

Renewable Energy Development

May 2024

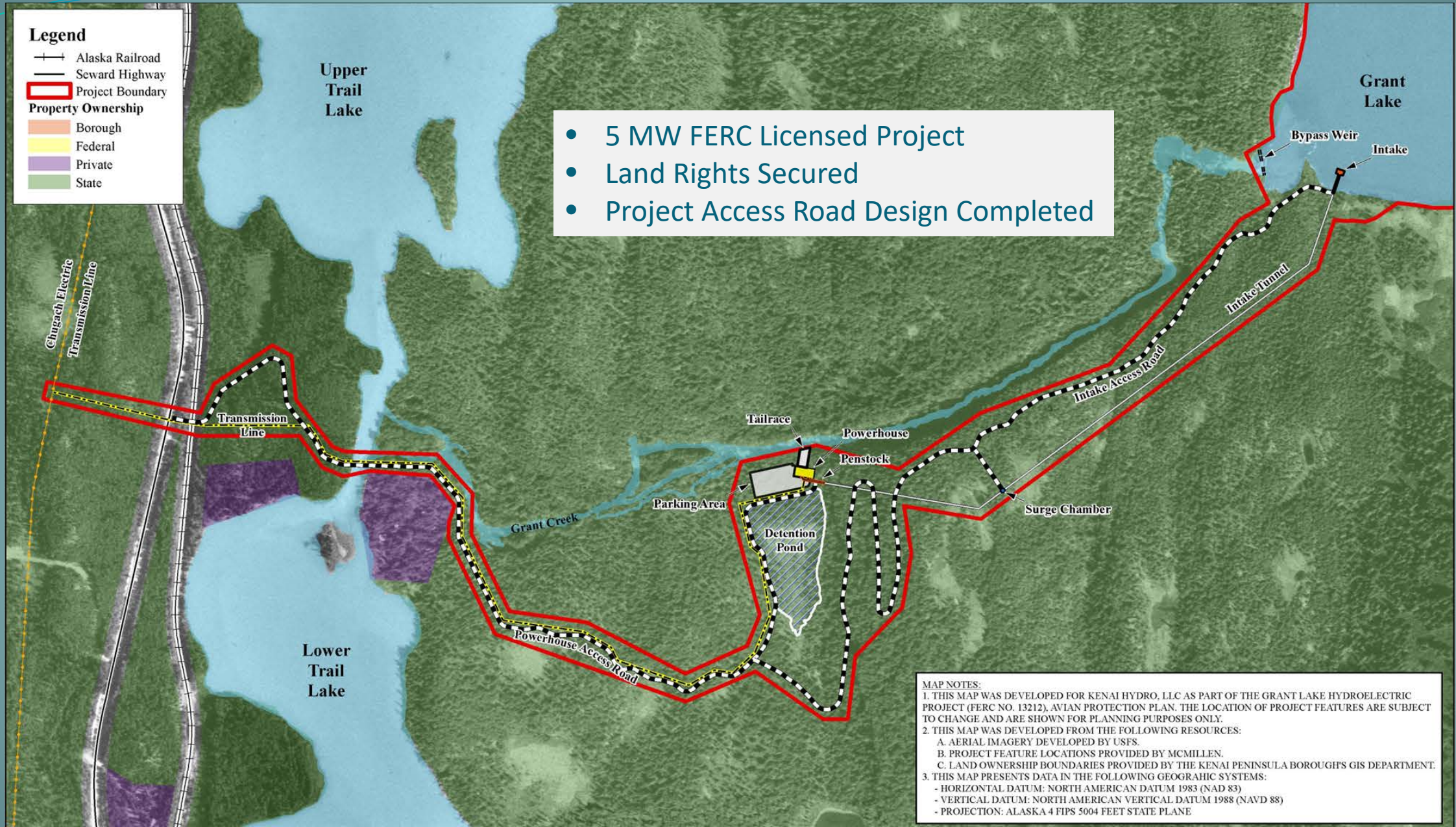


**Homer Electric
Association, Inc.**

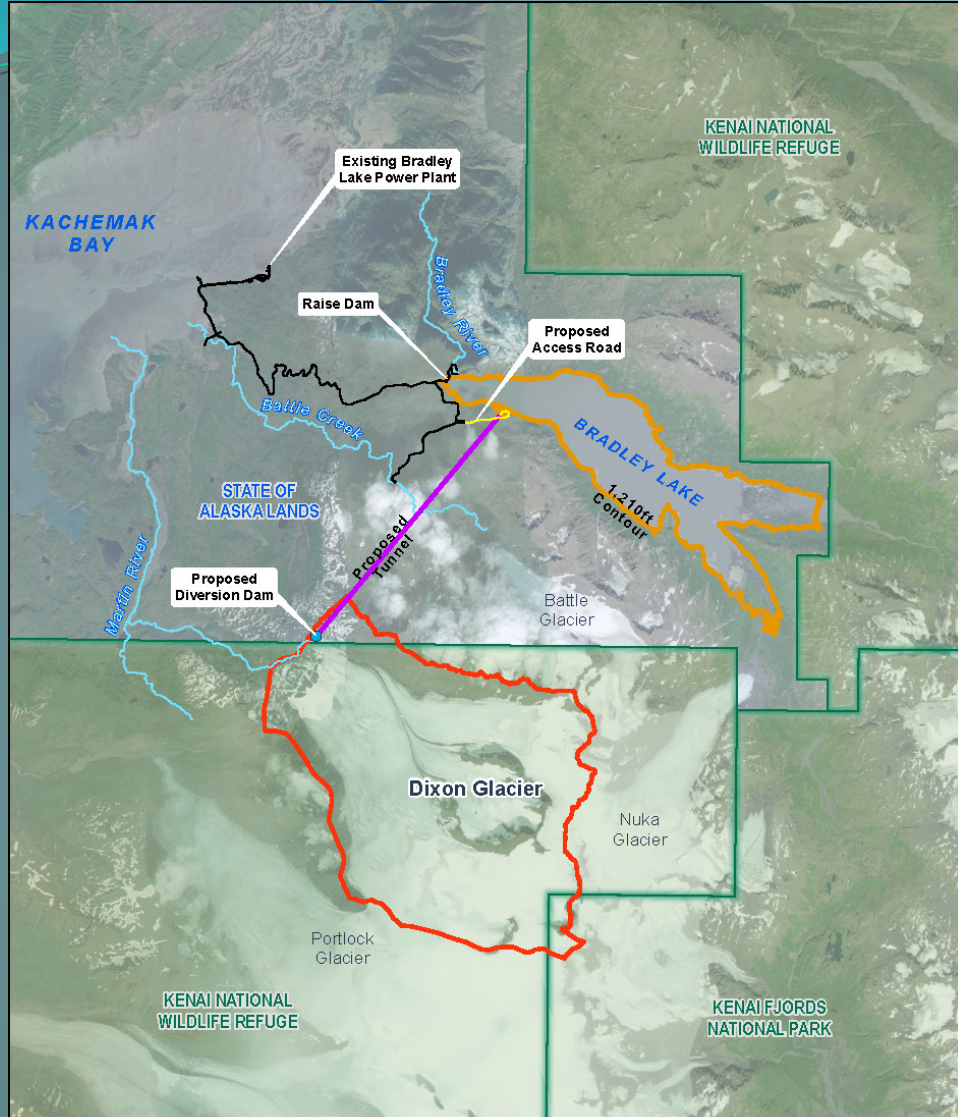
Renewable Energy Project Pipeline

| | HEA | IPPs & State |
|---------------------|------------------------------|-------------------------------|
| Hydro | Grant Lake | Dixon Diversion |
| | | |
| Biomass | Landfill Gas | |
| | | |
| Wind | Nikiski | Fire Island Phase 2 |
| | Ninilchik | Aikido Technologies |
| | Caribou Hills | Alaska Renewables |
| | Bradley Lake Bench | |
| | Dillion Platform | |
| | | |
| Solar | Net Metering | Proposed Kenai Peninsula Farm |
| | | |
| Geothermal | Augustine Interconnect Study | Geo Alaska – Augustine Island |
| | Mt. Spurr Interconnect Study | Geo Alaska – Mt. Spurr |
| | | |
| Tidal | | ORPC |
| | | |
| BESS | Soldotna BESS | |
| | | |
| Transmission | | GRIP Grants |

Grant Lake Hydroelectric Project



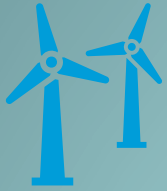
Dixon Diversion



| | | |
|---|--|--|
| <ul style="list-style-type: none"> — 1,210ft Contour — Bradley Lake Hydroelectric Project Roads — Proposed Tunnel — Propose Access Road ● Proposed Diversion Dam ● Dixon Intake Basin | | <p>Project Location</p> <p>Dixon Diversion Project</p> <p>Date: February 06, 2024</p> <p>DOWL ALASKA Figure 1</p> |
|---|--|--|



