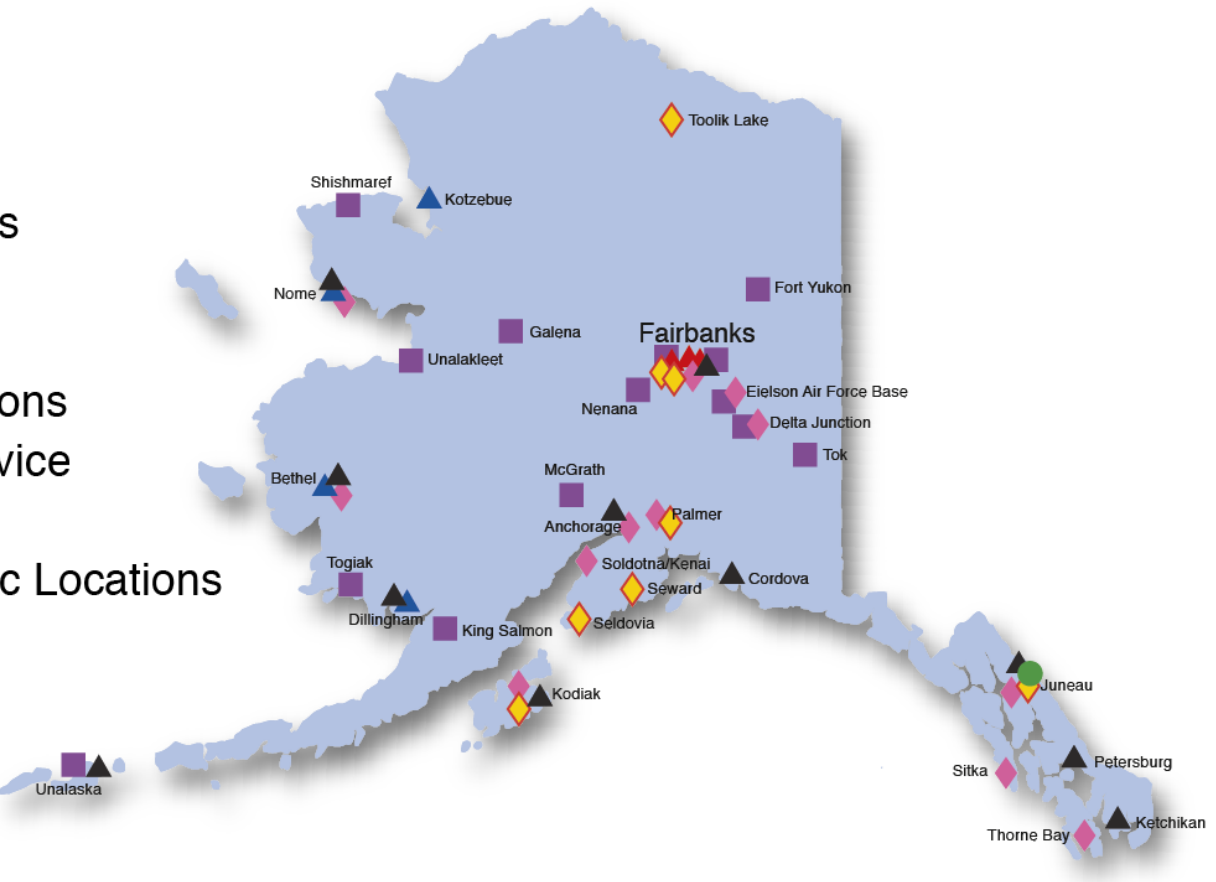

A strong foundation
for the next 50 years
UAF UNIVERSITY OF ALASKA FAIRBANKS
since 1917

About UAF

- Founded in 1917
- More than 10,000 students statewide
- More than 1,300 degrees awarded in 2013
- Economic engine for Alaska
  - *More than $100 million in research dollars*
  - *More than 4,000 jobs*
  - *Nearly 17,000 alumni living and working in Alaska*

Statewide service

- Fairbanks-based Campuses
- Rural Campuses
- CRCD Learning Centers
- Off-campus Research Stations
- Cooperative Extension Service
- Marine Advisory Program
- Other Off-campus Academic Locations



