



CIRI

Alternative energy solutions for Alaska

Stone
HORN RIDGE

Fire Island
Wind^{LLC}



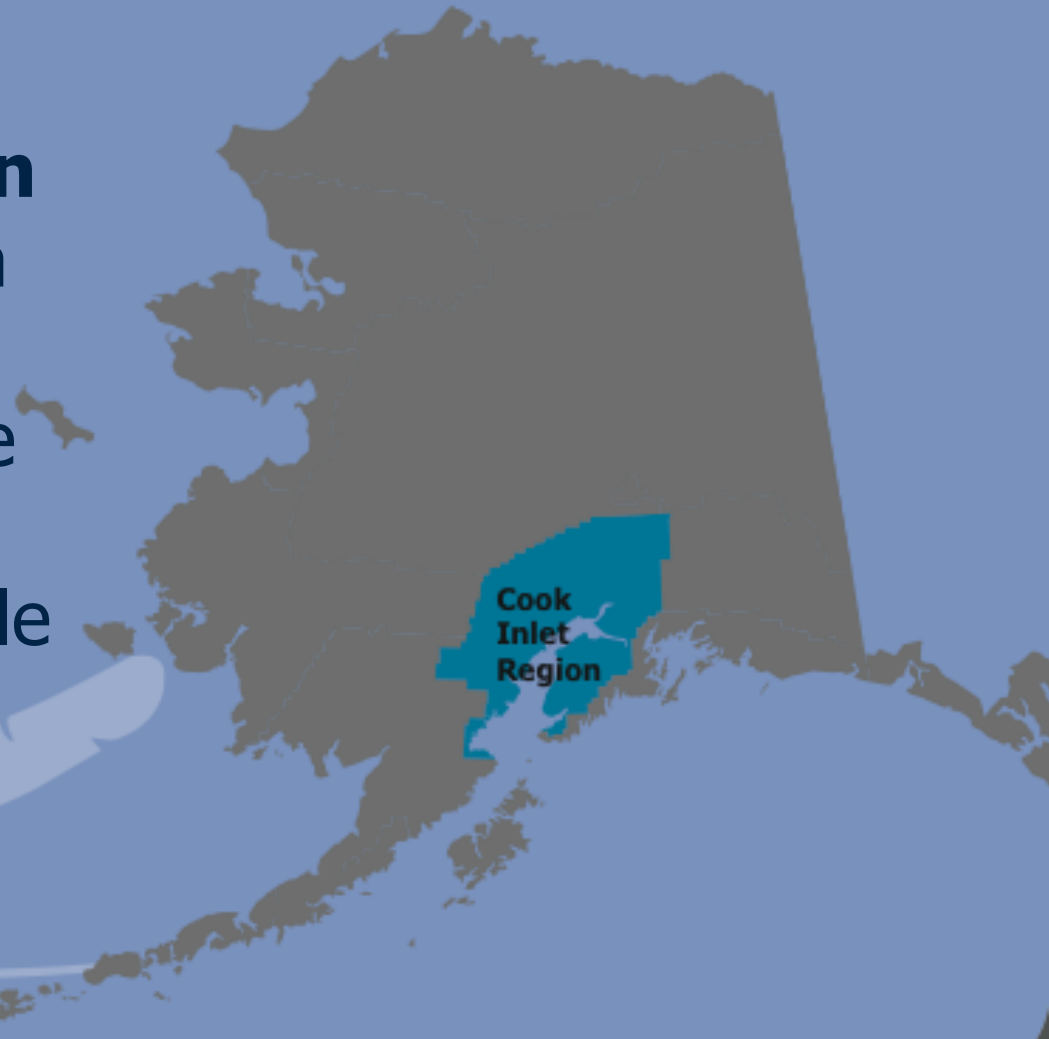


CIRI

An Alaska Native corporation with diverse business interests:

- Energy and resource development
- Oilfield and heavy construction services
- Real estate development and management
- Environmental remediation services
- Tourism and hospitality

CIRI is the **largest private landowner in Southcentral Alaska** with more than 1.3 million acres of surface and subsurface estate available for responsible oil, gas, mineral and alternative energy development



Stone HORN RIDGE

The logo graphic consists of a stylized flame or drop shape. The top half is a light gray gradient, and the bottom half is a solid orange color. Inside the orange section is a white, semi-circular shape that resembles a stylized 'H' or a flame's base.

