



*DRAFT*

# Diesel Heat Recovery and Efficiency Workshop

*The Economics of Stack Heat Recovery and Organic Rankine Cycle Devices in Rural Alaskan Utilities*

## Agenda:

### **1:00-1:30pm: Current Status of Heat Recovery in Rural Alaskan Utilities -**

*James Jensen, Heat Recovery Program Manager, AEA*

- Equipment
- Applications
- O&M model and costs
- Economics

### **1:30-2:00pm: Stack Heat Recovery - David Lockard P.E., Project Manager, AEA and Dr. Chuen -Sen Lin, Professor of Mechanical Engineering, UAF**

- History (Nushagak)
- University of Fairbanks/Arctic Energy Technology Development laboratory (UAF/AETDL) study
- Equipment specifications
- Vendors
- Ultra low sulfur diesel impacts
- O&M model and costs
- Economics
- Implications of new Tier 3 EPA requirements

### **2:00-2:30pm: Organic Rankine Cycle Devices - Gwen Holdman, Chena Power**

- History
- Equipment specifications
- Applications: diesel gensets, oil and gas produced water, bottoming cycles, etc.)
- Vendors (UTC, Ormat, Electratherm)
- O&M model and costs
- Economics

### **3:15-3:30pm: Break**

**3:30-4:15pm: Diesel Stack Heat with Organic Rankine Cycle Case Studies:**  
**(design, applications, energy flows, equipment, economics) - *David Lockard, James Jensen, and Kat Keith, Utility Engineer (Kotzebue Electric Association)***

- Nome (David)
- Yakutat (David)
- Unalakleet (James)
- Kotzebue (Kat)

**4:15-4:30pm: Action plan - *James Jensen***

- Demonstration projects
- Funding sources
- Design resources

**4:30-5:00pm: Panel Discussion- *David Lockard as moderator***

- Steve Stassel P.E., *President, Alaska Energy & Engineering*
- Brian Gray P.E., *Design Consultant, Alaska Energy & Engineering*
- Gwen Holdmann, *Chena Power*
- Dr. *Chuen -Sen Lin*, *Professor of Mechanical Engineering, UAF*
- James Jensen, *Heat Recovery Program Manager, AEA*