

**CITY OF GUSTAVUS, ALASKA
RESOLUTION CY17-09**

A RESOLUTION OF THE CITY OF GUSTAVUS ADDRESSING CONCERNS AND OPPORTUNITIES PRESENTED BY THE INTERTIE BETWEEN THE GUSTAVUS AND GLACIER BAY NATIONAL PARK & PRESERVE (NATIONAL PARK) ELECTRIC GRIDS

WHEREAS, The City of Gustavus (City) continues to support the proposed intertie between the Gustavus and the Glacier Bay National Park & Preserve (National Park) electrical grids for reasons enumerated in the City's Resolution CY16-15; and,

WHEREAS, while potentially providing benefits to our community and the larger region, the intertie intensifies the following concerns and uncertainties for Gustavus residents related to the Falls Creek hydroelectric facility's capacity, the impact of National Park electricity consumption on the community's electricity rate structure, and the trends in electricity usage at Gustavus and Bartlett Cove, as follows:

- The load the Falls Creek hydroelectric facility is capable of sustaining remains unknown. Though rated at 800 kW, the facility has never been loaded beyond 460 kW. There is no way of testing its sustainable capability without putting the rated load online.
- Under loads of less than half the rated capacity, the facility's turbine bearings have already been replaced three times. Maintenance requirements under full load are unknown, but may involve considerable cost and downtime.
- Electric car ownership in Gustavus is increasing, as is the use of heat pumps, electric water heaters, electric stoves, etc.
- There is an ongoing steep increase in Gustavus's demand for electricity that is likely in the fairly near future to push the Falls Creek hydroelectric facility's limit, at least during the visitor season. Over the past three years, Gustavus's peak load has increased by almost 100 kW. (In 2016, the peak load was about 400 kW; recently the load was 460 kW.)
- Excluding maintenance days, during 2015 the City- owned diesel-electric plant was operated for all or part of 19 days; during 2016 the plant was operated all or part of 36 days—an 89 percent increase over the previous year.
- Maintenance aside, two factors determine whether the diesel-electric plant is operated: demand (which is rising) and stream flow (which is beyond our control and often limiting); and,

WHEREAS, the National Park's peak demand for electricity, like Gustavus's, is during the visitor season; and,

WHEREAS, the National Park's peak load so far in 2017 was 207 kW; and,

WHEREAS, the combined peak loads of Gustavus and the National Park so far in 2017 total 667 kW, which is more than 83 percent of the Falls Creek hydroelectric facility's rated capacity; and,

WHEREAS, under any likely scenario, adding the National Park will add considerably to the total amount of diesel generation required, hastening the time of full-time operation of the diesel-electric plant, at least during the visitor season; and,

WHEREAS, routine, increased demand-related operation of the City's diesel-electric plant may, because of the costs of fuel, maintenance, etc., result in higher electricity rates in Gustavus; and,

WHEREAS, adding the National Park will also bring on uncertainties regarding the capability of the Falls Creek hydroelectric facility much sooner than they would otherwise occur; and,

WHEREAS, these uncertainties bring with them questions regarding the rate structure, and hence in potential benefits to ratepayers, notably in the effect on the Cost of Power Adjustment (COPA); and,

WHEREAS, the National Park owns a first-class diesel-electric plant that, when connected to the Gustavus electrical grid by the intertie, will be capable of providing electricity to the Park and/or to Gustavus;

WHEREAS, the National Park may be able to reduce overall electricity generating costs by leasing its diesel-electric plant to APC, eliminating the need for APC to install additional diesel-electric capacity at Gustavus; and,

WHEREAS, the National Park may be able to continue to purchase diesel fuel at a significantly reduced rate through its government contracts; and,

WHEREAS, these concerns and opportunities can be substantially addressed by 1) ensuring the National Park's diesel generation capacity is retained in the Gustavus/Bartlett Cove microgrid once the intertie is completed, 2) by providing the National Park the immediate access to smart metering and variable rates to encourage power consumption during off-peak times, and 3) providing a phase-in period to ensure that the intertie is functioning correctly potentially including interruptible power, and ensuring cost savings and reduced diesel consumption is indeed the result. These three things would:

- assure that the National Park retains its capacity to generate electricity during periods when surplus hydropower is not available;
- retain the benefits to all parties of a diverse, expanded electrical system that buffers all users against the vagaries of accident or emergency;
- provide an entry point for Alaska Power Company's (APC) Gustavus customers to benefit from smart metering and off-peak rates and other energy conservation measures that maximize the use of sustainable power;

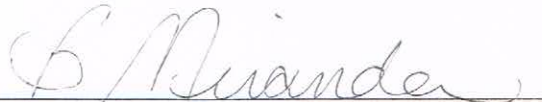
- provide the Alaska Power Company time to implement and/or install additional clean power options (e.g., greater hydropower generation efficiency, addition of solar and/or wind capacity, and tidal power development) as the present hydroelectric system approaches capacity; and,

NOW THEREFORE BE IT RESOLVED that the Gustavus City Council reiterates its support for the unification of the Gustavus and National Park electric grids, if the result is:

- the retention and use of the Park's power generation infrastructure as a component of a resilient microgrid, perhaps under lease to APC,
- installation and use of smart metering and variable rates for the National Park, to be followed with installation by additional Gustavus customers,
- additional diesel power demand caused by the addition of the National Park as a customer is generated in National Park facilities, NOT in Gustavus;
- a lower overall regional carbon footprint;
- lower overall electricity costs to Gustavus customers.

BE IT FURTHER RESOLVED that the Regulatory Commission of Alaska takes the City of Gustavus's position into full consideration when the matter of the National Park connection to the Gustavus electric grid comes before it.

PASSED and **APPROVED** by the Gustavus City Council this 9th day of October 2017, and effective upon its adoption.



Barbara Miranda, Mayor



Attest: Karen Platt, City Clerk