

Pumped Hydro Webinar



CIRI Energy, LLC

November 12, 2020



Phase I Project History

- Fire Island Wind, LLC a wholly owned subsidiary of Cook Inlet Region, Inc.)
- Southcentral Alaska's first utility-scale wind project
- Located on Fire Island, near Railbelt load center, three miles west of Anchorage
- First power September 2012
- Chugach Electric Association Power Purchase Agreement: 25-year term

Company History

- Fire Island was designed for 33 turbines laid out in three strings, each consisting of 11 turbines
- Phase I was chosen to provide the 17.6 MW project comprised of 11 GE 1.6 XLE wind turbine generators
- 33.0% Net Capacity Factor (NCF)
- P50 = 51,000 MWh

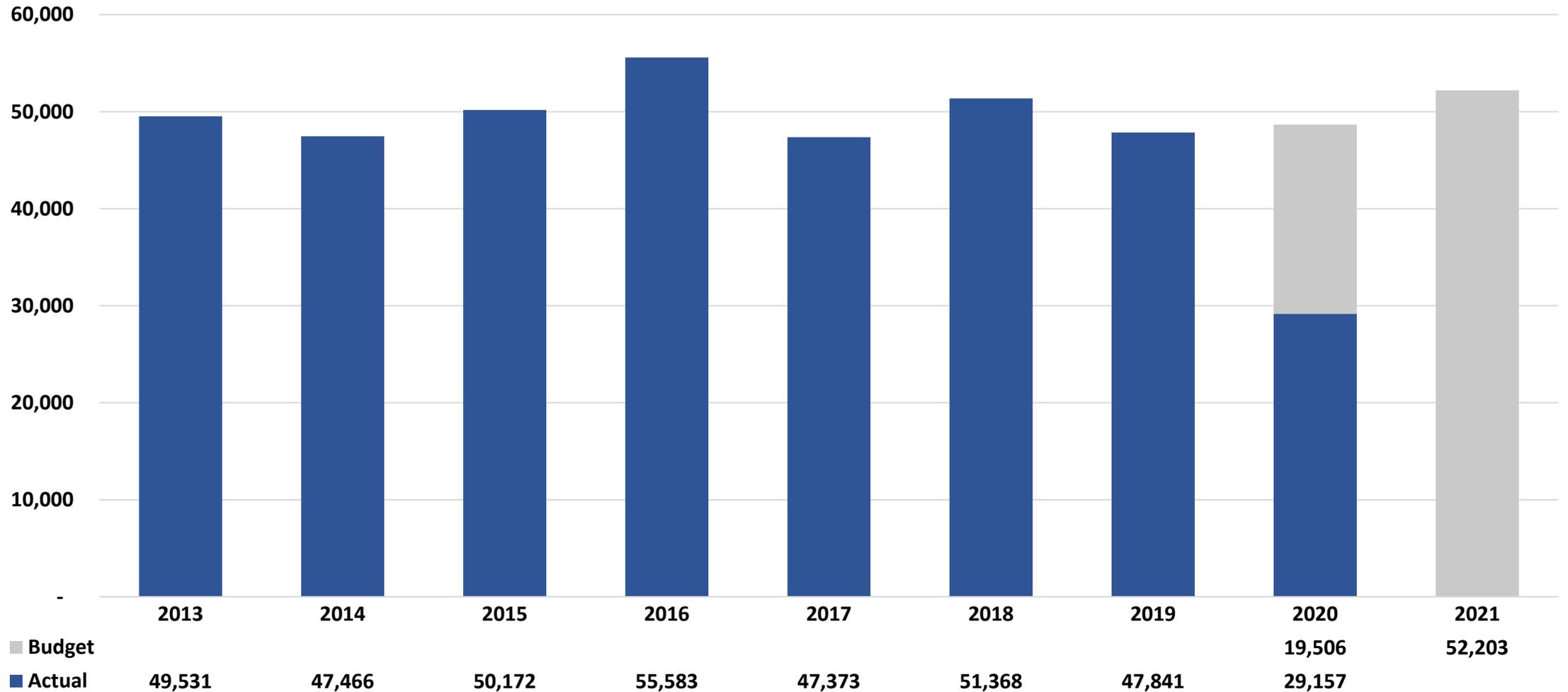


Phase I Project Performance

- Benefits realized: >400,000 MWh LTD (thru Oct 2020)
>3,346,747 Mcf of NG burn avoided
~183,629 Metric Tons of CO2 not emitted
- Turbine Availability:
99.76% - Including planned maintenance outages
No significant mechanical issues

