dated December 18, 2015 (attachment A).

This project would provide engineering and design details, equipment specification, and other work to ensure that the 16B docks will be capable of providing electricity to cruise ships in the near future, moving the CBJ toward full installation of shore to ship power connections for Juneau's cruise dock expansion. A critical need at this point is to identify how electrification infrastructure can be added to the new docks now in the most cost effective manner, and to ensure that excessive work and costs are not needed to retrofit this infrastructure once the docks are completed.

Continuing public dialogue has made it clear that the 16B docks are not electrification ready. A July 13, 2015 meeting of the Assembly Committee of the Whole confirmed that electrical and mechanical engineering has not been completed to ensure that dock facilities could festoon and connect properly to cruise vessels. Cochran Electric, which has built and installed most of the port electrification equipment in North America, advises that engineering and design for electrification should occur now, not after the docks are completed, to save time and money. Now that the docks are under construction, it is imperative that the financial resources be properly allocated to guarantee to Juneau community that our 16 B dock system is properly designed and engineered-mechanically, electrically and physically capable for providing locally produced electrical power to visiting cruise ships.

Shore-to-ship power has substantial benefits to Juneau. It reduces noise and smoke, since ships can shut down their generators while in port. At the same time it helps the cruise lines by eliminating fines for air quality emissions. In 2014 DEC apparently assessed a record number

of fines for cruise ships violating air emissions in Juneau. A one day fine for opacity violations is \$37,500. Dock electrification also reduces fuel costs for the cruise lines, creating an incentive to increase time in port. It also significantly reduces GHG emissions — for a single ship over 10 hours reductions in CO<sub>2</sub> emissions would be equivalent to those produced annually by 25 cars. Both the ports of Montreal and Brooklyn ensured that their ports became electrified in 2015 and these ports continue the world-wide trend to electrifying vessels while in port. About 43% of cruise vessels visiting Juneau in 2015 are electrification ready (attachment B).

Ensuring that the new city docks can provide electricity to cruise ships supports goals dealing with tourism and energy in the Comprehensive Plan (Policies 5.6, 6.11 and 12.3), and with specific recommendations in the Juneau Climate Action Plan (2012): "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." Additionally, as we noted in our CIP comments, this project has been identified as a priority project in the draft Juneau Energy Plan.

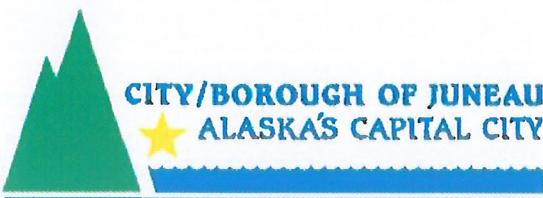
Given these benefits, it seems clear that Juneau should be ensuring that shore-to-ship power can be provided for the 16 B dock system now, rather than discovering that it will take major costly renovations in the future. Thank you for considering our request.

Sincerely,



Steve Behnke

Chair, Juneau Commission on Sustainability



December 18, 2015

CBJ Planning Commission  
155 S. Seward Street  
Juneau, Alaska 99801

RE: FY 2016-2021 CIP Department Improvement Plans

Dear CBJ Planning Commission Members:

The Juneau Commission on Sustainability (JCOS) reviewed the FY 2016-2021 CIP Department Improvement Plans, and offers the following comments, focusing on, but not limited to, FY17.

We ask that cost savings, from efficiency and conservation, and opportunities for greenhouse gas (GHG) emissions reductions, be considered when developing CBJ funding priorities, since they save money and help meet the goals of the Juneau Climate Action Plan and the 2013 CBJ Comprehensive Plan. It would be helpful if CIP projects explicitly addressed potential cost savings and GHG reductions during to the CIP process.

We commend the work being done by CBJ departments to reduce costs, lower resource consumption, and reduce emissions operationally and in their capital projects. Specific examples of sustainability being considered and described in the CIP process include:

- Streets: Whittier Street project, which specifically mentions replacing street lighting "with efficient LED components";
- Water Utility: Last Chance Basin Well-field Upgrades, which specifically notes plans to replace original pumps with more energy efficient ones, which would result in "a significant savings to the Utility's ratepayers."