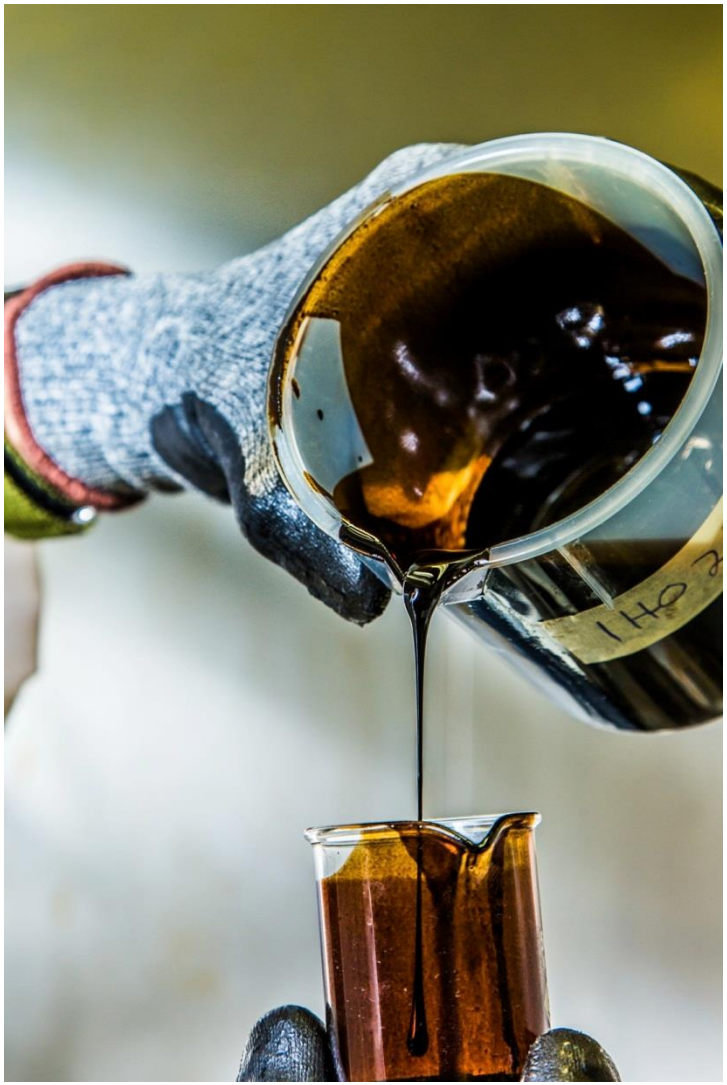
- Dozens of sites around Alaska
- Thousands served via informal workshops and events

Training Alaska's workforce

- UAF graduates ready for the resource industry
  - *Engineering and geology*
  - *Process technology*
  - *Accounting and business*
  - *Diesel and heavy equipment mechanics*
- Productive partnerships
  - *Internships for students*
  - *Advisory board service*
  - *Mentorship*
  - *Recruiting opportunities*

