

Senate Special Committee on World Trade, Technology & Innovation

Training for Emerging Alternative Energy Technology Jobs

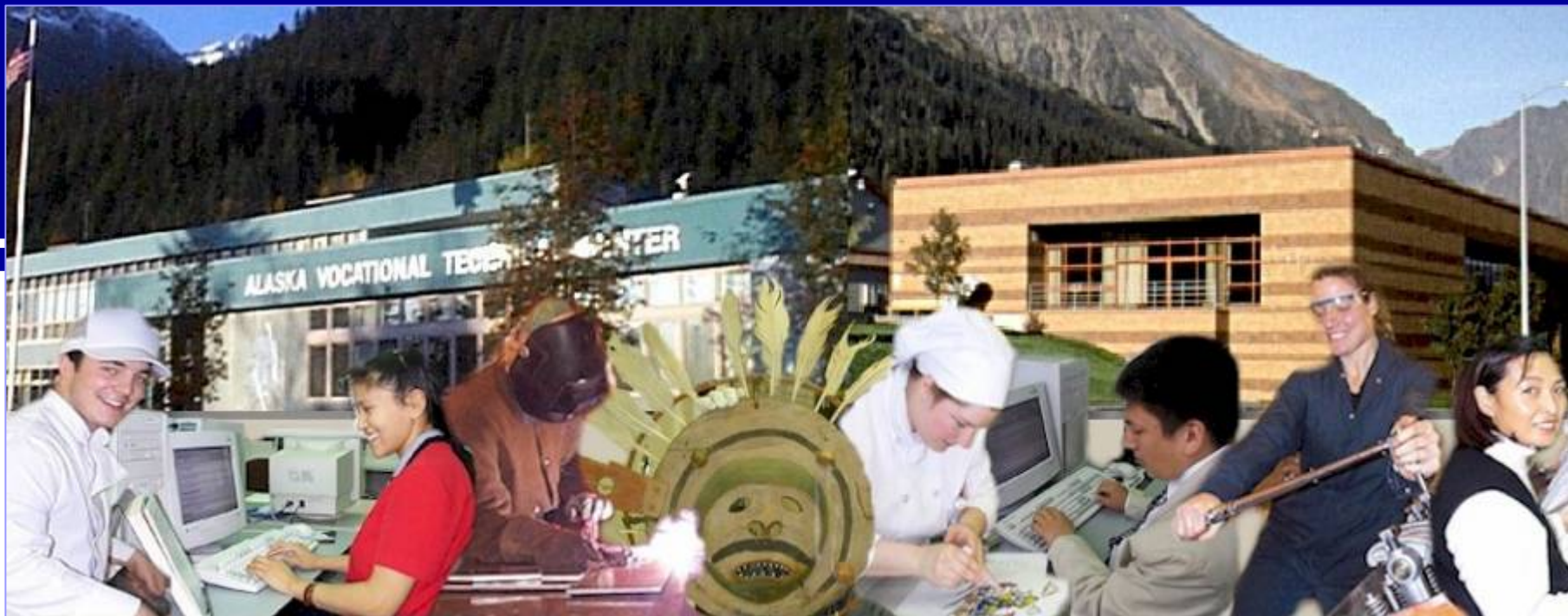
Click Bishop, Commissioner DOLWD

Fred Esposito, Director AVTEC

February 18, 2009



Alaska Vocational Technical Center



**Great Careers for
Alaska's Future**

Mission Statement

To train a diverse and effective workforce that supports the economic growth and stability of our state.

Who We Are

- A component of the Alaska Department of Labor and Workforce Development
- Providing occupational training since 1969. Nearly Forty Years! In Seward, Anchorage, and through Distance Delivery
- Enroll approximately 1,200 students per year in job preparatory and job upgrade training programs

Diesel Power Plant Operator

- 8 week training program
- Partnership with Alaska Energy Authority



Bulk Fuel Plant Operator



AVTEC students engaged in the classroom and in the field managing high efficiency bulk fuel systems

www.avtec.edu



Hydro Electric Plant Operator



AVTEC Students participating with operator training at the City of Seward Hydro Plant