HEA On-Shore Wind Resource Assessment



Renewable Energy Fund Grants
\$833,600

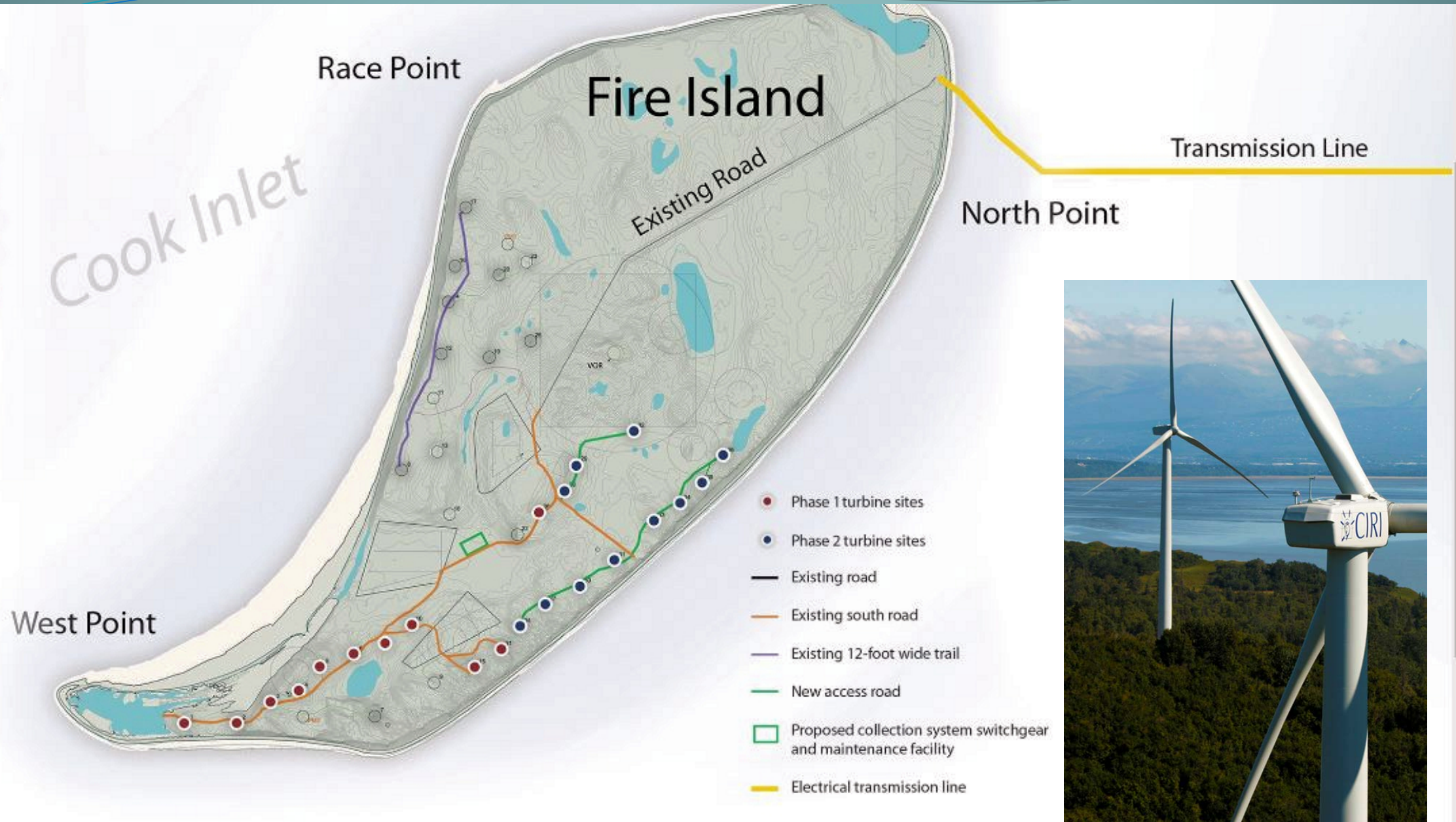
- Ninilchik Wind
