CHUGACH ELECTRIC ASSOCIATION, INC.  
ANCHORAGE, ALASKA  
OPERATIONS COMMITTEE MEETING  
AGENDA  
Stuart Parks, Chair  
Harold Hollis, Vice Chair  
February 5, 2020 4:00 p.m.  
Chugach Board Room  

I. CALL TO ORDER (4:00 p.m.)  
   A. Roll Call  
II. APPROVAL OF THE AGENDA*  
III. APPROVAL OF THE MINUTES*  
   A. January 8, 2020 (Portades)  
IV. PERSONS TO BE HEARD  
   A. Member Comments  
V. NEW BUSINESS (scheduled) (4:10 p.m.)  
   A. Willow Solar (Jenn Miller, Renewable IPP) (4:10 p.m.)  
   B. AEA Electric Vehicle Initiative (Skaling/Miller) (4:35 p.m.)  
   C. CEO Performance Review and 2021 KPI Evaluation Schedule (Committee) (4:50 p.m.)  
VI. EXECUTIVE SESSION* (scheduled) (5:25 p.m.)  
   A. Eklutna 1991 Agreement Discussion (5:30 p.m.)  
   B. IMO Update (5:50 p.m.)  
   C. ML&P Acquisition Update (6:20 p.m.)  
   D. Financing Update (7:10 p.m.)  
   E. Board Self-Evaluation (7:15 p.m.)  
VII. DIRECTOR COMMENTS (7:50 p.m.)  
VIII. ADJOURNMENT* (8:00 p.m.)  

* Denotes Action Items  
** Denotes Possible Action Items  
1/31/2020 9:54:07 AM
CHUGACH ELECTRIC ASSOCIATION, INC.
Anchorage, Alaska

January 8, 2020
Wednesday
4:00 p.m.

OPERATIONS COMMITTEE MEETING

Recording Secretary: Divina Portades

I. CALL TO ORDER
Chair Parks called the Operations Committee meeting to order at 4:01 p.m. in the boardroom of Chugach Electric Association, Inc., 5601 Electron Drive, Anchorage, Alaska.

A. Roll Call
Committee Members Present:
Stuart Parks, Chair
Harold Hollis, Vice Chair
Susan Reeves, Director (joined via teleconference)
Harry Crawford, Director (arrived during Executive Session)
Bettina Chastain, Director

Other Board Member Present:
Rachel Morse, Director

Guests and Staff in Attendance:
Arthur Miller    Brian Hickey    Andrew Laughlin
Connie Owens    Mark Fouts    Josh Resnick
Matthew Clarkson Tyler Andrews Todd McCarty
Paul Risse      Pete Smithson Don Edwards, Outside
Sherri Highers  Julie Hasquet Regulatory Consultant

II. APPROVAL OF THE AGENDA
Director Hollis moved and Director Reeves seconded the motion to approve the agenda. Chair Parks requested an amendment to add “Discuss Certificates of Fitness 2020” in the Executive Session as agenda item VI.F. No objections were made. Chair Parks called for a vote. The motion passed unanimously, as amended.

Director Crawford was not present at the time of the vote.

III. APPROVAL OF THE MINUTES
Director Hollis moved and Director Reeves seconded the motion to approve the December 9, 2019, Operations Committee Meeting minutes. The motion passed unanimously.

Director Crawford was not present at the time of the vote.
IV. PERSONS TO BE HEARD
   A. Member Comments
      None

V. NEW BUSINESS
   None

VI. EXECUTIVE SESSION
   A. IMO Update
   B. ML&P Acquisition Update
   C. 2020-2022 Strategic Plan Update
   D. 2020 (May 1, 2020 – April 30, 2021) Chief Executive Officer Key Performance
      Indicators
   E. REAP Board Election Ballot Discussion
   F. Discuss Certificates of Benefits 2020

At 4:05 p.m., Director Chastain moved and Director Hollis seconded the motion that
pursuant to Alaska Statute 10.25.175 (c)(1), (2) and (3) the Board of Directors’ Operations
Committee go into executive session to: 1) discuss and receive reports regarding financial
matters, the immediate knowledge of which would clearly have an adverse effect on the
finances of the cooperative; 2) discuss personnel matters that may tend to prejudice the
reputation or character of a person; however, the person may request a public discussion;
and, 3) discuss with its attorneys legal matters, the immediate knowledge of which could
have an adverse effect on the legal position of the cooperative. The motion passed
unanimously.

Director Crawford arrived during Executive Session.

The meeting reconvened in open session at 5:13 p.m.