Phase I Production - LTD

MWh Production

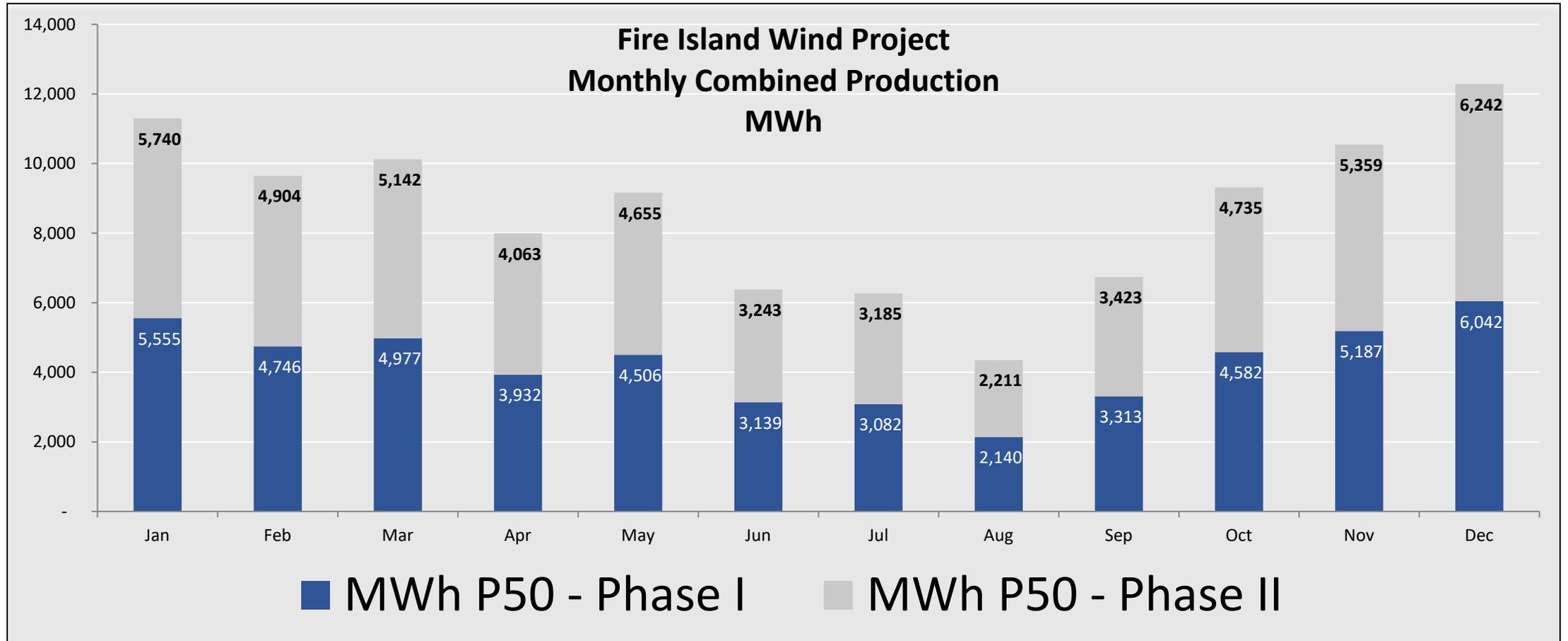


Phase II - Proposed

- 20.35 MW project
- “B String” flanks the east ridgeline of island
- 30.7% Net Capacity Factor (NCF)
- 11 upgraded wind turbines
- P50 = 53,900 MWh
- Could add “C String” as well



Phase II - Proposed



Phase II - Timeline

- Negotiate PPA
- Approval of PPA by RCA

- Construction RFP
- TSA contract
- Construction contract
- NTP for contractors

- May-start construction
- September-Completion
- September-Commissioning
- October -COD

Phase II - Benefits



- **Reduced capital requirement for Phase II:**
 - Transmission capacity available
 - Utilizes existing roads
 - Switchgear
 - O & M Facility
 - Project Labor and Equipment
- **Simple to contract:**
 - PPA template – previously approved by RCA
 - Interconnection agreement
 - Turbine supply
 - Financing

Phase II – Take Aways

- FIW Phase II - Shovel Ready
- Could be built in less than 1 year
- Power Off-take
 - Price is competitive with gas-fired generation
 - Future tax savings uncertain, but turbine pricing lower
 - Optimizes state investment in transmission
 - Reduces system emissions
 - Moves us closer to State's 50% renewable goal
- Pumped hydro could provide a sync for wind energy and ancillary services for the grid
 - Could enable higher renewable penetration

CIRI Energy, LLC

Active investor
Alaska and USA

- Wind
- Gas storage
- Gas-fired power
- Biomass