- Bradley Lake Bench Wind
- East Forelands Wind
- Caribou Hills Wind



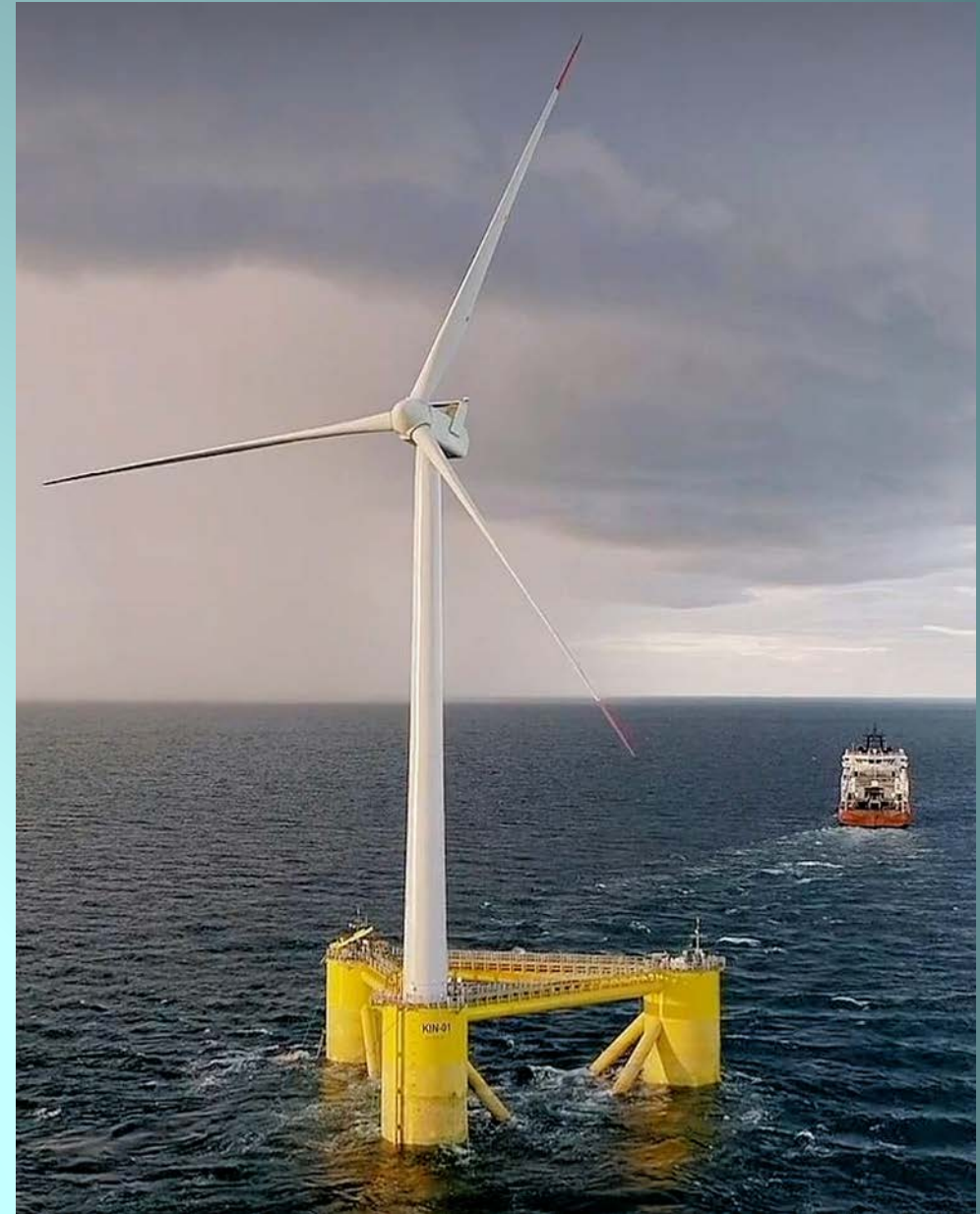
HEA / Hilcorp Off-Shore Wind Resource Assessment