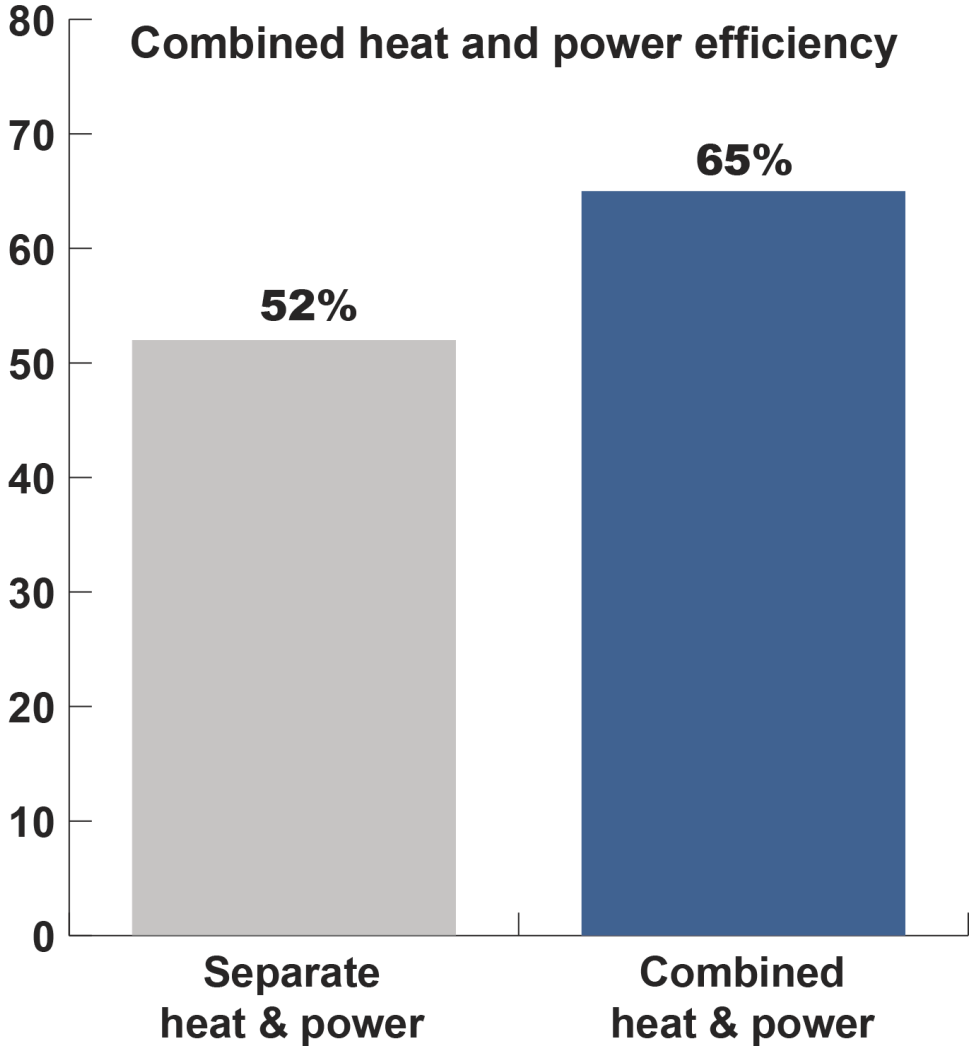
Research for Alaska's industry

- Exploration
- Extraction
- Transportation
- Monitoring
- Environmental
- Educational opportunity



Energy is the foundation

- 3.1 million square feet of public facilities
- Average age of building: 34 years
- All these things need heat and power
- More than 500 schools and universities have their own heat and power plants

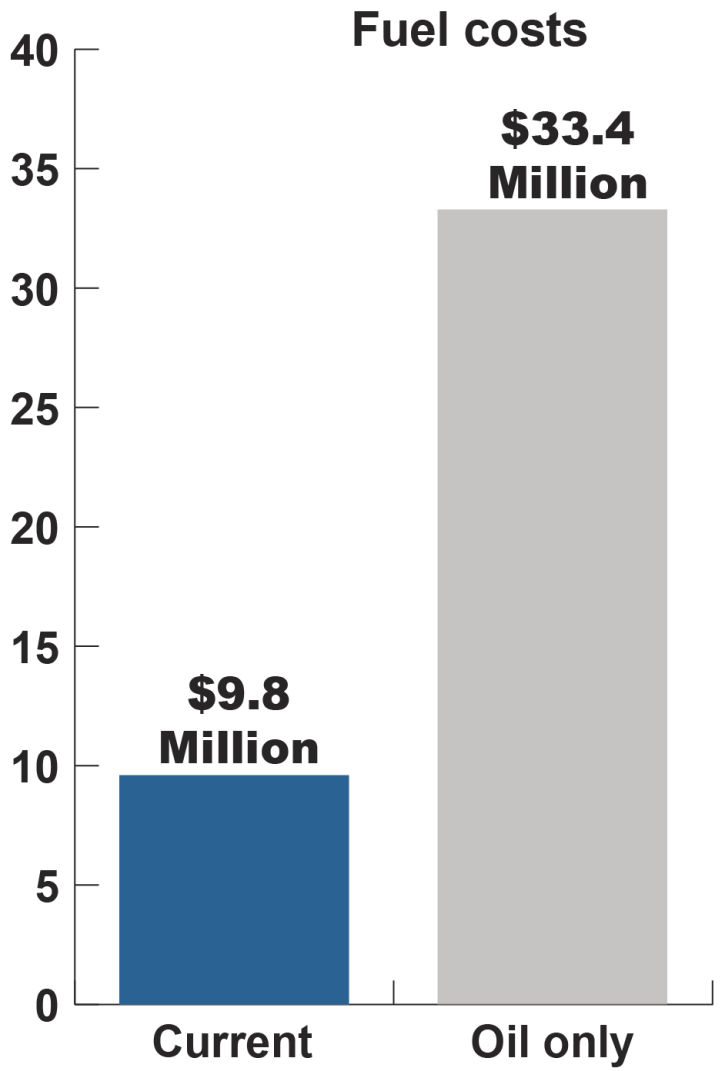


Our foundation looks like this

What if the coal boilers fail?