An Alaska energy company

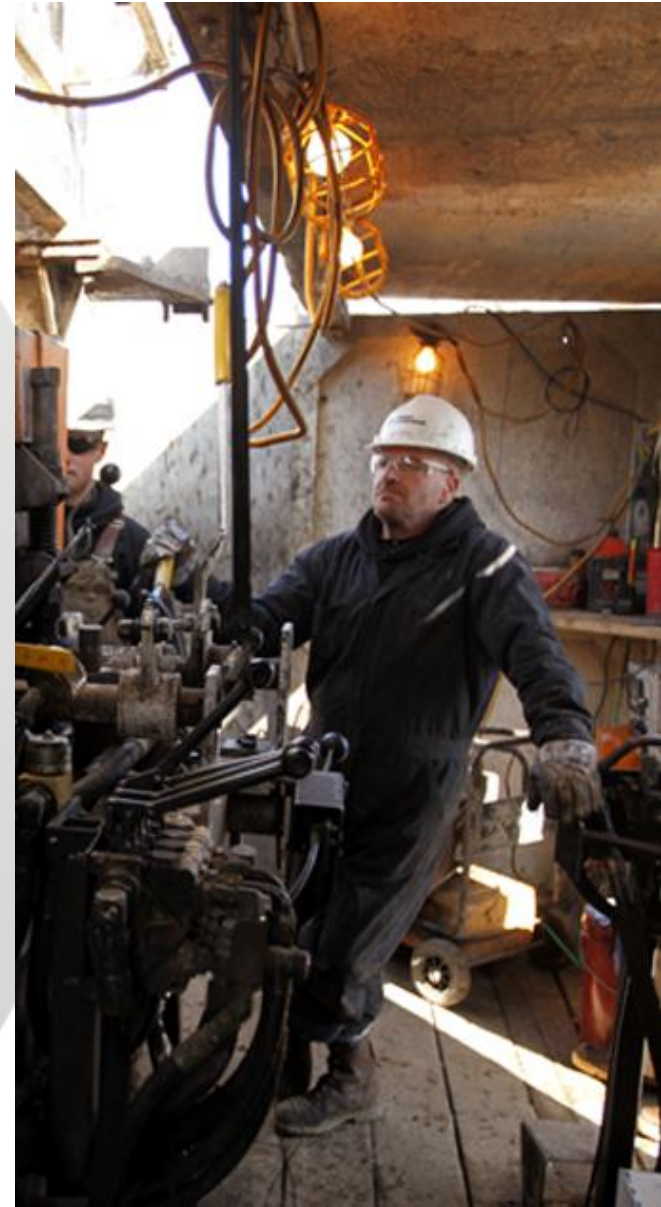
Stone Horn Ridge

- Alaska energy company developing underground coal gasification (UCG) project
- Joint venture of CIRI and Laurus Energy, a Houston-based UCG technology company
- UCG technology provided by license from Ergo Exergy



UCG: Proven, Clean Technology

- UCG is a proven technology that converts coal “in situ” to produce syngas
- Process occurs below impermeable rock layers isolated from freshwater aquifers
- Eliminates most environmental and safety risks associated with conventional coal mining, handling, transport and waste
- More than 50 test and commercial projects completed worldwide



UCG Process

- Drill two wells and create a connection between the wells
- At one well, inject an oxidant such as air or oxygen
- Start a combustion reaction
- Heat and pressure gasify coal and drive other reactions
- Second well produces syngas to surface for cleanup and use