Fire Island Wind Expansion



Aikido Technologies Off-Shore Wind



Alaska Renewables – Little Mt. Susitna Wind



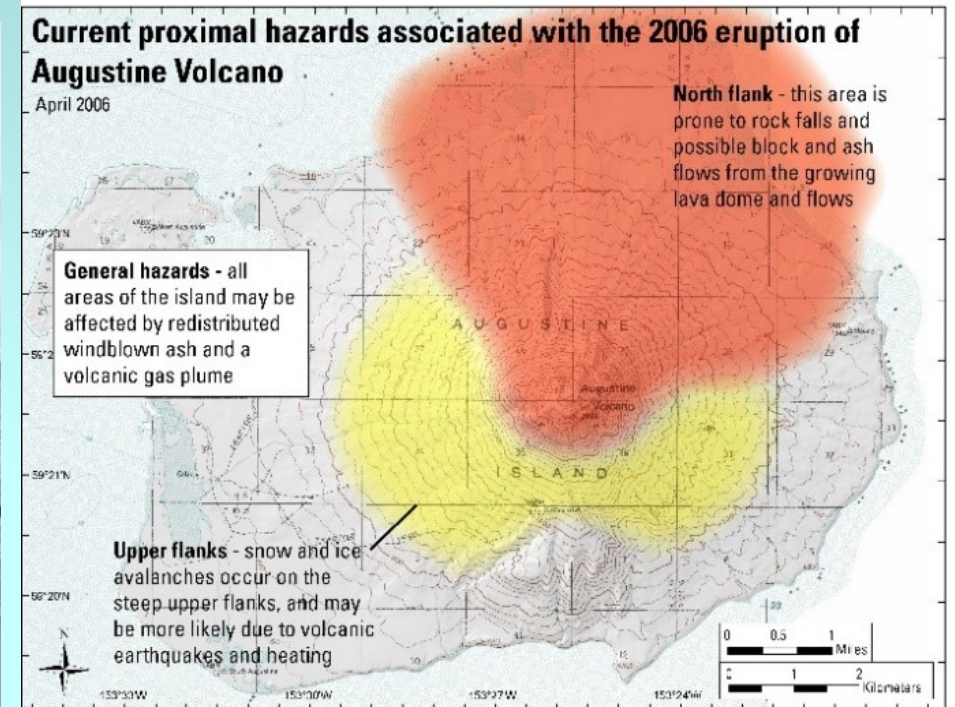
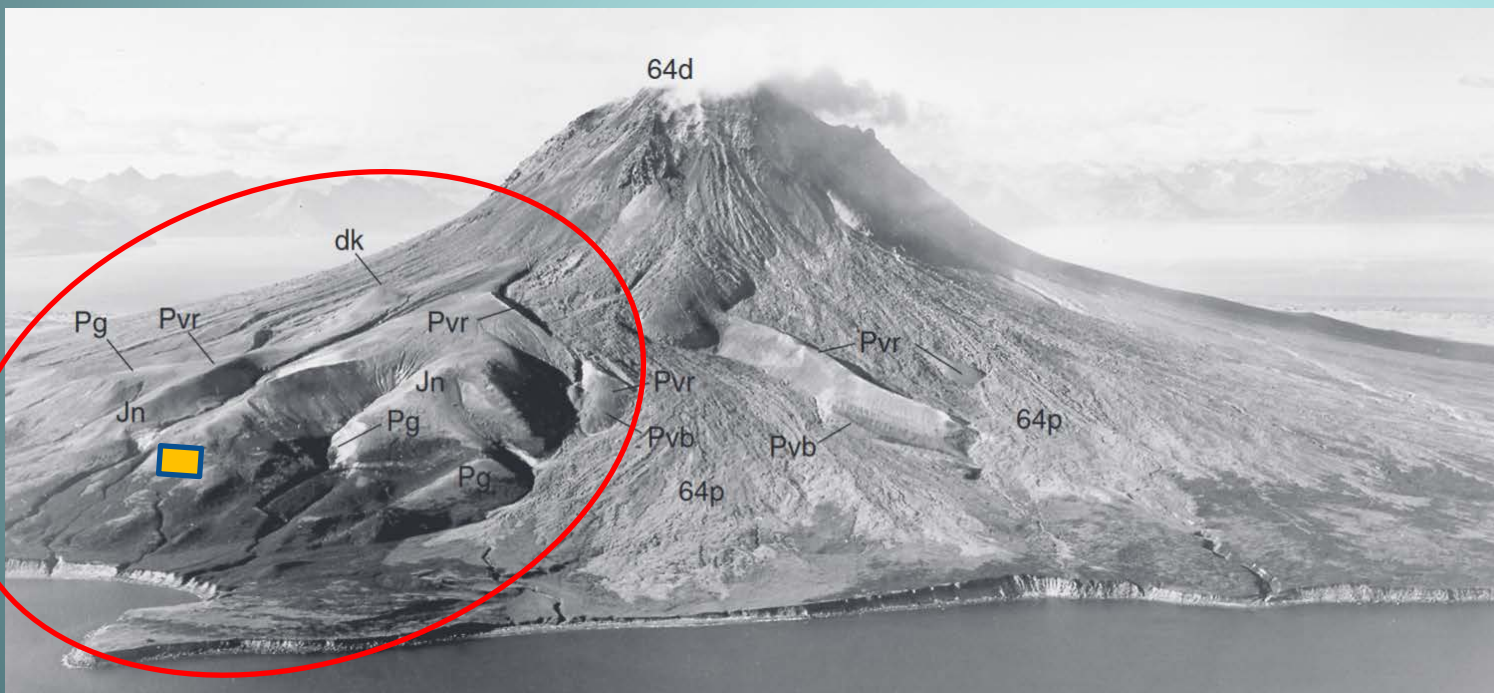
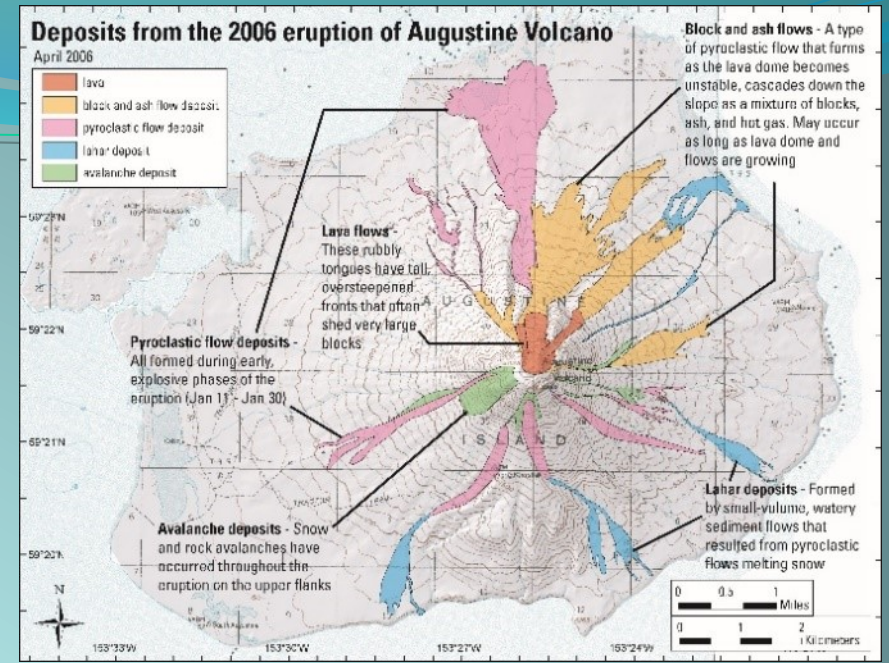
Orange Dots: Proposed Wind Turbine Site
Neon Green Solid Line: New Transmission Line
Pink Solid Line: New Access Roads

Black Solid Lines: Existing Roads
Yellow Dotted Line: Lease Area
Dark Green Line: Existing Transmission Lines

