



FROM MINE TO MEGAWATT, MEGAWATT TO MARKET
Meeting National Defense & Urgent Alaska Power Needs
September 2026

⚡ Planned Capacity **1,250 MW**

🌿 CO₂ Capture **Integrated**

📅 Financial Close Target **2028**

🏗️
3 GW
Reserve Fuel

\$
**MILITARY, AI/DC
POWER SUPPLY**

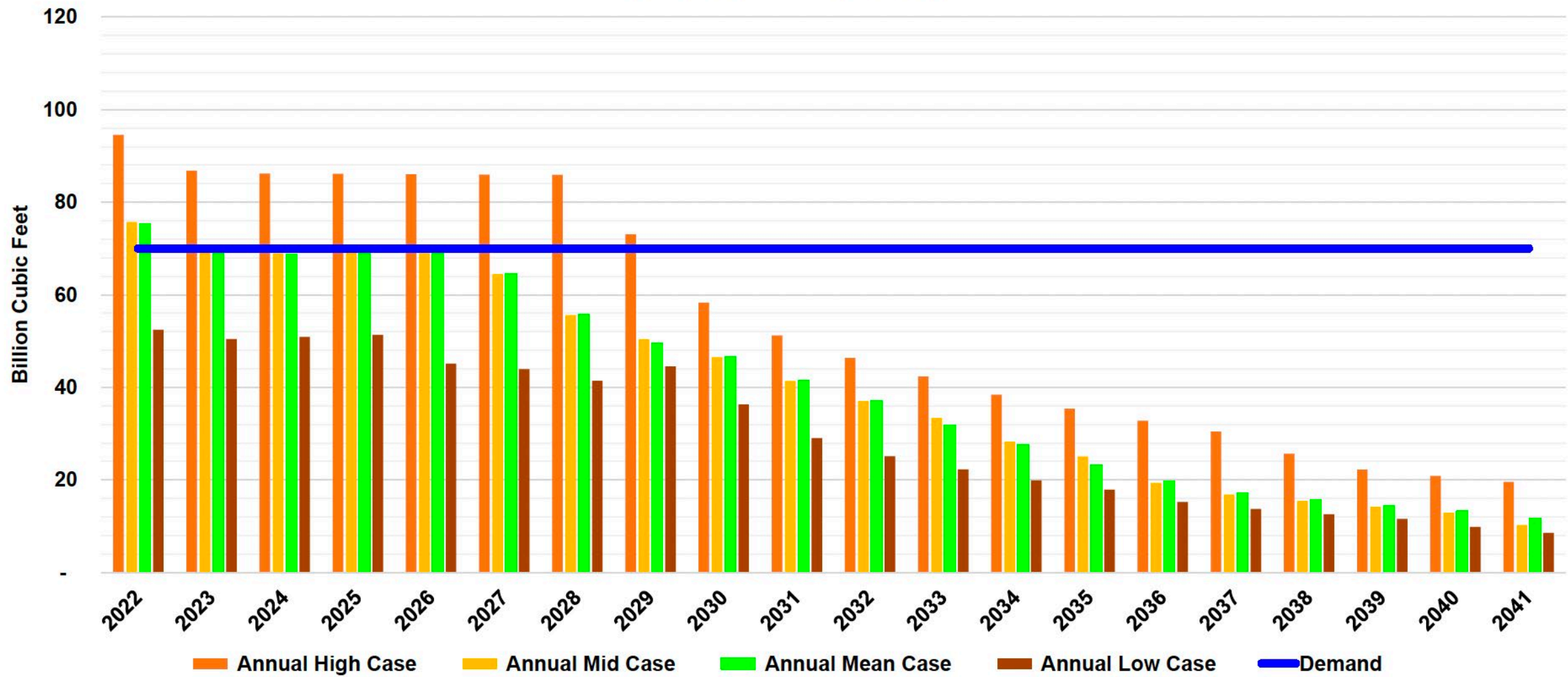
⚡
24/7
Scalable,
Dispatchable
Power

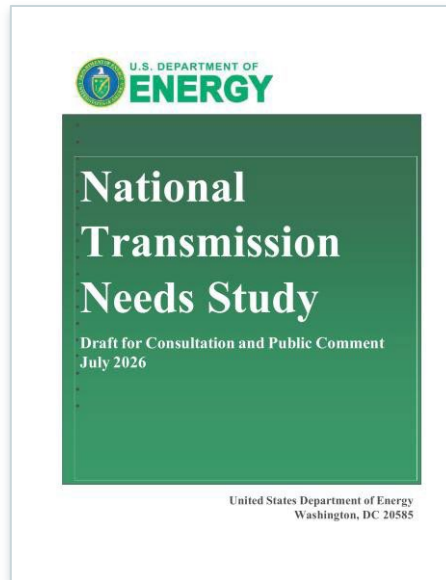
Robert Power CEO
Terra Energy Center Corporation

FORECAST ANNUALIZED GAS VOLUME (TRUNCATED)



Cook Inlet Gas
Annualized Volume Forecast





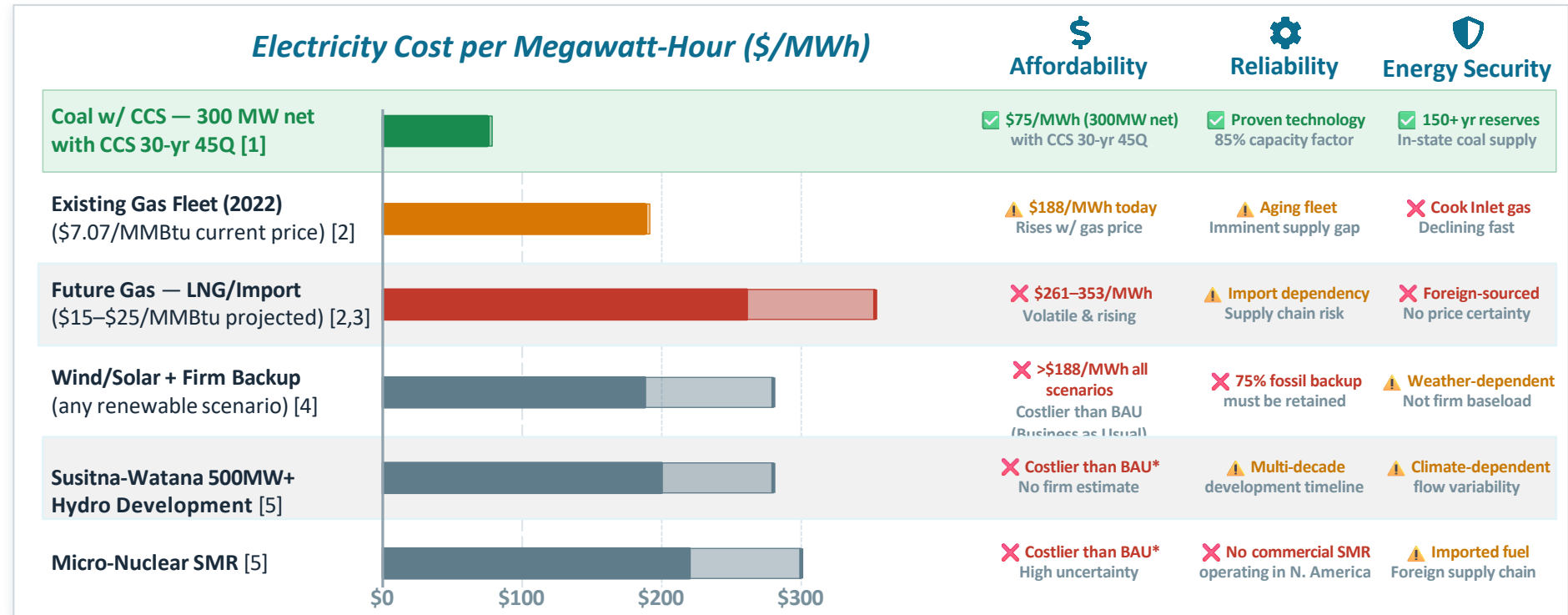
National Transmission Needs Study — Draft for Consultation and Public Comment, DOE, July 2026

Alaska has one, aging, north-south transmission line, with no redundancy:

- "...Alaska's...transmission system...is in urgent need of expansion and modernization."
Dept. of War base operations are primarily dependent on this frail system
- "...many cities and regions are at risk of being isolated from energy sources."
- "...135 days in which the southern generation was separated from the [northern generation] ." (2019)
- "System frequency was at the nominal 60 Hz about 44% of the time in 2011 and only about 15% in 2020."
- Stability limit is "only 50% of the line's thermal rating in one direction and 30% in the other."