VII. NEW BUSINESS
   A. Recommendation to Approve the 2020 Strategic Plan** (Miller/Thibert)
      No action taken. Discussion will continue at the Regular Board of Directors’

VIII. DIRECTOR COMMENTS
      Director comments were made at this time.

IX. ADJOURNMENT
    At 5:23 p.m., Director Hollis moved and Director Crawford seconded the motion to
    adjourn. The motion passed unanimously.
The Challenge

Many Renewable Projects Funded

Economic Renewable Energy

Attract Investment $$

More Renewable Energy Installed!
The Prize

Everybody Wins

- Reduce Carbon Footprint
- Cost Neutral Electricity Prices
- Preserve Natural Gas Resources

Invest in Alaska

CO₂
Can We Do It?
Solar in Alaska???

According to NREL Alaska has more Solar Resource potential than Germany.

Germany happens to have the 2\textsuperscript{nd} largest installed solar capacity in the world!
Alaska Energy Prices

- Alaska has the second highest electricity prices in the nation

Average state electricity price in cents per kilowatt-hour
(Source: U.S. Energy Information Administration. Data for 2013)
Solar Competitiveness

**The average cost of energy in North America**

Solar/wind have the lowest cost of supply...

Good Solar Resource + High Energy Prices + Low Supply Cost = Good Economics!
Renewable IPP Company Overview

**Slogan:**

“Affordable Renewable Energy for Alaska”

**What We Do**

- Develop, construct & operate utility scale solar farms, including:
  - Land Acquisition/Lease Agreements
  - Financing
  - Power Purchase Agreement
  - Engineering Design
  - Procurement
  - Construction (Licensed General Contractor)
  - Operation & Maintenance
RIPP Partners

Jenn Miller, CEO
- Business development, project management, PPA & external affairs

Chris Colbert, CFO
- Business development, economic modelling, finance & accounting

Sam Dennis, COO
- Solar PV system design, procurement, construction & operation oversight

Grant Smith, Chief Engineer
- Structural design and construction & operation oversight
Company History

- **2017- Partners completed DIY residential solar**
  - Nov. 2017 Formed Renewable IPP

- **2018- 140 kW Willow Pilot**
  - Self Funded
  - Designed & Constructed by RIPP Partners
  - Validated Cost Model & Identified Design Improvements

- **2019- 1.2 MW Willow Expansion**
  - Established Business Model for Investment
  - Received PPF Loan Funds from AEA
  - Agreed Power Purchase Agreement with MEA & RCA
  - Became Licensed General Contractor (13 employees)
  - Delivered project in <1 yr & under budget
1.2 MW Willow Solar Farm Expansion

**System Size**
- 3,240 Solar Panels
- 1.2 MW-DC
- 1200 MW-hrs/yr
- Occupies 13 acres

**System Cost**
- TIC: $1.52 MM
- $1.27/W-DC

**PPA**
- Sell Power to MEA @ Avoided Cost
- 30-year Term
- 50/50 REC Sharing (Offsets 2MM lbs_CO2/yr)

**Key Discoveries**
- $/W delivered << historical benchmark (GVEA $1.91/W-DC)
- An Alaska Solar farm can be economic at avoided cost
Contact Us!

Renewable IPP Partners (left to right): Sam Dennis, Chris Colbert, Grant Smith & Jenn Miller

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Chugach Electric Association, Inc.
Anchorage, Alaska

January 31, 2020

TO: Chugach Board of Directors

FROM: Lee D. Thibert, Chief Executive Officer

SUBJECT: Alaska Energy Authority Electric Vehicle Initiative Update

Volkswagen Settlement Background

As a result of Volkswagen’s (VW) 2016-2017 settlements of violations of the Clean Air Act through the installation of “defeat devices” on vehicles to cheat on federal emissions tests, the State of Alaska is the beneficiary of funding for electric vehicle charging stations.

As part of the Settlement with the U.S. Environmental Protection Agency, VW has paid approximately $2.9 billion into an Environmental Mitigation Trust to mitigate the amount of excess nitrogen oxides from the illegal vehicles.

The State of Alaska is the beneficiary of $8.1 million from the Volkswagen Settlement Environmental Mitigation Trust (VW Settlement). The amount is based partially on the number of certain vehicles sold in Alaska that contained a “defeat device.” The State of Alaska has designated the Alaska Energy Authority (AEA) as the agency responsible for managing and distributing the funds.

As required by the funding source, AEA developed and received approval for Alaska’s Beneficiary Mitigation Plan. After a public comment period, AEA selected five eligible mitigation actions from among eleven possible actions. Those mitigation actions include school bus replacement, public transit bus replacement, commercial marine vessel upgrades, the replacement of diesel engines used for generation, and electric vehicle (EV) charging infrastructure.

Electric Vehicle Charger Funding

The funding source limited the percentage of funding that could be allocated to EV charging infrastructure to a maximum of 15 percent of each beneficiary’s funding. AEA allocated the full 15 percent available to this mitigation action, totaling about $1.2 million. AEA divided that funding into two geographic regions of the state. The contiguous statewide road system region, which includes Anchorage, has been allocated $950,000 and other areas of the state combined have been allocated $250,000.