In all projects, we recommend that opportunities for energy conservation, efficiency, and renewable sources be considered and described. Projects like the following would seem to have potential for increased cost savings and reduced GHG emissions, but the CIP materials do not provide relevant information:

- Airport: Replace Terminal Building (North Wing). SREF Building Phase III. Terminal Renovation Phase III;
- Parks & Recreation: Marine Parking Garage Lighting Upgrade;
- Streets: numerous projects, especially those focusing on street lighting;
- Wastewater: biosolids;
- Water Utility: numerous projects.

We support the following projects, because of their positive impacts on cost savings and emissions reductions:

- Eaglecrest: Snowmaking & Waterline Replacement/Improvement, "which significantly lowers our electric usage annually";
- Waste Management: Recycling Drop Box Containers.

Additionally, the following projects are not currently included on in the FY 2017-2022 CIP proposals, but we ask for their consideration (projects recommended by adopted plans are noted):

- CBJ Electric Vehicle Fleet Enhancement: evaluate opportunities and costs of converting Capital Transit fleet to electric buses, and bringing electric vehicles into CBJ fleet (Juneau Community Energy Plan, draft version);
- Develop a district heating pilot project (Juneau Climate Action Plan strategy RE2-A);
- Cruise Ship Dock Electrification: conduct engineering and design to ensure that electricity can be added to new docks in a cost effective manner, and begin electrification add-ons as new electrical capacity becomes available (Juneau Community Energy Plan, draft version);
- Purchase an electric vehicle to test for fleet use (Juneau Climate Action Plan strategy T1-A);
- Projects recommended by the Juneau Non-Motorized Transportation Plan, such as covered bike racks;
- Composting feasibility study (Juneau Climate Action Plan strategy U5-D).

More projects have been identified in recent audits performed on CBJ facilities (AHFC energy audits in 2010/2011), wastewater treatment plants (2009), and the water utility (2009). If these audits are out of date, or lack needed details, we recommend that they be updated and used as a basis for identifying CIP projects that will deliver energy and cost savings.

Many projects proposed by CBJ departments and JCOS could be candidates for grant funding or other financial incentives if resource conservation and efficiency, GHG emissions, and other sustainability indicators are considered and prioritized. A sustainability or energy manager position could help coordinate these funding efforts, as well as focus on operational and capital project cost savings that would likely cover the staffing cost of the position.

Thank you for your efforts to make Juneau a more sustainable place to live, work, and play.

