

ALASKA RENEWABLES



Working to harness the vast potential of renewable energy to deliver a transformative, clean, sustainable, reliable, and cost-reducing energy supply for Alaska.

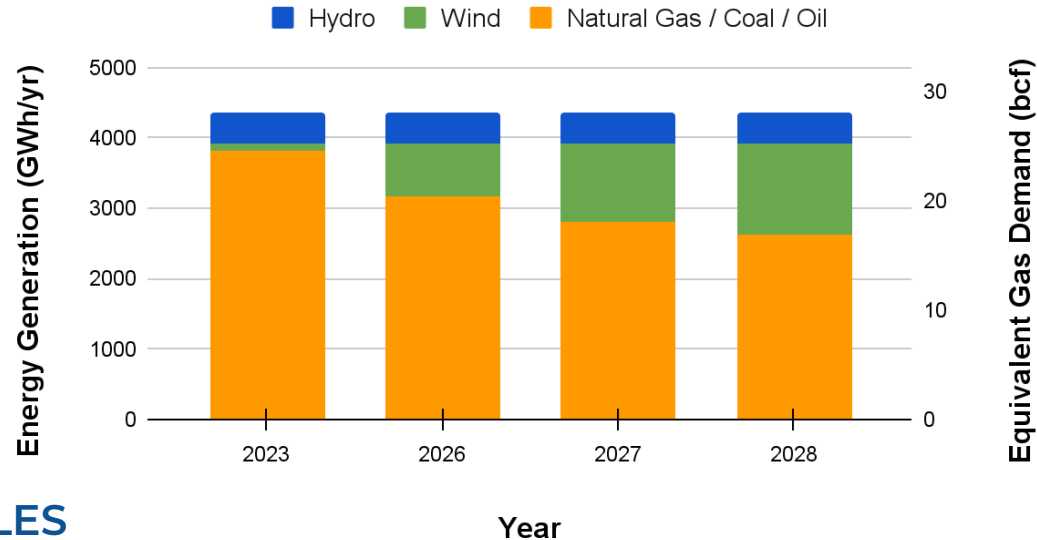
Our Approach

- Community-centered
- Solution-oriented
- Technology-agnostic
- Engineering-first
- Committed to collaboration

Alaska's Wind Energy Deployment Opportunity

- Adding 400 MW of Wind Capacity could displace 8 billion cubic feet (33%) of natural gas demand per year
- Could be deployed with projects coming online yearly from 2026 to 2028
- Protects consumers from rising costs of energy and fuel scarcity

Railbelt Energy Sources



Wind Energy Development Fundamentals

Grid Integration

Land Agreements

Wind Resource Assessment

Operations and Maintenance

Engineering

Construction

Procurement

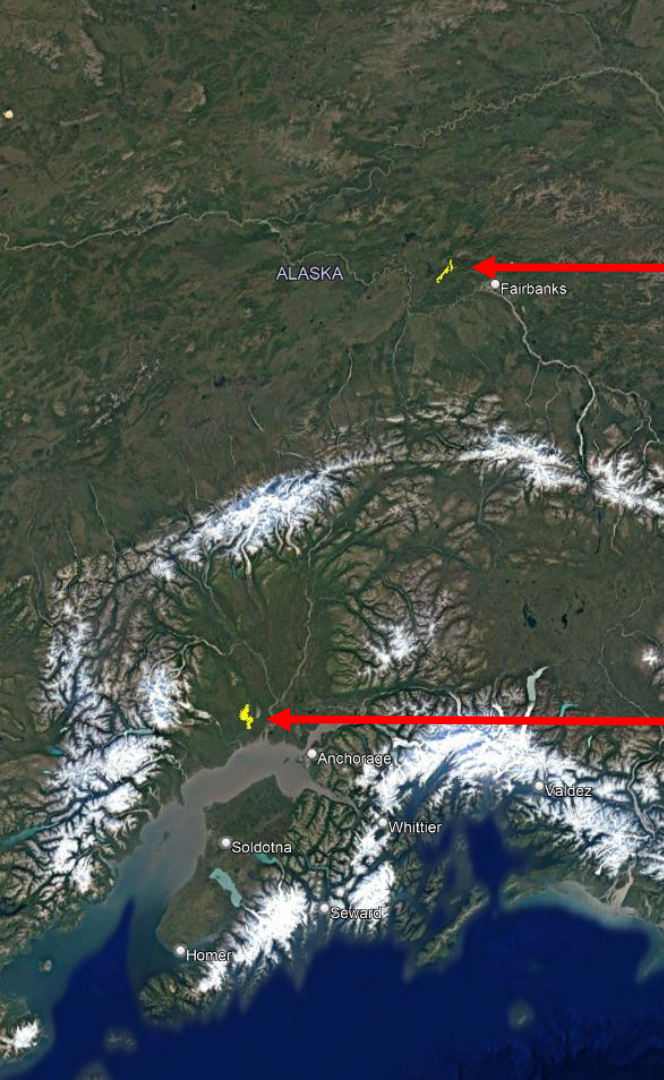
Financing

Permitting

Community Engagement

Power Purchase Agreements





Shovel Creek Wind

Little Mount Susitna Wind



Shovel Creek Wind Project

- 2.5-10 miles west of Murphy Dome, near Fairbanks
- Access via Murphy Dome Extension Rd
- 60-211 MW project capacity
- 18-62 turbines