Alaska Renewables – Shovel Creek Wind

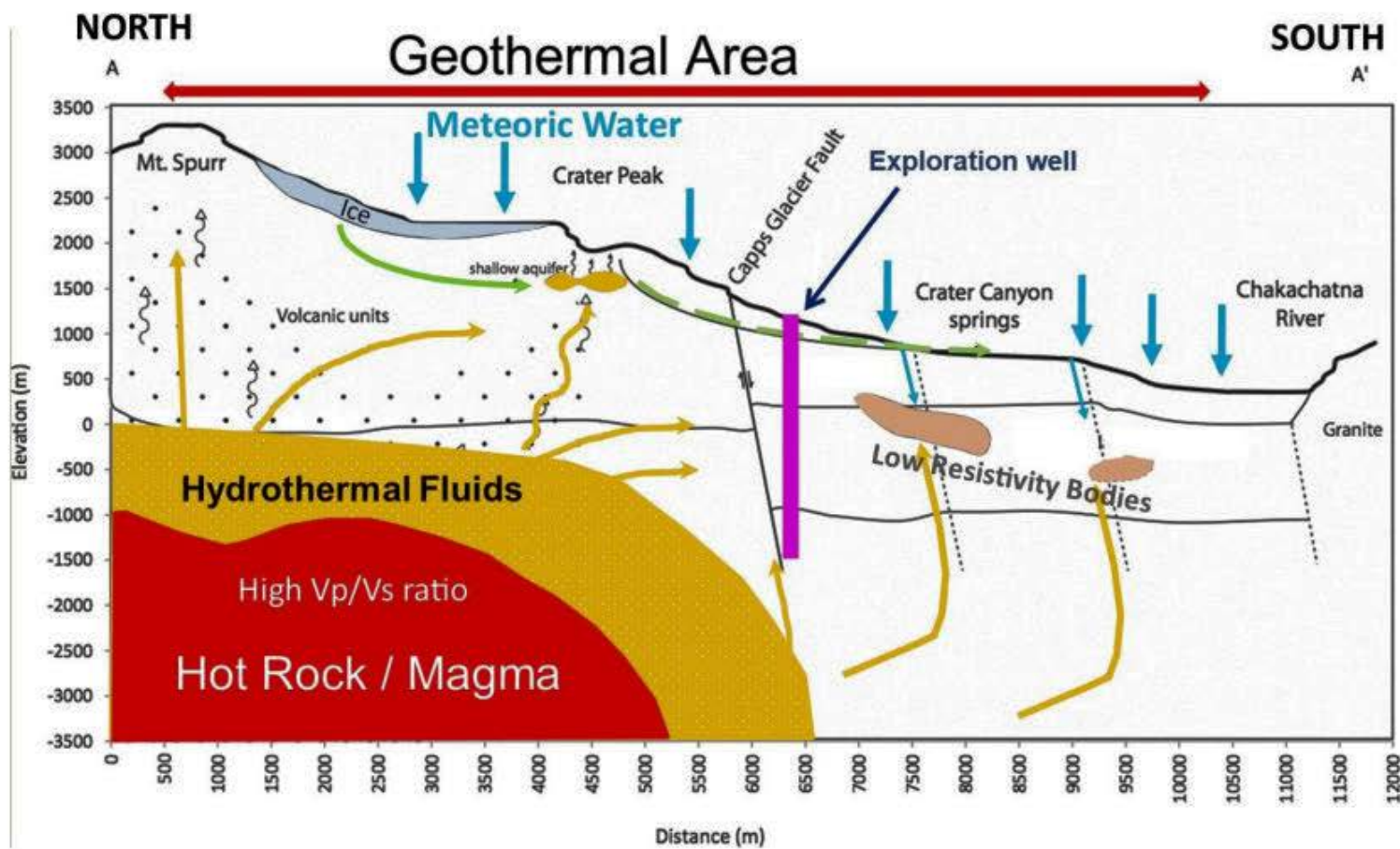


GeoAlaska Augustine Island Geothermal

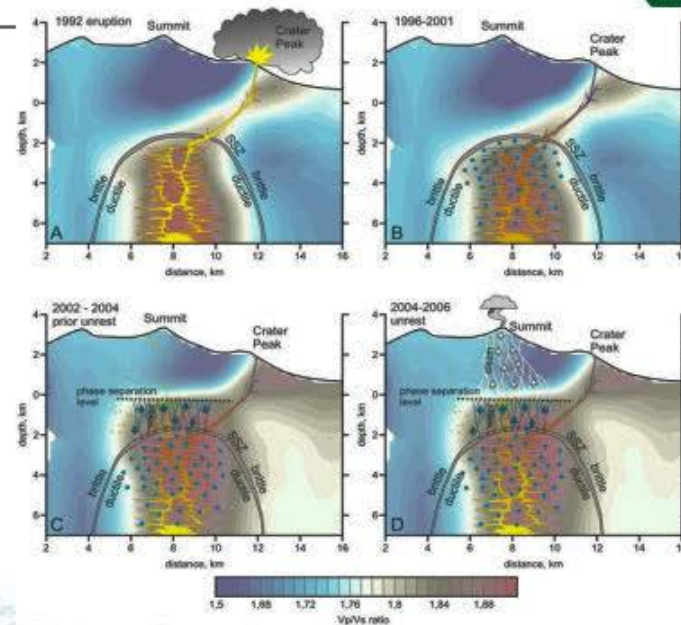


GeoAlaska Mount Spurr Geothermal

PRELIMINARY CONCEPTUAL MODEL



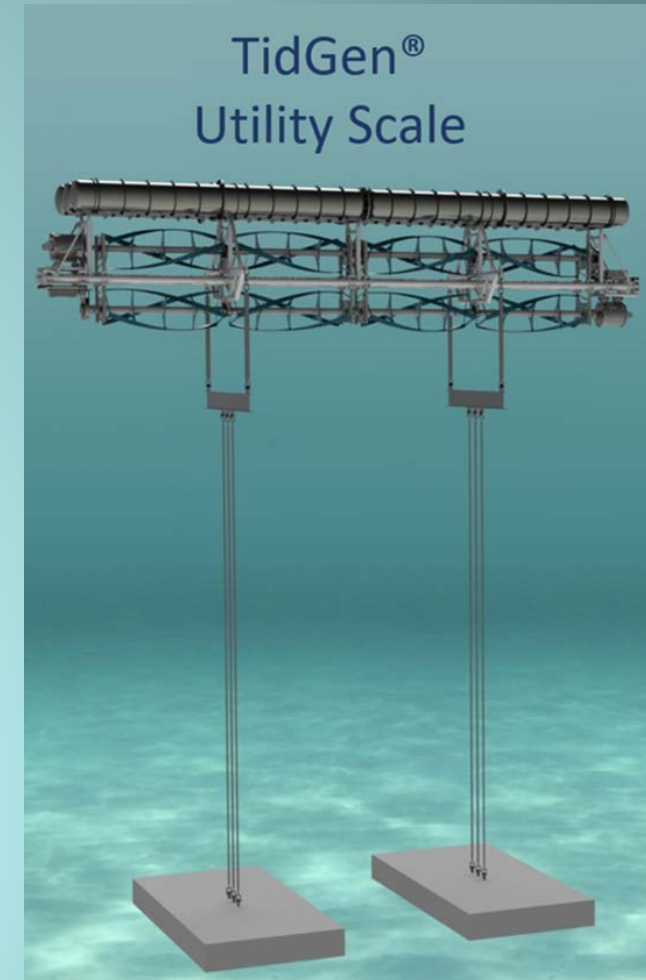
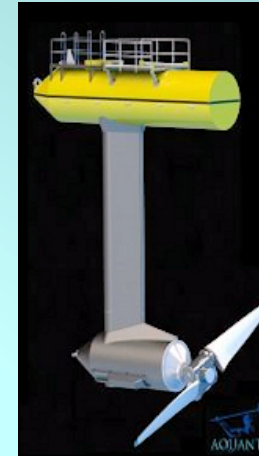
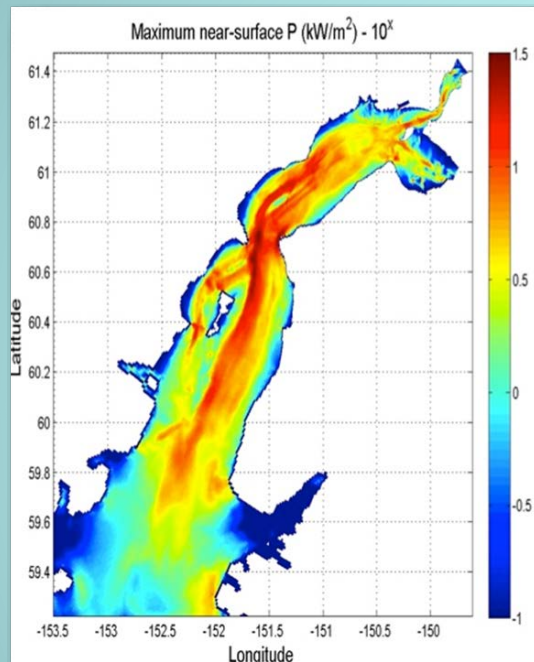
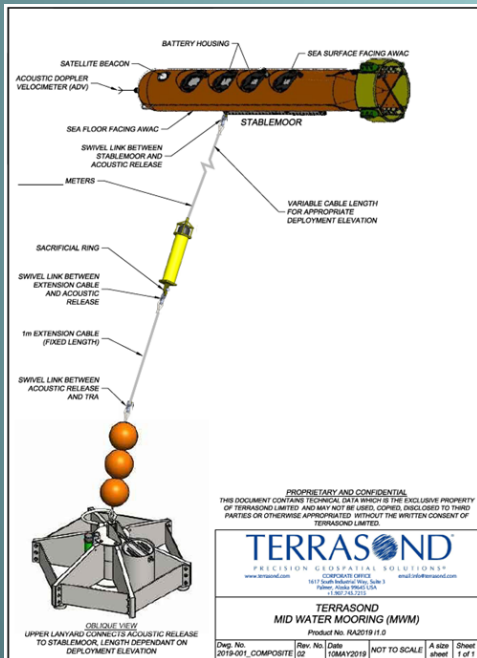
Change in V_p/V_s with time



Tidal Energy Development In the Cook Inlet

Cook Inlet Tidal Energy

- World Class Resource
- Close to Existing Transmission Grid Infrastructure
- NREL Conducted High Fidelity Tidal Resource Characterization
- Cook Inlet Tidal Energy Work Group
- NREL's Cook Inlet Tidal Energy Evaluation
- ORPC Team Received \$3 Million for a Phase 1 Study to Deploy 1-5 MW. They are short listed to receive \$29 Million more.