Sincerely,



Steve Behnke, Chair  
Juneau Commission on Sustainability

Electric Shore to Ship 2015 Market for Juneau based on 2015 Juneau Port Schedule				Prepared by Juneau Hydropower Inc.	Copyright © 2015
Date	number or Pax	number on vessels	vessels		
01-May-15				Green color indicates electrification ready vessel	
02-May-15					
03-5-May-15					
04-4-May-15	4768	2	Celebrity Solstice, Westerdam		
05-5-May-15					
06-5-May-15	3080	1	Ruby Princess		
07-4-May-15	490	1	Seven Seas Navigator		
08-4-May-15	1974	1	Coral Princess		
09-4-May-15	2394	1	Norwegian Pearl		
10-4-May-15	2376	1	Norwegian Jewel		
11-4-May-15	6686	3	Celebrity Solstice, Noordam, Ruby Princess	Westerdam	
12-4-May-15	4602	2	Norwegian Sun, Oosterdam, Ruby Princess,	Seven Seas Navigator	
13-4-May-15	5418	3			
14-4-May-15					
15-4-May-15	3284	2	Regatta, Golden Princess		
16-4-May-15	1974	1	Coral Princess		
17-4-May-15	1950	1	Celebrity Millennium		
18-4-May-15	9806	4	Celebrity Solstice, Norwegian Jewel, Zaandam, Carnival Legend, Norwegian Sun, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Crown Princess, Star Princess, Celebrity Infinity
19-4-May-15	9871	4			
20-4-May-15	9070	4	Celebrity Solstice, Norwegian Jewel, Oosterdam, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Crown Princess, Ruby Princess, Star Princess, Pacific Princess
21-4-May-15	4515	2			
22-4-May-15	5396	4	Carnival Legend, Norwegian Sun, Zaandam, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Coral Princess, Seven Seas Navigator, Crown Princess, Seven Seas Navigator
23-4-May-15	684	1			
24-4-May-15	7466	4	Celebrity Solstice, Norwegian Jewel, Oosterdam, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Crown Princess, Seven Seas Navigator, Seven Seas Navigator
25-4-May-15	10296	4			
26-4-May-15	9320	4	Carnival Legend, Norwegian Jewel, Oosterdam, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Celebrity Millennium, Ruby Princess, Star Princess, Zaandam
27-4-May-15	10128	4			
28-4-May-15	6109	3	Carnival Legend, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Pacific Princess, Seven Seas Navigator, Zaandam
29-May-15	2128	2			
30-May-15	3924	2	Coral Princess, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Crown Princess, Seven Seas Navigator, Zaandam
31-May-15	4451	2			
01-Jun-15	10490	5	Celebrity Solstice, Norwegian Jewel, Oosterdam, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Crown Princess, Seven Seas Navigator, Zaandam, Volendam, Regatta
02-Jun-15	9871	4			
03-Jun-15	3505	4	Carnival Legend, Norwegian Sun, Disney Wonder, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Radiance Of The Seas, Grand Princess, Golden Princess, Volendam
04-Jun-15	7138	4			
05-Jun-15	5206	3	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta
06-Jun-15	3157	2			
07-Jun-15	6976	3	Radiance Of The Seas, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta
08-Jun-15	9816	4			
09-Jun-15	9320	4	Carnival Legend, Norwegian Jewel, Amsterdam, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta
10-Jun-15	8908	4			
11-Jun-15	5392	3	Disney Wonder, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Disney Wonder, Norwegian Sun, Volendam, Regatta
12-Jun-15	4628	3			
13-Jun-15	5131	3	Carnival Legend, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta
14-Jun-15	7051	3			
15-Jun-15	9806	4	Celebrity Millennium, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Celebrity Millennium, Norwegian Sun, Volendam, Regatta
16-Jun-15	9871	4			
17-Jun-15	8500	4	Disney Wonder, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Disney Wonder, Norwegian Sun, Volendam, Regatta
18-Jun-15	6438	4			
19-Jun-15	5890	4	Carnival Legend, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Seven Seas Navigator, Norwegian Sun, Volendam, Regatta
20-Jun-15	3157	2			
21-Jun-15	6976	3	Jewel Of The Seas, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Jewel Of The Seas, Norwegian Sun, Volendam, Regatta
22-Jun-15	9806	4			
23-Jun-15	9320	4	Celebrity Solstice, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Celebrity Solstice, Norwegian Sun, Volendam, Regatta
24-Jun-15	8908	4			
25-Jun-15	7992	4	Celebrity Millennium, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Celebrity Millennium, Norwegian Sun, Volendam, Regatta
26-Jun-15	4628	3			
27-Jun-15	5131	3	Carnival Legend, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Carnival Legend, Norwegian Sun, Volendam, Regatta
28-Jun-15	4451	2			
29-Jun-15	9806	4	Jewel Of The Seas, Norwegian Sun, Volendam, Regatta	Noordam, Radiance Of The Seas, Norwegian Pearl, Grand Princess, Oosterdam, Norwegian Sun, Staterdam, Regatta	Jewel Of The Seas, Norwegian Sun, Volendam, Regatta
30-Jun-15	9871	4			