Visual Simulation

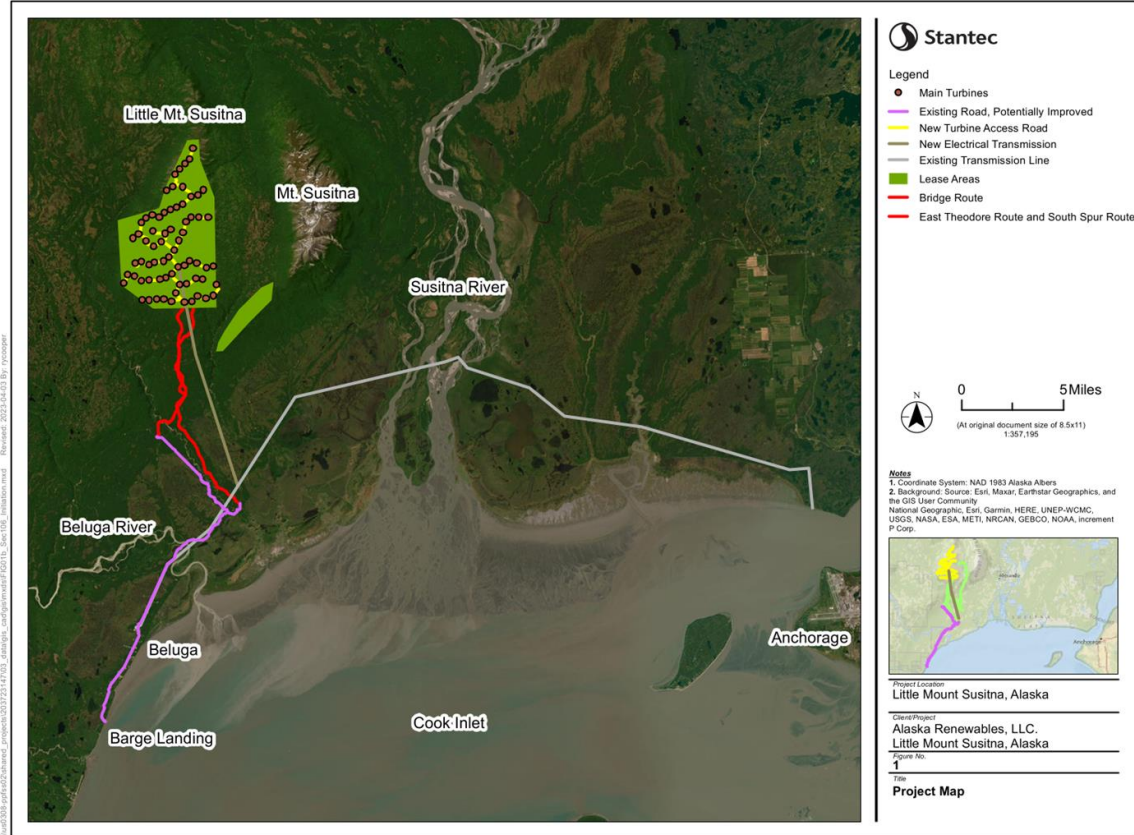
Little Mt Susitna Wind Project

- 40 miles WNW of Anchorage
- Access via barge landing in Beluga and existing gas roads
- 204 – 280 MW project capacity
- 45 – 62 turbines

Little Mount Susitna Wind Project

ALASKA RENEWABLES

- Selected from Chugach Electric's 2021 renewable energy RFP
- Studies underway to assess feasibility and economics
- Lease under evaluation by DNR
- Environmental assessments and permitting work underway
- Wind resource assessment - meteorological towers and Lidar
- Preliminary engineering design and independent analyses
- Turbine suitability and selection
- Community and Indigenous engagement
- Commercial Operation of 2026