Met Tower Installation

Studying Wind Energy at AVTEC's Seward Campus



www.avtec.edu

Wind-Diesel Training Overview



INSTALLATION

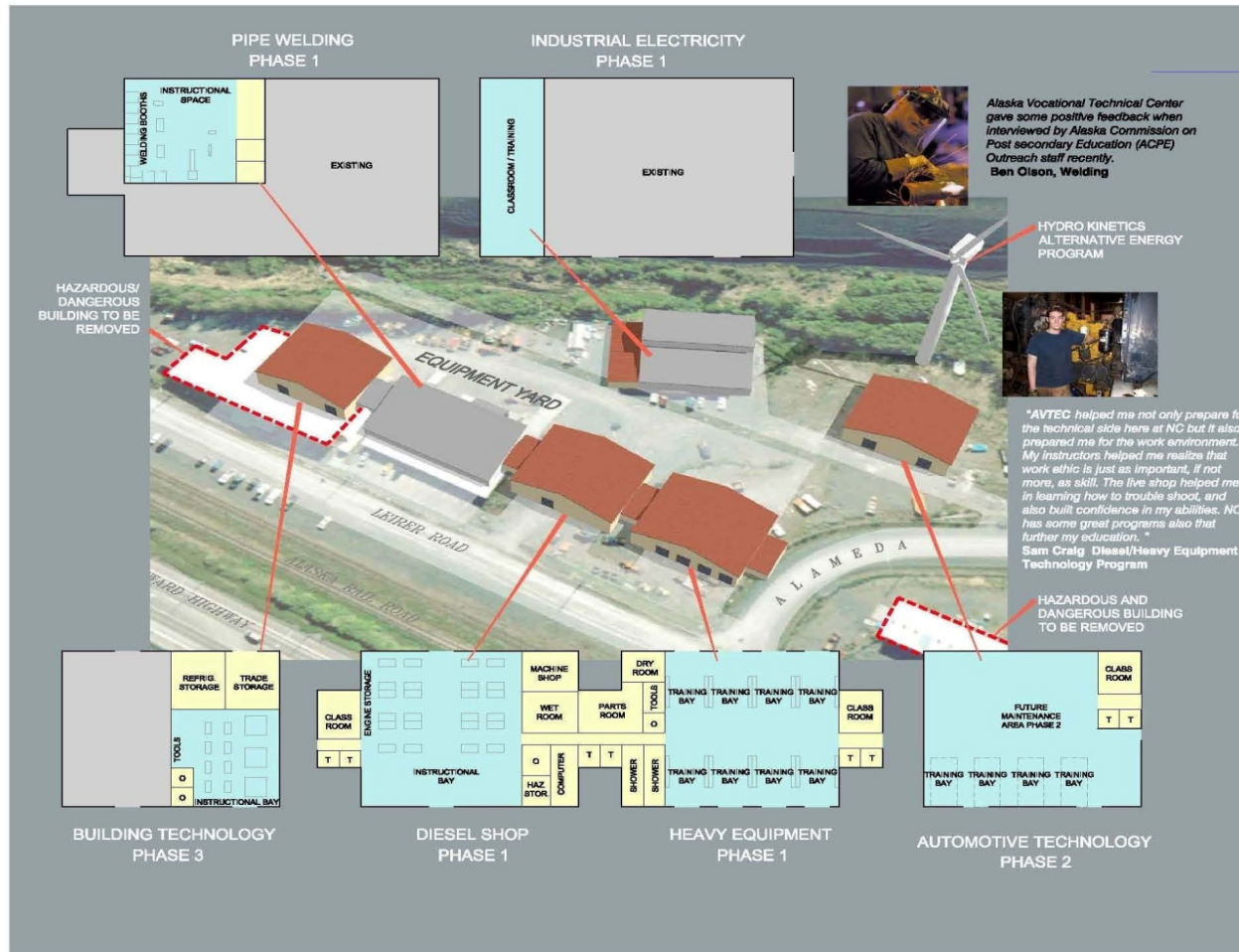


ON-GOING
"HANDS-ON" O/M
TRAINING



**WORLD CLASS WIND-DIESEL
OPERATOR TRAINING**

Wind Turbine Installation



Capital Improvement and Deferred Maintenance Plan



Applied Technology Campus

The applied tech campus is located at the industrial edge of town. These are the first AVTEC facilities seen by the public and this is where the vocational nature of AVTEC's programs are most evident. The location along the highway and railroad on the way into town makes this site an excellent opportunity to identify AVTEC and build interest for the diverse hands on programs. There is in renewal an opportunity to have significant impact on program delivery, operational efficiency and image upgrade. Several projects are planned to make these programs competitive with up to date facilities.