Southcentral Alaska Energy

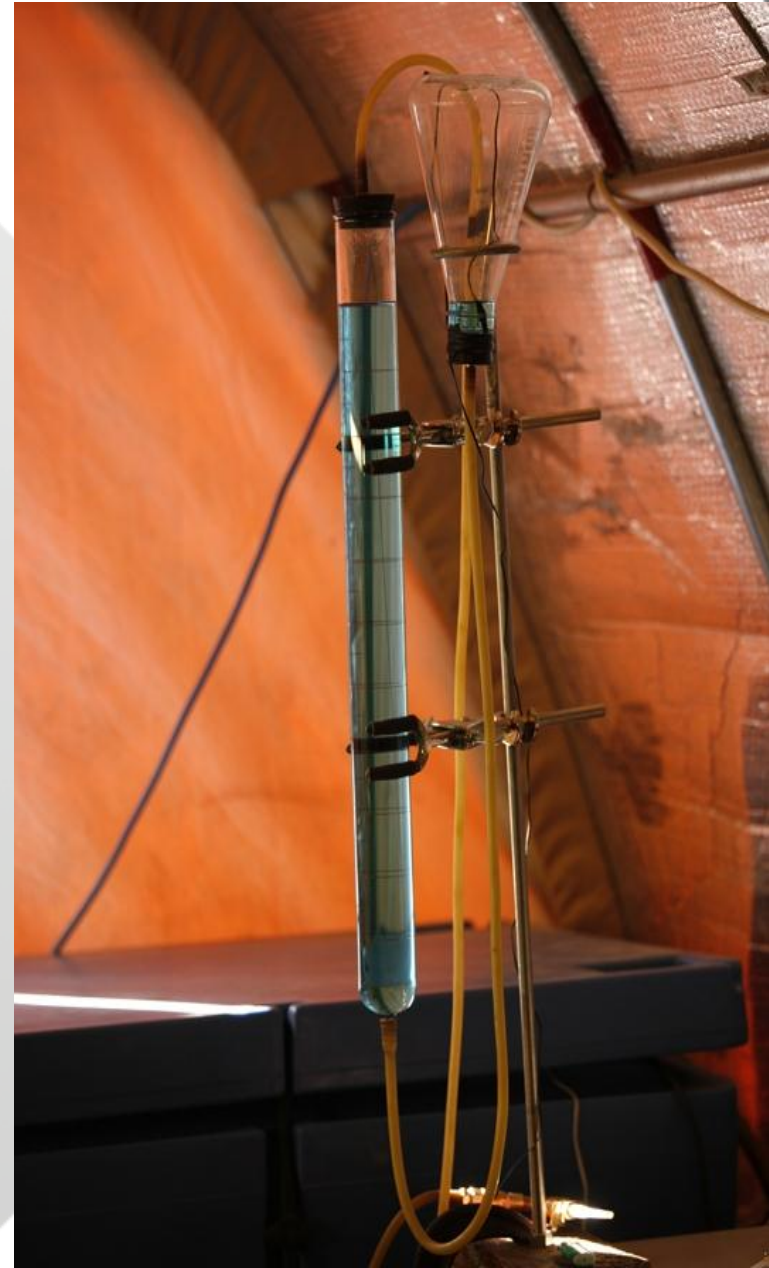
- Produce energy for local use and export
- CIRC core drilling confirmed significant commercial coal reserves
- Favorable geology for UCG development
- Global-scale coal resource
- Tidewater location
- Local energy market need



Uses for Syngas

UCG-produced syngas can be:

- Used to generate electricity
- Upgraded via methanation into synthetic natural gas (methane) for local use and export
- Used as feedstock to produce:
 - clean liquid fuels
 - fertilizer
 - other petrochemical products

