State of Alaska
Governor’s Climate Change Sub-Cabinet
Stakeholder Process

Energy Supply & Demand Technical Working Group
(ESD TWG)

Alaska Forum on the Environment
February 2 – 6, 2009
Meera Kohler, Alaska Village Electric Cooperative
Energy Supply & Demand TWG Focus: Reduce greenhouse gas emissions from the energy supply sector by addressing production, transmission and consumption of electricity

1. Generation
2. Transmission
3. Residential
4. Commercial
5. Industrial
6. Military
7. Public Facilities
ESD TWG Members

- David Benton – Marine Conservation Commission - TWG
- Charlie Boddy – Usibelli Coal Mine
- Steve Colt – ISER
- Peter Crimp – Alaska Energy Authority
- Steve Denton – Usibelli Coal Mine
- Clint Farr – Alaska Department of Environmental Conservation
- Scott Goldsmith – ISER
- Wayne Hall – Teck Cominco (Red Dog)
- Gwen Holdmann – AK Center for Energy & Power
- Meera Kohler – AK Village Electric Cooperative – TWG & MAG
- Kate Lamal – Golden Valley Electric Association
- Marilyn Leland – Alaska Power Association
- Tom Lovas – National Rural Electric Cooperative Association
- Jodi Mitchell – Inside Passage Electric Cooperative
- Christopher Nye – Department of Natural Resources
- Greg Peters – Alyeska Seafoods
- Jim Posey – Anchorage Municipal Light & Power
- Chris Rose – Renewable Energy Alaska Project
- Sean Skaling – Green Star
- Dan White – Institute of Northern Engineers

~ 52 Mmt CO₂ Equivalent
(~0.7% US Emissions)

Alaska Title V GHG Emissions

~ 21 Mmt CO₂ e

O+G GHG Emissions

~ 15 Mmt CO₂ e

Option 1. Optimize Transmission System

- Upgrade existing systems to accommodate new low-carbon energy sources and to allow more energy to flow between production and end-use
- Connect diesel-dependent villages to new low-carbon resources and to each other
- Move toward “Smart Grid”
  - Embedded microelectronics optimize the use of conventional, alternative, demand-side, and storage resources
  - Consistent with Title 13 of Energy Independence and Security Act of 2007
Option 2. **Energy Efficiency for Residential and Commercial Sectors**

- Provide Demand Side Management/Efficiency programs
  - Consumer education
  - Energy audits
  - Rebates & incentives
  - Loans
  - Appliance recycling
- Implementation by: state agency, utilities or third-party
- Benefits:
  - Involve, support and leverage the public and businesses in reducing GHG emissions
  - Energy Efficiency is very cost-effective
  - Low-hanging fruit / lots of room for improvement
Option 3. **Renewable Energy Implementation**

- Incentives to Promote Renewable Energy (e.g. HB 152)
- Grid-based Renewable Energy Incentives
  - Direct subsidies to sell/purchase renewable energy
  - Tax credits or exemptions for investing in renewables
  - Regulatory policy to assure cost recovery...
- Distributed Renewable Energy Incentives
  - Standardized interconnection policies
  - Streamlined permitting
  - Financing packages...
- Production Based Incentives
  - Feed-in tariffs
  - Production tax credits
  - Renewable energy credits/Green tags...
Option 4. **Building standards/incentives**

- Adopt BEES as the state residential energy efficiency building code
- Enforce existing regulations on building codes and develop a commercial EE building code
- Energy audits, loans, and/or match grants for schools and commercial, public, institutional facilities
- Implement pay-as-you-save loan programs for residential/commercial customers
- Lead by Example: SOA agencies and UA reduce energy use 20% by 2020
- Tax credits, permit fee reductions, or other incentives for green buildings
Other Options under Development

- Efficiency improvements for generators
- Energy efficiency for industrial sector
- Implementation of small scale nuclear power
- Research and development for cold-climate renewable technologies
- Implementation of advanced supply-side technologies
Next Steps

- The advisory groups will assemble information from the technical work groups and deliver final recommendations to the Sub-Cabinet. The Sub-Cabinet, in turn, will evaluate the recommendations and submit a proposed Climate Change Strategy to the Governor. This should be completed within one year.

- If you have additional ideas on priority research needs for this area, come to:  
  Climate Change Research Coordination Workshop  
  Thursday, February 5, 9:15-4:45 pm [Dena’ina Center]
Thank you!

For more information

http://climatechange.alaska.gov/