Proposed Kenai Peninsula Solar Farm

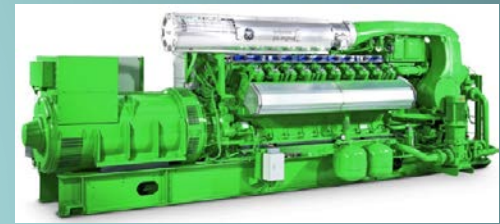
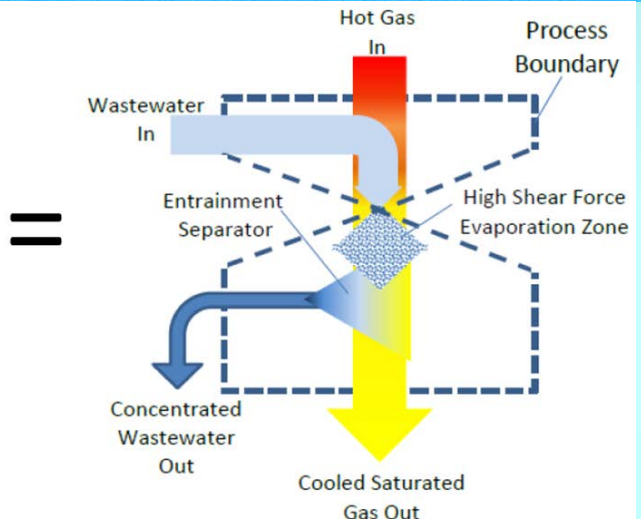
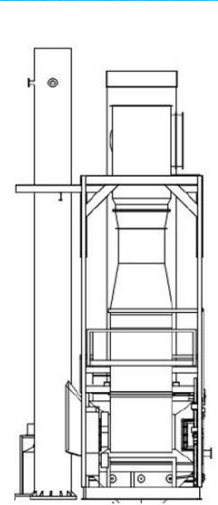
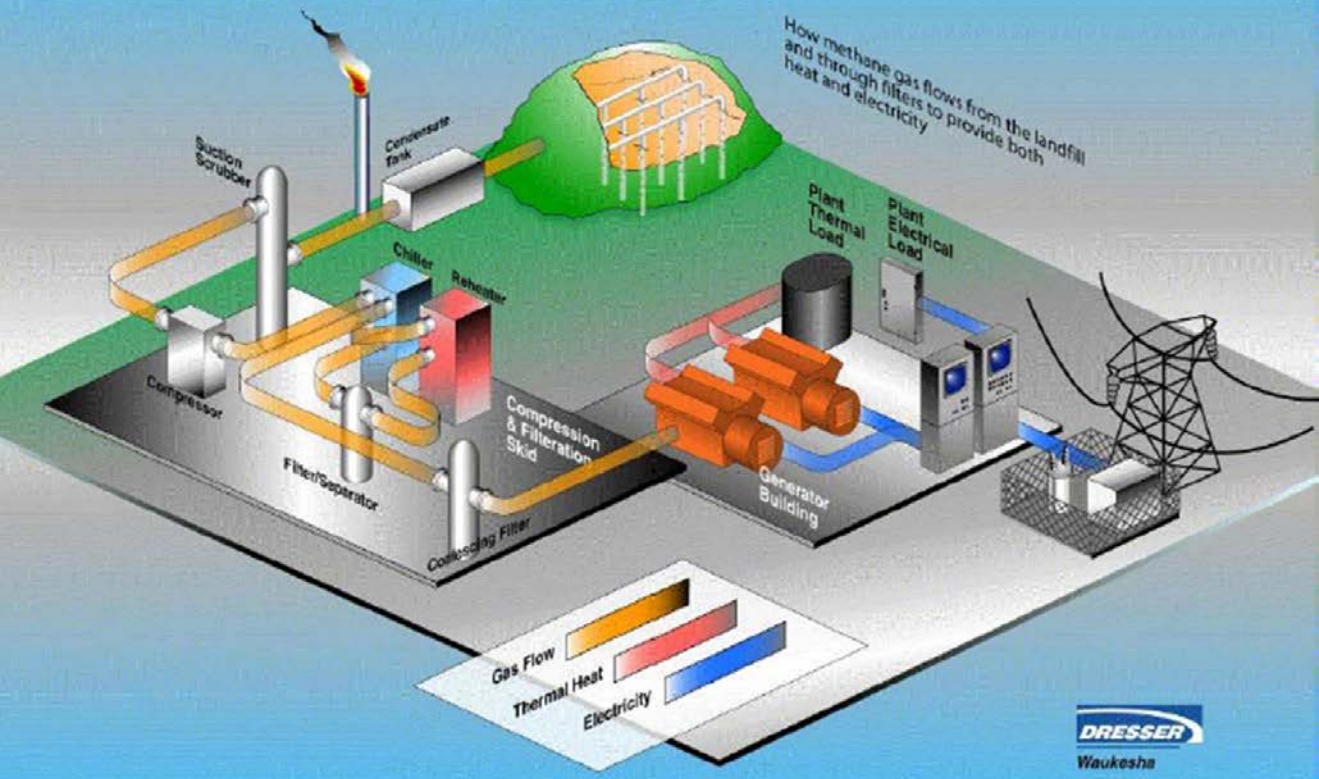
- Utility scale solar farm
- **Potential to meet ~10% HEA energy demand**
- Would use bi-facial panels
 - Produces energy from front & back
 - Captures reflective light off snow
- **Being developed by Renewable IPP**
 - Same company who completed the Willow & Houston Solar Farms



HEA Net Metering



Landfill Gas to Energy



HEA / KPB
Landfill Gas
Project

HEA'S Battery Energy Storage System



Railbelt Transmission System Upgrades



(Bob Hallinen photo)