



“We are eager to learn from the innovative solutions Alaskans have developed over hundreds—often thousands—of years.”

— Energy Secretary
Jennifer Granholm

Leading an Arctic Energy Transition

The Arctic Energy Office’s mission is to lead cross-cutting operations in the Arctic to tackle 21st Century energy, science, and national security challenges.

We bring together U.S. Department of Energy (DOE) resources to collaborate in innovative ways to meet the needs of the United States and its allies in the Arctic.

Key audiences

We partner with arctic-facing entities such as:

- DOE offices, programs, national labs
- Federal & state agencies
- Communities
- Universities
- Energy industry
- Military bases
- White House

Arctic Energy Office: Collaborating In Innovative Ways for the US Arctic



Wind turbines and solar panels in Kotzebue, Alaska, show the advancement of clean energy in the state. (Source: Amanda Byrd, Alaska Center for Energy and Power.)

Fulfilling DOE’s Vision

We work every day to fulfill the DOE goals to:

- Combat climate crisis
- Promote energy justice
- Create clean energy jobs

A focus on energy

AEO advances DOE research and programs in multiple areas, including:

- **Energy storage:** electrical, thermal, pumped hydro
- **Bioenergy:** kelp feedstock
- **Electricity:** grid control, microgrids, resiliency
- **Efficiency:** buildings, sustainability, capacity building, technical assistance
- **Transportation:** electric vehicles (all types)
- **Fossil:** carbon capture, transport, use and storage, mitigation of natural gas impacts

- **Geothermal:** geothermal for power and heat
- **Hydrokinetics:** river and marine energy
- **Nuclear:** small nuclear reactors, site monitoring
- **Strategic materials:** Rare earth elements, critical minerals
- **Renewables:** wind and solar installations in Alaskan communities

A focus on science

AEO supports projects at many national labs, including the Arctic Lab Partnerships and Cold Climate Housing Research Center. Specific projects include the Atmospheric Radiation Measurement system at Utqiagvik; and sensors and uncrewed systems efforts at Oliktok Point.

AEO also consults on other national lab Arctic-related projects, such as:

- Energy Exascale Earth System Modeling (E3SM) on Arctic tundra, mid-latitude, tropical forests, and oceans
- Next-Generation Ecosystem Experiments (NGEE Arctic) to improve carbon predictions on climate
- Arctic Innovators Program at the University of Alaska that pairs entrepreneurs with national labs

A focus on US national security

AEO is a hub for DOE collaboration with other Arctic nations.

We help ensure national energy security by:

- Promoting STEM in the Pan Arctic
- Participating in the Arctic Council Assembly
- Collaborating with the U.S. State Department's Arctic Coordinator
- Providing input into the Interagency Arctic Research Policy Committee's Arctic Research Plan and the National Security Council's National Climate Strategy and the National Strategy for the Arctic Region
- Representing DOE at the White House Arctic Executive Steering Committee
- Coordinating on maritime transportation and port modernization



The Atmospheric Radiation Measurement facility at Utqiagvik, Alaska. (Courtesy of Mark Ivey, Sandia National Laboratory)

Opportunities for DOE Work in the Arctic

Rapidly evolving natural, economic, and political conditions mean more opportunities to advance energy in the region. Add to this a diverse range of community sizes, tribal knowledge, rich energy resources, technology trends and evolving federal funding and they all lead to an increasing interest in the Arctic as a whole.

How AEO Can Help

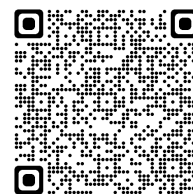
- Support DOE policies programs and events
- Advance Arctic energy transition
- Ensure all voices are heard
- Collaborate with Arctic stakeholders
- Promote goodwill among Arctic nations

Further Reading

Fact sheet on Arctic Science



Fact sheet on Arctic Energy



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