FY10 Phase 1 Heavy Equipment / Diesel Shop Pipe Welding Relocation \$ 12,000,000

This project has three significant parts that involve sequencing the relocation of programs. A new 16,000 SF pre engineered building will house the Heavy Equipment Program and Diesel Program. The Pipe Welding Program will move to the Diesel Shop and be adjacent to the Existing Welding program. This will also provide the requested adequate space for long pipe staging, storage and cutting. Relocating these programs will facilitate the demolition of the existing building which has Code, Life and Safety, and ADA Deficiencies.

Industrial Electricity Upgrade

\$ 1,300,000
Improvements to this building include upgrade environmental systems and additional instructional space for increasing the student enrollment.

FY11 Phase 2 Automotive Technology Shop \$ 7,000,000

A new 8,000 SF pre engineered building will house the Automotive Technology Program. This is the last program to move out of the existing building allowing the demolition of the existing building which has Code , and Life and Safety and ADA deficiencies. Work also includes the removal of a buried fuel tank and grading and paving the drainage away from the buildings.

FY12 Phase 3 Building Technology Facilities Maintenance Demolition of Existing Shop \$ 7,000,000

A new 8,000 SF pre engineered building addition for shared use by the Building Technology Program and Facilities Maintenance. This facility will replace the existing facilities maintenance building which has Code , and Life and Safety and ADA deficiencies

BDS
January 2009

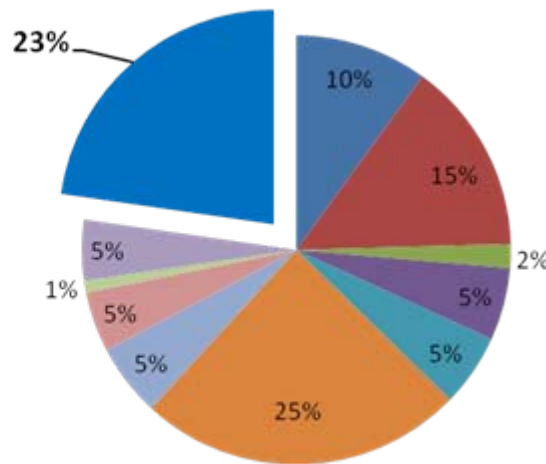
Wind-Diesel Training Objectives

- Establish a world-class wind-diesel program that supports the interests of stakeholders from across Alaska
 - Wind-Diesel System Owners/Operators
 - Rural Alaska Electricity Cooperatives
 - Alaska Energy Authority
- Create “hands-on” educational opportunities through an on-campus wind-diesel installation
- Utilize standardized, proven, and relevant technologies for Alaskan applications



Wind-Diesel Program Benefits

- Currently, no wind-diesel training programs exist within the state of Alaska
 - Approximately 20 unique utility scale wind projects are currently in operation across Alaska
 - Alaska's Renewable Energy Fund will support a significant number of new wind energy projects



*Alaska Renewable Energy Fund
Round I Grant Applications by
Technology (October, 2008)*

Wind-Diesel Program Benefits

- Historically, rural Alaskan wind-diesel system operators have been sent out of state to receive necessary training
- AVTEC Program will be based on successful training program already established by Alaska's largest wind energy system owner (AVEC)



Wind-Diesel Program Benefits

- Alaska based program will significantly reduce training costs while providing opportunities for expanded curriculum (introduction, intermediate, advanced, etc.)



Wind-Diesel Program Benefits

- Operating cost reduction at the school's industrial electricity facility
- Total net energy production estimates are 100,756 kWh annually which would save AVTEC approximately \$7,300 each year based on current electricity rates