That could mean firing up the backup oil/gas boilers.

- *An adequate supply of gas is not available.*
- *Using only diesel would more than triple fuel costs.*
- *The university's existing operating budget cannot absorb that.*



What if the entire plant fails?

- Billions of dollars in public infrastructure at risk of freezing. More than $1 billion to repair.
- Students need alternate housing.
- Research stops. Education stops. Service stops.
- Enrollment and funding impacted for years in the future.

Failure to invest now invites catastrophic failure

Every year we delay increases the risk and the cost.

Solution: Major plant upgrade

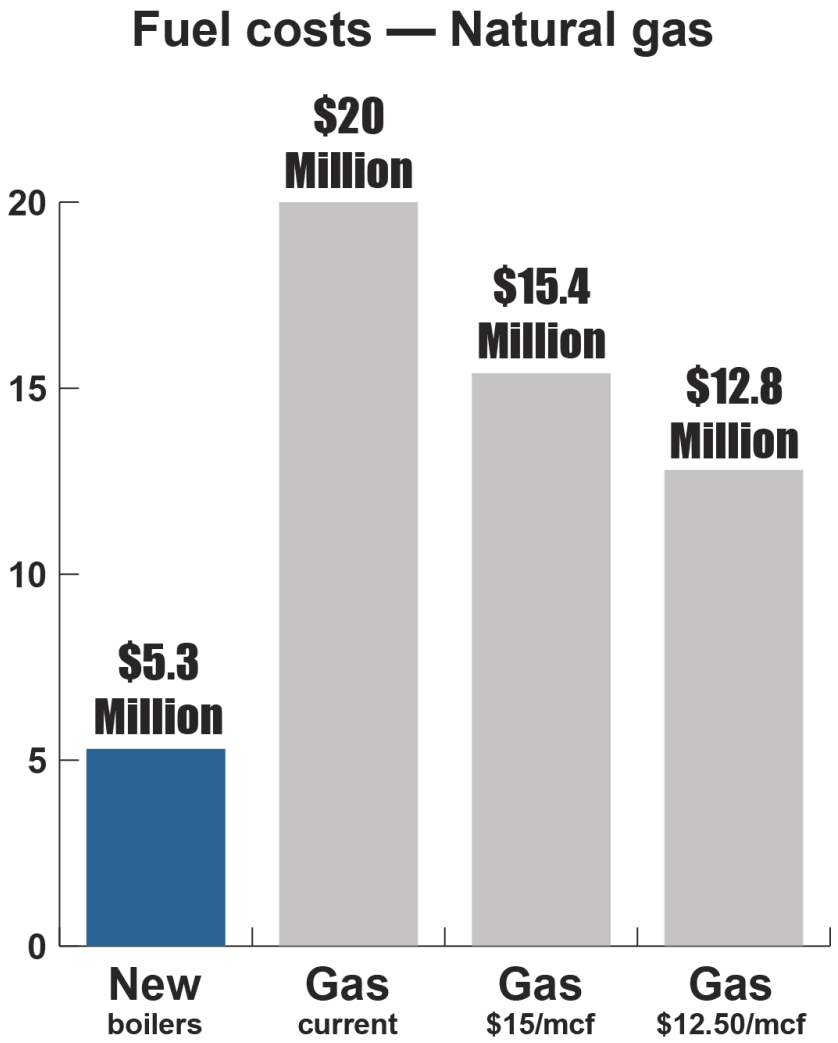
A diversified energy portfolio

- New circulating fluidized bed (CFB) boilers
  - *Flexible solid fuel, proven technology*
  - *Coal with up to 15 percent biomass*
  - *Capable of generating 17 MW of power*
- Oil/natural gas backup boilers
- Purchase renewable energy, when available
- Energy conservation on campus
- Small renewable projects on campus

Flexible, sustainable, fiscally responsible

Why don't you _____?