SOUTH CENTRAL ALASKA: ENERGY OPTIONS COMPARED

KEY FINDING: At \$75/MWh, TECC coal w/ CCS is the lowest-cost firm baseload option for South Central Alaska
2–4 x lower cost than LNG imports



Sources: UAF-INE PCOR Cook Inlet Low Carbon Power Generation Feasibility Study (2024) | NREL Alaska Railbelt Analysis (2022) | CEA Approved Tariff Schedule 760

1. PCOR/UAF Study (2024), Table 9 & Fig. 14. Plant size is 400 MW gross, delivering 300 MW net to the grid with CCS. Cost shown at 85% capacity factor and 30-yr 45Q tax credit scenario; for 12-yr 45Q only \$124/MWh (300 MW net). CCS consumes ~25% of gross plant output, e.g., pumps & CO₂ compression.

2. CEA G&T Schedule 760 tariff (Nov. 2020, updated Sep. 2023), PCOR Table 2. \$188/MWh at current \$7.07/MMBtu gas; rises to \$261/MWh at \$15/MMBtu and \$353/MWh at \$25/MMBtu. [3] Future gas price range (\$15–\$25/MMBtu) per: BRG Cook Inlet Gas Supply Phase I Assessment (Jun. 2023); Black & Veatch/CEA Market Assessment (Aug. 2023); Enstar Natural Gas legislative testimony (2024). CEA G&T costs from Table 2: \$260.8/MWh at \$15/MMBtu and \$352.7/MWh at \$25/MMBtu, rounded to \$261/\$353 on chart. [4] UAF/ACEP Railbelt Electric System: Decarbonization Scenarios for 2050 (Cicilio, Jan. 2024), cited in PCOR/UAF Study p.12. UAF/ACEP found that every renewable scenario — wind, solar, tidal, hydro — would cost more than business-as-usual (BAU) power costs. Business-as-usual is the current CEA G&T rate of \$188/MWh (Table 2, PCOR Study), establishing \$188/MWh as the confirmed cost floor for any renewable scenario. UAF/ACEP also confirmed the Railbelt cannot be decarbonized using only variable renewables — firm fossil or hydro backup is always required. NREL Alaska Railbelt Analysis (2022) separately found 75% of fossil generation capacity must be retained even with extensive renewables buildout. Upper range of bar is an estimate. [5] UAF/ACEP Railbelt Decarbonization Scenarios 2050 (Jan. 2024): both Susitna-Watana hydro and micro-nuclear (SMR) are more expensive than business-as-usual power costs; nuclear also has “significant uncertainty in projected costs and future commercial availability.” No specific \$/MWh figures cited in PCOR study. Ranges shown are indicative only. * = no firm cost estimate in study. No commercial SMR is currently operating in North America.

THE TERRA ENERGY CENTER 1.25GW CAPACITY

5 X 250MW CFB UNITS



CONCEPTUAL RENDERING — NOT A PHOTOGRAPH

Conceptual only; not an engineering general arrangement.

GENERATION REDUNDANCY

Five individual boiler trains. If one unit has an unplanned outage the outage does not affect the operation of the other four units.