01-Jul-15	9184	5	Amsterdam,	Zaandam,	Regatta,	Grand Princess,	Ruby Princess,	
02-Jul-15	6488	4	Norwegian Sun,	Oosterdam,		Pacific Princess,	Celebrity Infinity	
03-Jul-15	5206	3	Disney Wonder,	Statendam,		Volendam		
04-Jul-15	5757	3	Carnival Legend,	Golden Princess,		Seven Seas Navigator		
05-Jul-15	6976	3	Jewel Of The Seas,	Radiance Of The Seas,		Coral Princess	Crown Princess	
06-Jul-15	9806	4	Celebrity Solstice,	Noordam,		Westerdam,	Crown Princess	
07-Jul-15	9320	4	Norwegian Jewel,	Norwegian Pearl,		Celebrity Millennium,	Grand Princess	
08-Jul-15	8908	4	Amsterdam,	Oosterdam,		Ruby Princess,	Star Princess	
09-Jul-15	5392	3	Norwegian Sun,	Zaandam,		Celebrity Infinity		
10-Jul-15	4628	3	Disney Wonder,	Volendam,		Pacific Princess		
11-Jul-15	5131	3	Carnival Legend,	Coral Princess,		Seven Seas Navigator		
12-Jul-15	4451	2	Jewel Of The Seas,	Celebrity Millennium		Westerdam,	Crown Princess	
13-Jul-15	9806	4	Celebrity Solstice,	Noordam,		Radiance Of The Seas,	Crown Princess	
14-Jul-15	9821	4	Norwegian Jewel,	Norwegian Pearl,		Golden Princess,	Star Princess	
15-Jul-15	11100	5	Amsterdam,	Zaandam,		Grand Princess,	Ruby Princess	
16-Jul-15	6488	4	Norwegian Sun,	Oosterdam,		Pacific Princess,	Celebrity Infinity	
17-Jul-15	5206	3	Disney Wonder,	Statendam,		Volendam		
18-Jul-15	3841	3	Carnival Legend,	Regatta,		Seven Seas Navigator		
19-Jul-15	6976	3	Jewel Of The Seas,	Radiance Of The Seas,		Coral Princess		
20-Jul-15	9806	4	Celebrity Solstice,	Noordam,		Radiance Of The Seas,	Crown Princess	
21-Jul-15	9320	4	Norwegian Jewel,	Norwegian Pearl,		Golden Princess,	Star Princess	
22-Jul-15	8908	4	Amsterdam,	Zaandam,		Ruby Princess,	Celebrity Infinity	
23-Jul-15	5392	4	Norwegian Sun,	Volendam,		Celebrity Millennium,	Grand Princess	
24-Jul-15	7228	4	Disney Wonder,	Carnival Legend,		Golden Princess,	Pacific Princess	
25-Jul-15	5131	3	Carnival Legend,	Golden Princess,		Seven Seas Navigator		
26-Jul-15	4451	2	Jewel Of The Seas,	Celebrity Millennium		Westerdam,	Crown Princess	
27-Jul-15	9806	4	Celebrity Solstice,	Noordam,		Radiance Of The Seas,	Crown Princess	
28-Jul-15	10555	4	Norwegian Jewel,	Norwegian Pearl,		Golden Princess,	Regatta,	Star Princess
29-Jul-15	8500	4	Amsterdam,	Zaandam,		Seven Seas Navigator	Ruby Princess	
30-Jul-15	6488	4	Norwegian Sun,	Oosterdam,		Pacific Princess,	Celebrity Infinity	
31-Jul-15	5206	3	Disney Wonder,	Volendam,		Volendam		
01-Aug-15	3157	2						
02-Aug-15	6976	3	Carnival Legend,	Seven Seas Navigator		Coral Princess		
03-Aug-15	9806	4	Jewel Of The Seas,	Radiance Of The Seas,		Westerdam,	Crown Princess	
04-Aug-15	9320	4	Celebrity Solstice,	Noordam,		Celebrity Millennium,	Grand Princess	
05-Aug-15	11508	5	Norwegian Jewel,	Norwegian Pearl,		Golden Princess,	Ruby Princess,	Star Princess
06-Aug-15	7992	4	Amsterdam,	Oosterdam,		Pacific Princess,	Celebrity Infinity	
07-Aug-15	4628	3	Norwegian Sun,	Zaandam,		Seven Seas Navigator		
08-Aug-15	5131	3	Disney Wonder,	Carnival Legend,		Westerdam,	Crown Princess	
09-Aug-15	4451	2	Jewel Of The Seas,	Celebrity Millennium		Radiance Of The Seas,	Crown Princess	
10-Aug-15	9806	4	Celebrity Solstice,	Noordam,		Golden Princess,	Ruby Princess	
11-Aug-15	9821	4	Norwegian Jewel,	Norwegian Pearl,		Golden Princess,	Pacific Princess,	Celebrity Infinity
12-Aug-15	8500	4	Amsterdam,	Zaandam,		Volendam		
13-Aug-15	9058	5	Disney Wonder,	Statendam,				
14-Aug-15	5206	3	Carnival Legend,	Regatta,				
15-Aug-15	3157	2	Jewel Of The Seas,	Radiance Of The Seas,				
16-Aug-15	6976	3	Carnival Legend,	Golden Princess,				
17-Aug-15	9806	4	Jewel Of The Seas,	Noordam,				
18-Aug-15	9320	4	Celebrity Solstice,	Norwegian Pearl,				
19-Aug-15	8908	4	Norwegian Jewel,	Oosterdam,				
20-Aug-15	5392	3	Amsterdam,	Zaandam,				
21-Aug-15	4628	3	Disney Wonder,	Volendam,				
22-Aug-15	5131	3	Carnival Legend,	Golden Princess,				
23-Aug-15	7051	3	Jewel Of The Seas,	Celebrity Millennium,				
24-Aug-15	9806	3	Celebrity Solstice,	Noordam,				
25-Aug-15	5871	4	Norwegian Jewel,	Norwegian Pearl,				
26-Aug-15	8500	4	Amsterdam,	Zaandam,				
27-Aug-15	4538	3	Nonwegian Sun,	Oosterdam,				
28-Aug-15	5206	3	Disney Wonder,	Statendam,				
29-Aug-15	5107	3	Carnival Legend,	Celebrity Infinity				
30-Aug-15	6976	3	Jewel Of The Seas,	Radiance Of The Seas,				
31-Aug-15	9806	4	Celebrity Solstice,	Noordam,				
01-Sep-15	9320	4	Norwegian Jewel,	Norwegian Pearl,				
02-Sep-15	8908	4	Amsterdam,	Oosterdam,				