- Buy power from GVEA
  - *We need **heat** and **electricity**.*
  - *Not cost effective to heat with electricity*
- Build a natural gas plant
  - *A reliable supply of gas is not available*
  - *Lower capital cost*
  - *Double to more than triple the fuel cost*



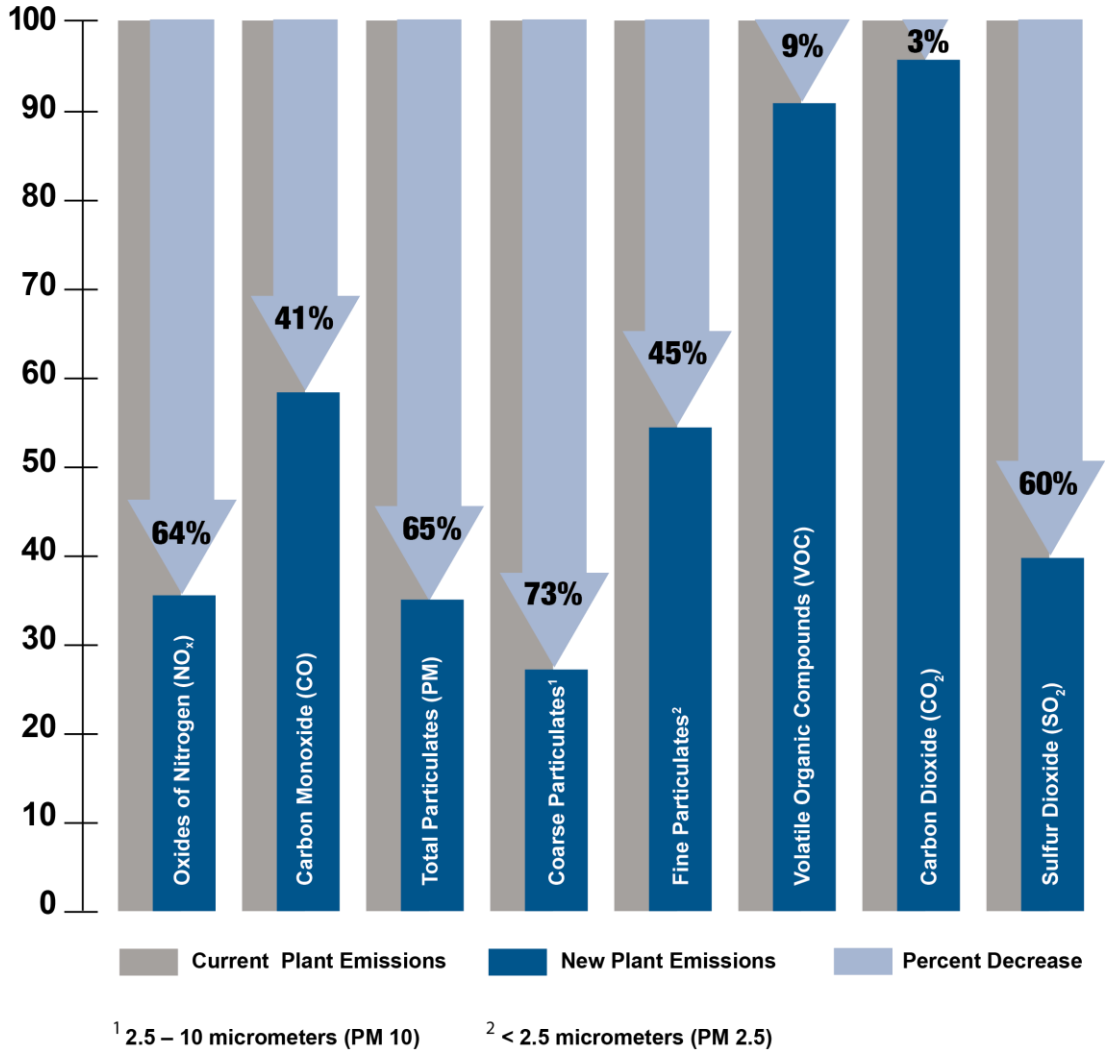
Replacement now is fiscally responsible

- Aging plant and a growing campus
- More than $35 million in maintenance needed in the coming years
- That doesn't guarantee continued reliable operation
- About half of those projects are bandages not needed in a new plant

Energy solutions for the future, not temporary patches.

Environmental benefits

- Current main boilers are 1890's technology
- Plant burns coal, diesel and gas
- Newer technology is more efficient
- Current load and upgraded plant reduces emissions



Additional benefits

- Increase in available construction jobs for Alaskans
- Increase in economic activity during 2015-2018 time period
- Public safety
    - *UAF historically serves as a place of shelter during emergencies.*
    - *Upgraded plant could heat and power campus independent of the grid.*

Timeline

- Current: $3 million for preliminary design and permitting
- FY15: Requesting $245 million for full design, boiler and equipment purchase, and construction
  - $195 million state funding
  - $50 million in bonding authority
    - *UAF can make the bond payment with fuel cost savings*
- Target completion and opening: Winter 2018


Questions?