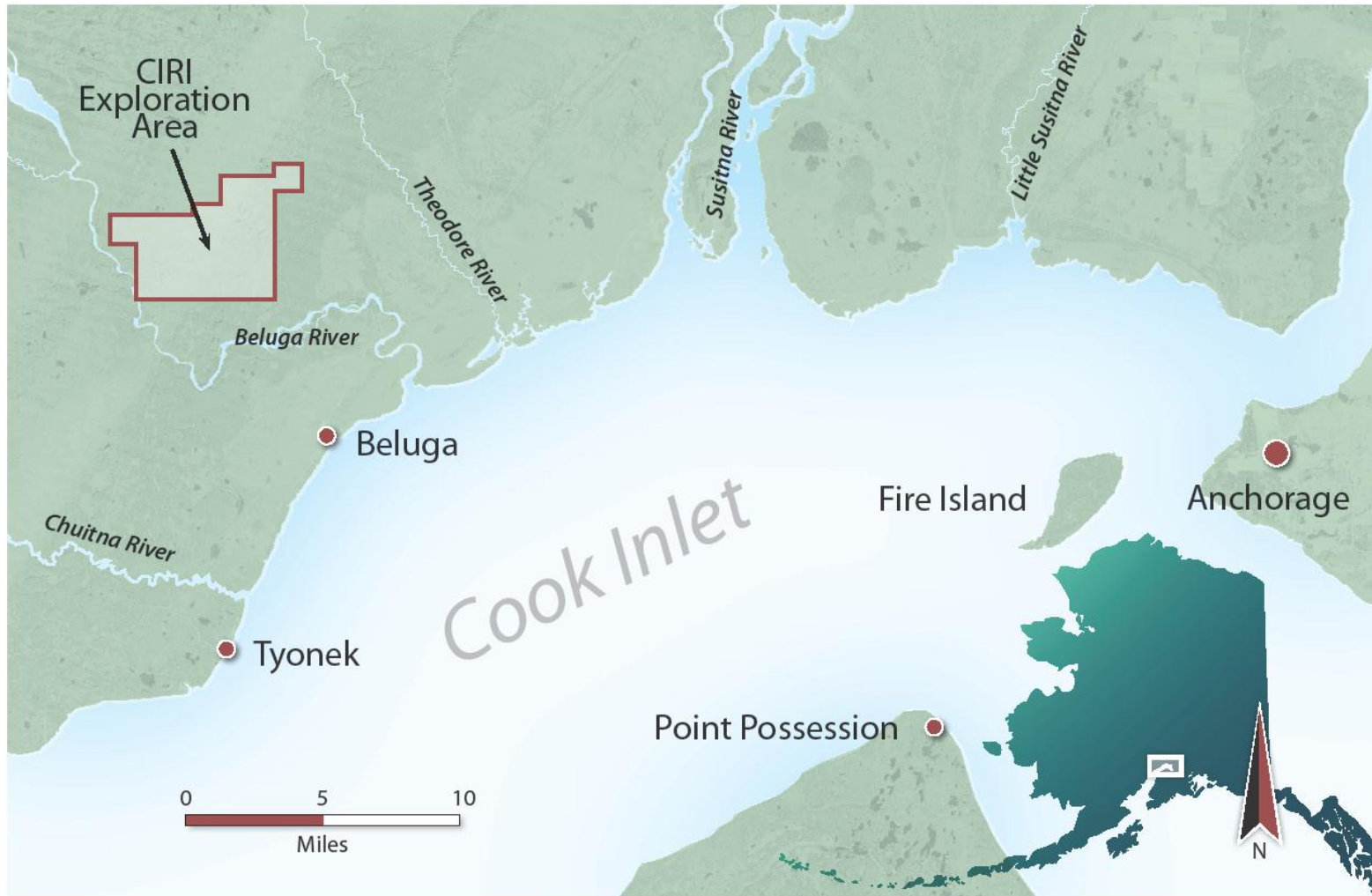


Stone Horn Ridge Project

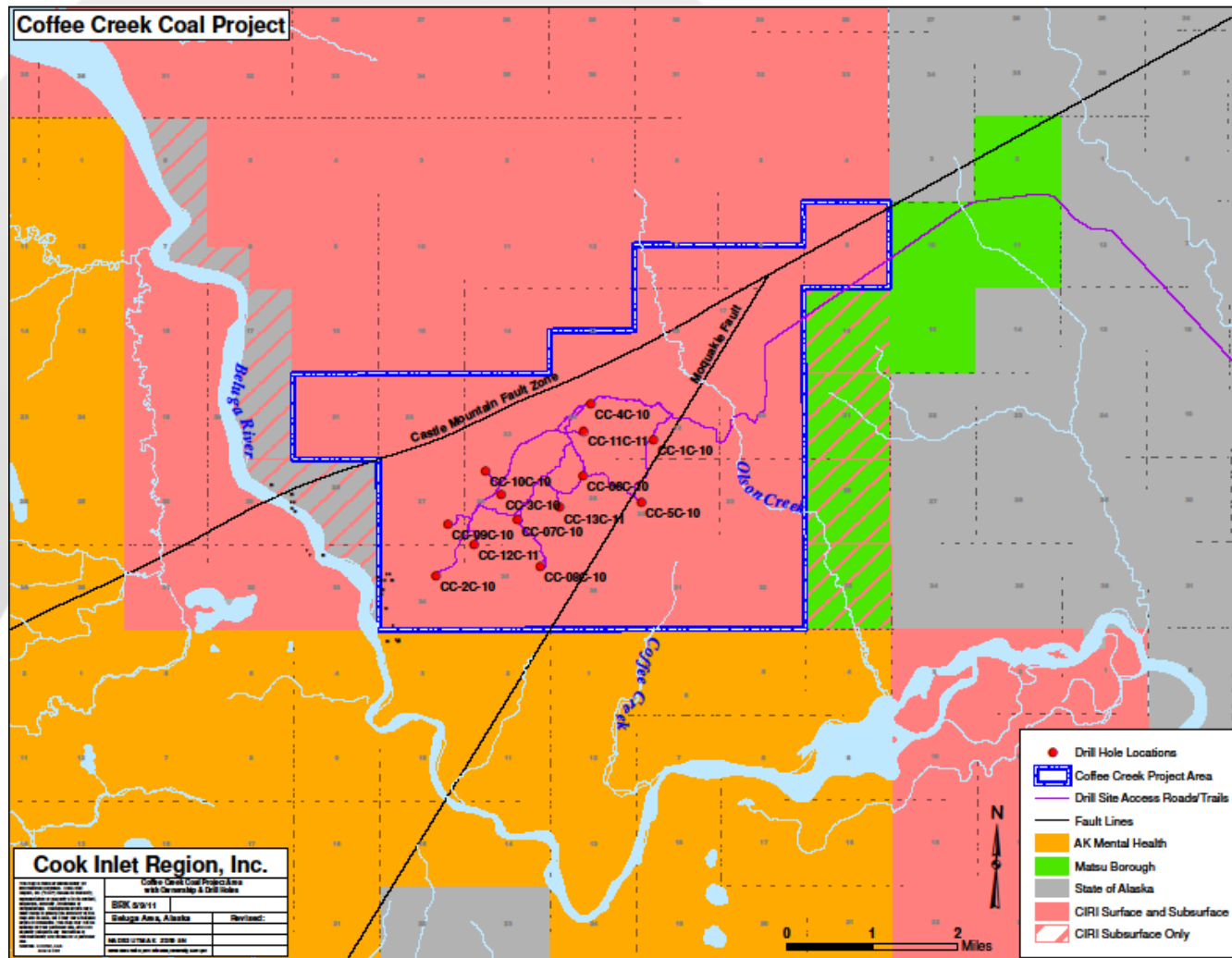
- Project located on CIRI land
- significant commercial coal reserves confirmed
- Multiple coal seams confirmed more than 650 feet deep, below impermeable rock layers and isolated from freshwater aquifer
- Ongoing study, modeling, testing and monitoring



Stone Horn Ridge site



Stone Horn Ridge site



Stone Horn Ridge Project History

- **UCG resource and geological evaluation of CIRI lands**
- **13-hole core drilling and wire line data program**
- **Formed Stone Horn Ridge LLC**
- **Preliminarily validated commercial UCG resource and appropriate geology for development**
- **Concept engineering and costing of large scale surface facility**
- **Geological, rock mechanics and hydrogeological modeling**

Responsible Development

Stone Horn Ridge will only develop a UCG facility after a deliberate, thoughtful process

- Performing all due diligence, environmental risk assessment and necessary permitting
- Committed to developing carbon capture and management program
- Consistently seeking input from community, environmental and technical interests

Project Updates

Next Steps

- Shallow, high-resolution seismic
- Complete model of underground geology
- Initiate permitting process and baseline environmental data collection
- Design site characterization drilling program
- Initiate commercial operations and syngas production as soon as 2015





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