03-Sep-15	8709	4	Norwegian Sun,	Carnival Legend,	Zaandam,	Golden Princess
04-Sep-15	4638	3	Disney Wonder,	Volenndam,	Pacific Princess	
05-Sep-15	1974	1	Coral Princess			
06-Sep-15	4451	2	Jewel Of The Seas,	Celebrity Millennium	Westerdam,	Crown Princess
07-Sep-15	9806	4	Celebrity Solstice,	Noordam,	Radiance of the Seas,	Star Princess
08-Sep-15	9871	4	Norwegian Jewel,	Noordam,	Grand Princess,	Ruby Princess
09-Sep-15	8500	4	Amsterdam,	Zaandam,	Oosterdam	
10-Sep-15	6517	3	Norwegian Sun,	Carnival Legend,	Celebrity Infinity	
11-Sep-15	4636	3	Statendam,	Volenndam,		
12-Sep-15	2600	1	Golden Princess			
13-Sep-15	4475	2	Jewel Of The Seas,	Coral Princess	Crown Princess	
14-Sep-15	6954	3	Noordam,	Westerdam,	Oosterdam	Star Princess
15-Sep-15	6618	3	Norwegian Jewel,	Noordam,	Amsterdam,	
16-Sep-15	5982	3	Norwegian Sun,	Celebrity Solstice,	Star Princess	
17-Sep-15	4292	2	Norwegian Sun,	Volenndam		
18-Sep-15	1440	1				
19-Sep-15						
20-Sep-15						
21-Sep-15	3834	1	Noordam,	Westerdam,		
22-Sep-15	4770	2	Norwegian Pearl			
23-Sep-15	3382	2	Norwegian Sun,	Amsterdam		
24-Sep-15	322825	145	Oosterdam			
<b>Total Port Visits</b>						
<b>19.0% Total number by percentage of vessels visiting Juneau connecting to shore power (all Princesses in 2015 and prior)</b>						
<i>The above represents the 2015 current demand met and serviced by AE&amp;P</i>						
<b>6,315,080 kWh in estimated 2015 electrical sales (2015 electrical demand)</b>						
<b>194. 2015 Juneau vessel visits with shore to ship ready capabilities (total 2015 market)</b>						
<b>43.8% Total number by percentage of 2015 vessels visiting Juneau with shore to shore electrification ready capabilities (total market %)</b>						
<i>The above represents the 2015 total demand and market for cruise ship electrification demand for the Juneau market.</i>						
<b>110 unmet and unserved electrical 2015 demand in number of cruise ship visitations</b>						
<b>24.8% unmet 2015 demand by percentage of vessels not provided electrical service while hoteling (port stay) in Juneau</b>						
<b>Current and Future Electrical Demand Analysis</b>						
Princess Cruise Ship Season Demand						
(Source RGA Tariffs TA 422-21 TA 413-1)						
Projected 2015 demand if CBJ Docks were electrified with current vessels and port visits						
(Sales Tax is derived by caps on each customer per month, 3 cruise lines currently would be customers)						
Approximate demand by vessel per port stay						
Current unmet and unserved demand by current electrification ready cruise ships docking in Juneau in 2015						
Marine Transportation Electrical Growth rate if another dock in Juneau was electrified based on current demand (electrification ready ships)						
<b>231% 8,269,748 kWh</b>						