The $950,000 for the road system is likely to be further sub-divided allocating approximately two thirds to direct current (DC) fast charging (sometimes called Level 3 charging) and one third to Level 2 charging.
AEA considered several methods of distributing funds over the past two years. AEA’s apparent most-favored method is to hire a third-party contractor who would be responsible for securing suitable charging station site hosts, procuring and installing EV charging equipment, and operating and maintaining the charging stations for a 5-year period. This contractor would coordinate site selection with AEA, the Alaska Electric Vehicle Working Group, utilities and other entities.

**Alaska Electric Vehicle Work Group**

AEA recently hired a contract coordinator to establish an Alaska Electric Vehicle Work Group. The first meeting of this group was on January 30, 2020. While this was a technical committee meeting, it attracted 40 participants from across the state. More than two years ago, Chugach and Municipal Light & Power initiated an ad-hoc Railbelt utility working group (which eventually included AEA) to address utility issues relating to EVs, and to prepare for and help AEA prepare for the distribution of VW Settlement funding.

The first meeting of AEA’s new technical committee focused on demand charges. Demand charges can be a significant cost in low-load factor billing periods. AEA also provided an update on their distribution of VW Settlement funding. A participant expressed another issue to address: whether electricity can be resold by EV charging station owners. Chugach’s tariff (and perhaps those of other utilities) prohibits reselling retail electricity. The group generally believes it would be more convenient and equitable to allow EV charging station owners to charge in units of kilowatt-hours and kilowatts, rather than needing to charge for parking or for a period of time while parked at an EV charger.

AEA expressed concern about releasing the request for proposals for the road system contractor to install charging stations until the issue with high demand charges for DC fast charging is addressed. AEA stated that parties may not submit proposals if current demand charges are in place, or if there is uncertainty about how they might change.

The EV Work Group seemed united in the goal of achieving more EVs in Alaska and in addressing the concern that EV adoption is delayed partially due to the lack of high-speed charging infrastructure, which may be delayed due to the high demand charges. The group was also united in wanting an efficient, rapid solution to the demand charge issue to enable charging infrastructure development this summer. The fact that AEA is further slowing its process of releasing VW funding for EV charging is concerning. The continued delay could push charging infrastructure development to 2021 or later.

**Possible Tesla Chargers**

Teslas accounted for about three-fourths of the EVs registered in the Municipality when Chugach last counted EVs in August. Tesla owners have contacted Tesla asking for DC fast chargers in Alaska. Last fall Tesla sent a team to Alaska to scout possible locations for its proprietary DC fast chargers. They were looking at the corridor from Homer to Wasilla. While in Alaska, they met with Chugach and others. Tesla indicated its plans did not depend upon funding from the VW settlement money. While Tesla would prefer not to pay demand charges and expressed support
for an alternative rate design, Chugach’s current rates may not be a showstopper for their developments. Their final business decisions have not been broadcast.

Ratemaking

As a regulated utility, Chugach can only charge rates that have been approved by the Regulatory Commission of Alaska. On its own, Chugach cannot simply waive demand charges for a customer whose estimated usage would put it in the Large General Service rate class. A rate for EV charging that excludes a demand charge would need RCA approval. In general, electric utility ratemaking is based on a cost-causer, cost-payer principle, with the costs to serve a particular class of customer recovered through the rates paid by all customers within that class. Currently the Chugach tariff does not include a unique rate class for DC fast charging. These facilities can draw in excess of 100 kilowatts per connector (Tesla’s new superchargers draw up to 250 kilowatts per connector). Under the current Chugach tariff this level of demand would put these installations into the Large General Service class, where customers who draw more than 20 kW in a 15-minute period in the billing month pay approximately $20 per kW. With this rate structure, a low-load factor customer would pay a significantly higher average cost (dollars per kWh) compared to a high-load factor customer. This is expected to be addressed by the utilities and the RCA in future proceedings.

RCA Public Meeting February 26, 2020

A coalition of interested parties who were represented at the EV Work Group meeting are planning to make a presentation to the Regulatory Commission of Alaska (RCA) at the scheduled February 26, 2020 public meeting. The primary focus of the presentation will be to consider ways to lower the current barrier to entities installing DC fast charging stations due to the cost of demand charges when demand is high and utilization is low. The group consists of the Alaska Electric Vehicle Association, Renewable Energy Alaska Project, Alaska Center for Energy and Power, the Municipality of Anchorage, Spark Box, and possibly others.

Chugach will participate in the February 26 RCA public meeting and will consider tariff changes to encourage the growth of the EV market in our area. Chugach would prefer to consider tariff changes in coordination with other utilities and the RCA.

Federal Tax Credit

In December 2019, an expired federal tax credit for electric vehicle charging infrastructure was reauthorized. The tax credit is for 30 percent of the cost, up to a cap of $30,000 for depreciable property and $1,000 for non-depreciable property. Credits are available for the period of January 1, 2018 through December 31, 2020.