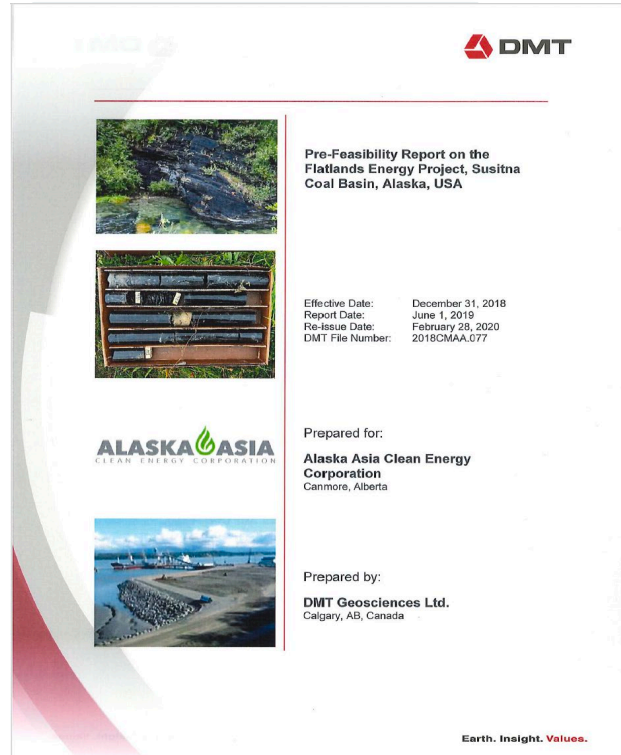
FUEL SECURITY RISK ELIMINATED

Co-located mine site, eliminating fuel transportation risk and cost. Not dependent on foreign fuel sourcing and delivery

LOW EMISSIONS

Ultra-low sulfur, low mercury coal, carbon capture, electrified vehicles rather than diesel, enclosed overland conveyor from adjacent mine

COAL LEASE DEVELOPMENT TIMELINE



2015: Coal Lease Acquisition

- historic Mobil Oil lease and drill program (1970's)
- estimate ~0.9B tonnes

2020: JORC Pre-Feasibility Report:

- 309M tonnes reserve, 212M tonnes resource to date
- 3,800-5,000 kcal/kg unwashed; 4800+ kcal/kg washed
- 0.15% S, low Hg, trace elements, 7-14% ash
- large area of coal lease yet to be drilled/verified

2018-2026: Environmental Baseline, Stakeholder Consultations

- Environmental impacts limited, mitigable at mine site
- State, local government strong support

2026-2027: Final mine design, permitting



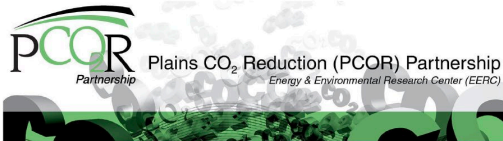
**COOK INLET REGION
LOW CARBON POWER GENERATION WITH
CARBON CAPTURE, TRANSPORT, AND STORAGE
FEASIBILITY STUDY**



February 28, 2024

University of Alaska Fairbanks Institute of Northern Engineering

Energy & Environmental Research Center, University of North Dakota



2022-24: Techno-Economic Feasibility Study

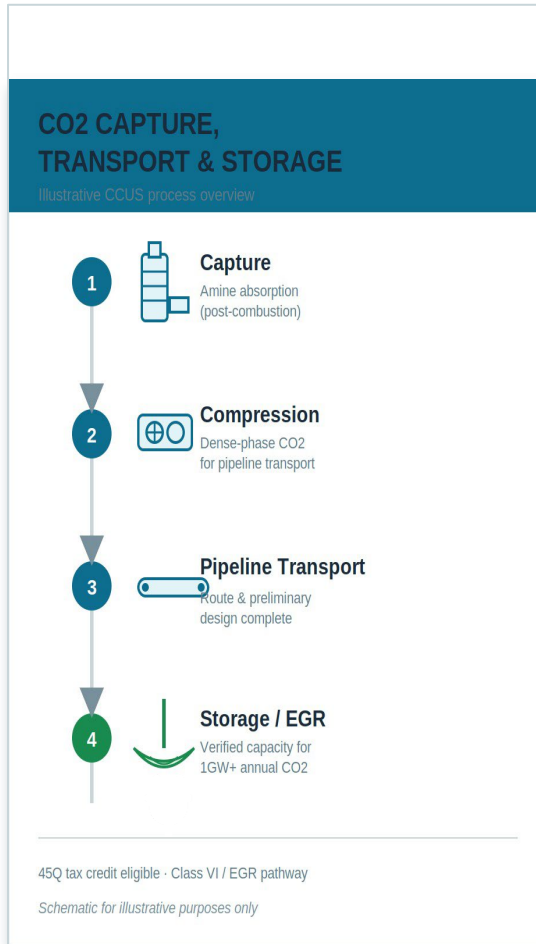
- 4X100MW CFB study
- Cost competitive power supply
- Designed to supply existing utility needs only