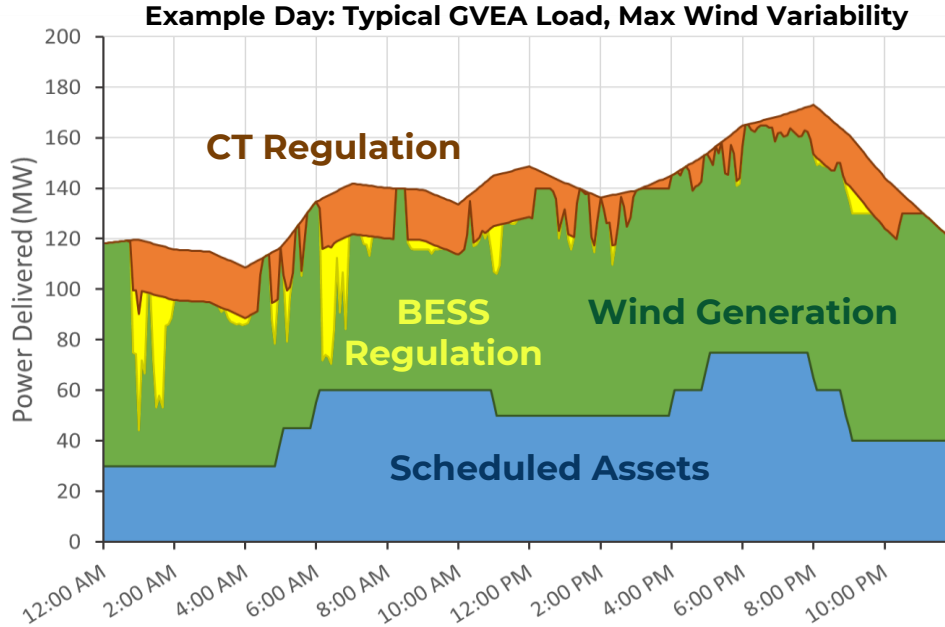


Advances in Forecast Accuracy - 24-hr Ahead



Improving Wind Integration

90 MW Wind, Wind Forecasting, 46 MW BESS



Integration Approach

Scheduling

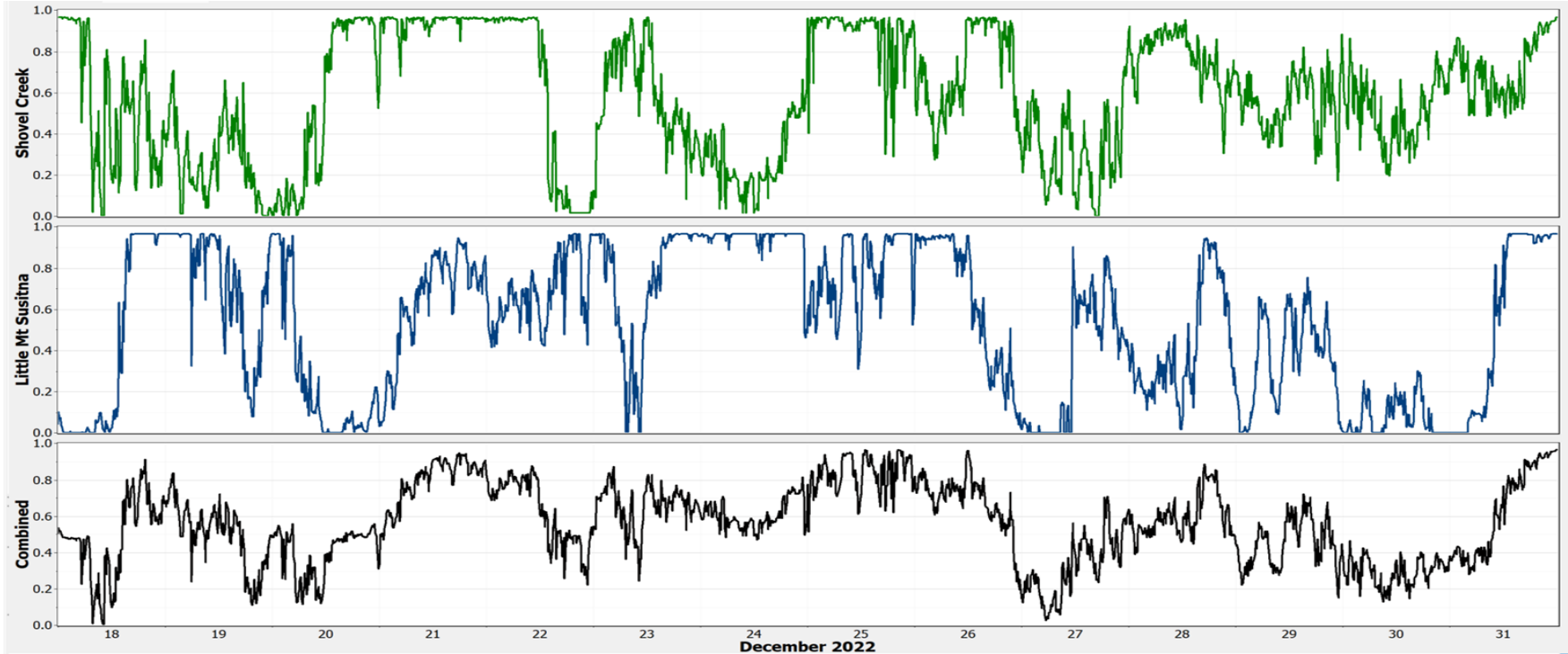
- North Pole CC scheduled at Min Load
- Healy or Intertie (Bradley/Gas) scheduled against forecasted load and wind profiles
- 2x North Pole SC on standby

Operation

- North Pole CC regulates power against wind variability
- BESS charges/discharges based on pre-established setpoints (~1 Daily EFC)
- Wind curtailment to balance (0.7%)

Leverage the existing tools, and add right-size BESS/LDES and Ancillary Services to ensure Reliability and Stability

Diversified wind supply from multiple sites



Less time at full/high wind production
Less time at zero/low wind output
Reduced ramp rates
Higher predictability



Less need for curtailment
More economic dispatch
Reduced need for energy storage capacity
Improved nomination of gas supply
Lower maintenance costs

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