

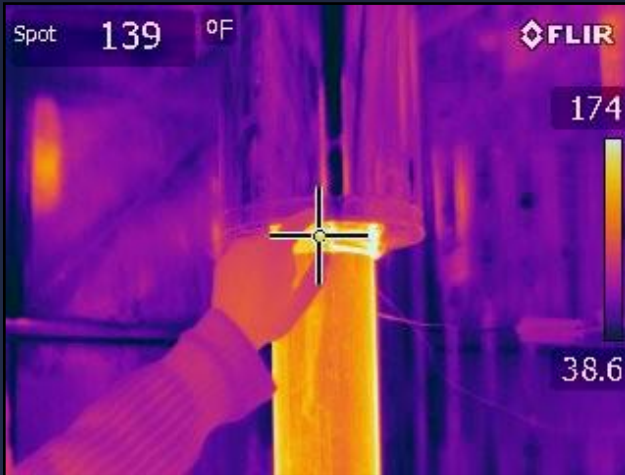


Emerging Energy Technology Fund

Senate Labor and Commerce

March 20, 2014





Testing Safe and Efficient Exhaust Thimble



Emerging Energy Technology Fund

“...make grants to eligible applicants for demonstration projects of technologies that have a reasonable expectation to be commercially viable within five years that are designed to:

- test emerging energy technologies or methods of conserving energy;
- improve an existing energy technology; or
- deploy an existing technology that has not previously been demonstrated in Alaska. “



Arctic Field Testing of Eocycle Wind Turbine



Wind-Diesel Battery Hybrid for Kwigillingok

Emerging Energy Technology Fund

Energy Technology includes renewables, energy conservation and efficiency, hydrocarbons, enabling technologies and integrated systems.

- (2010) Program Legislation: AS 42.45.375
- Program Regulations: 3 AAC 107.700-799

EETF: Process

- Two-step review process
 - Project abstracts and full applications
 - Evaluated on technical merit
- Priority given to:
 - Alaska entities
 - Projects demonstrating post-secondary partnerships
 - Matching funds or in-kind commitments
 - Demonstration of potential for widespread deployment
- Top-ranking projects invited to submit detailed project applications and deliver presentations to AEA staff and the advisory committee

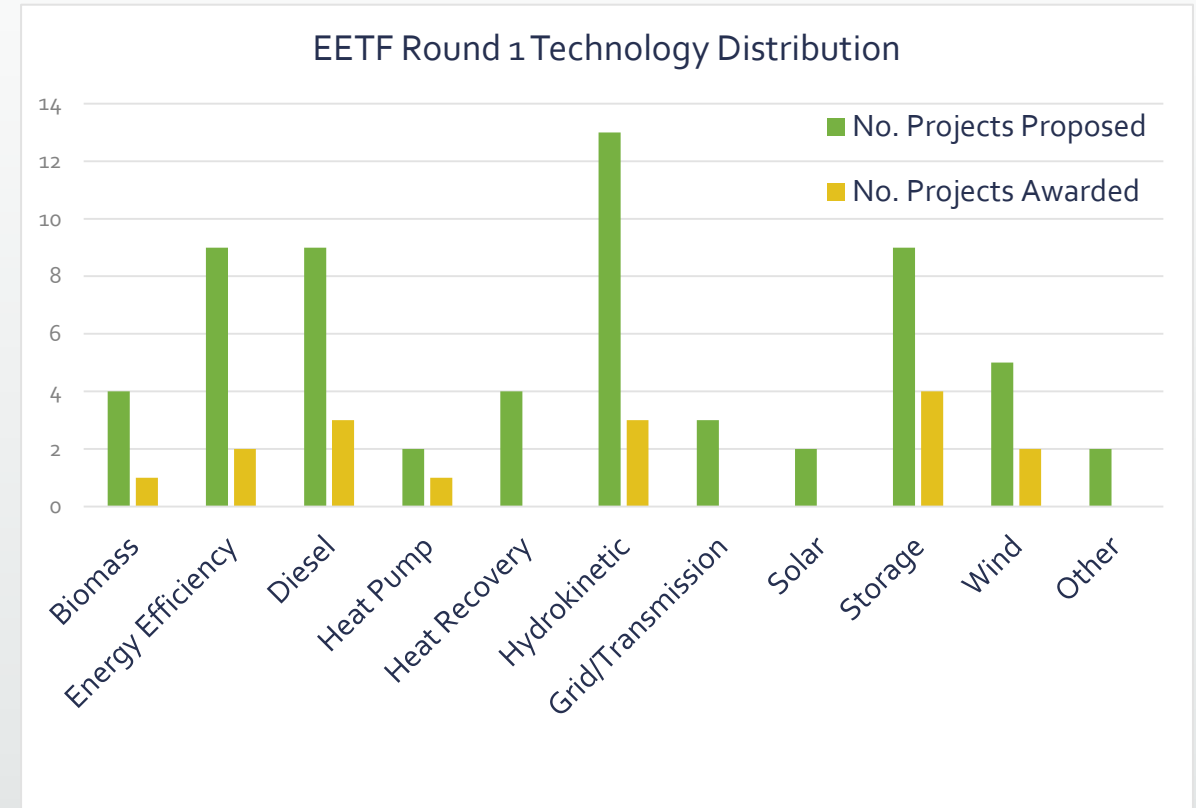
EETF: Project Awards

2012: First round of projects selected and funded

- Funds available: \$8.9 million (through Denali Commission matching grant)
- Projects selected: 16 (15 awarded funding)
- Juneau, Fairbanks, Kodiak, Delta Junction, Nenana, Nikiski, Igiugig, Tuntutuliak, Kwiglingok and Kotzebue

2014: Second round of projects selected

- Funds available \$2.4 million
- Projects recommended: six, pending funding
- Expecting award announcement within the month





Modified '97 Eagle Talon EV Test bed



Modified 15 kW Genset

EETF: Project Highlight

Ultra-Efficient Generators and Diesel Electric Propulsion (Kodiak)

- Technology aims to provide more efficient diesel power generation
- Can be used in marine propulsion and stationary powerhouses
- Power dense motor and inverter/controller invented by operators of a machining and fabricating shop in Kodiak
- Commercial availability anticipated at project's end



Installation of Slinky Loop



Installed 6-ton Heat Pump

EETF: Project Highlight

Cold Climate Heat Pump Demonstration (Fairbanks)

- Cold Climate Housing Research Center demonstrating the potential for ground source heat pumps as an efficient and economic heat source in colder climates
- Different ground surface treatments are applied to compare effects on the loop field
- Next phase is data collection

AKEnergyAuthority.org