2025-26: 5X250MW Design, Integrated with Carbon Capture

- Islanded design for maximum reliability
- 5 independent trains, modular
- 120MW battery energy storage system
- Military base, AI/data center and mine developments

2026 Q4: Engineering & Commercial Milestones

- DOE \$89M award, accelerate to construction
- FEL 2 Class 4 & Transmission Study
- Minimum Functional Specification
- Bankable Feasibility Study
- Invitation to Tender document preparation
- Deposits on long lead items



2022-23: Techno-Economic Feasibility Study

- evaluated generic amine capture based on 2019 known costs
- capex and opex recoverable under US 45Q tax incentives
- lowest CO2 and methane emissions power supply option for Alaska

2024-26: Carbon Capture, Use, Storage Verification Technical Studies

- \$9M DOE grant, \$2.2M State of Alaska grant
- verified storage for 1GW+ annual CO2 emissions
- CO2 pipeline preliminary design, routing completed
- now evaluating Enhanced Gas Recovery (EGR) for depleting gas fields

2025-26 Q4: Technology Selection & Power Plant Integration

- Technology Readiness evaluation
- Minimum Functional Specification preparation
- Invitation to Tender document preparation

TIMELINE TO COMMERCIAL OPERATION DATE



2027: EPC Selection

- FEL 3 Study
- Fixed cost proposal
- Site access road construction

2028: Project Finance Close

- Delivery to local port
- Mobilization
- Construction start

2031: Commercial Operation

- Unit 1 on line 2031
- Units 2-5, 3-month intervals

DEFENSE AI/DC POWER PROCUREMENT

WHITE HOUSE INVITED TECC TO THE SIGNING OF EXECUTIVE ORDER 14386 ON FEB 11, 2026,
ANNOUNCING PROCUREMENT OF COAL POWER FOR MILITARY NEEDS

” ...The Secretary of War, in coordination with the Secretary of Energy, shall seek to procure power... by approving long-term Power Purchase Agreements, or entering into any similar contractual agreements, with coal-fired energy production facilities to serve DOW installations... with priority given to projects that enhance grid reliability and blackout prevention and on-site fuel security... “



RFP FOR POWER SUPPLY
FOR ALASKA BASES

Proposal submitted by TECC, Doyon Utilities

DC DEVELOPMENT ON AIR FORCE
BASES

250MW data center proposal to be powered by TECC

GOVERNMENT & STAKEHOLDER SUPPORT

TECC Appointed to the US National Coal Council by the White House



FEDERAL DELEGATION SUPPORT

- Sen. Lisa Murkowski
- Sen. Dan Sullivan
- Rep. Nick Begich
- Joint letter to U.S. Secretary Wright, Department of Energy

STATE, LOCAL GOVERNMENT & UTILITY SUPPORT

- Matanuska-Susitna Borough (MSB) resolutions in support of Project
- All 9 MSB region State Legislators
- Alaska Energy Authority and the three largest regional utilities, letters of support

NATIVE ENTITY SUPPORT

- Doyon Limited Native Corporation – Project development partner
- ASRC / ASRC Energy Services (Native Corporation) - Project permitting lead
- Knik Tribe (local tribe support)
- Calista Native Corporation

Industry and Labor Support: Alaska Support Industry Alliance (500+ companies, 35,000+ workers) · Alaska EXCEL (workforce training) · Northern Industrial Training · Trade Unions



TERRA ENERGY CENTER

POWERING ALASKA'S FUTURE

THANK YOU!

INFORMATION REGARDING EPC PARTICIPATION

Jason Motyka | EVP, Business Development

jmotyka@terraenergycenter.com