Rural Power System Upgrade Progress Report
Hydro power is a Tremendous renewable resource for much of Alaska
Innovation – modular diesel-hydro power plants
The cost of energy is unaffordable – we will lose villages

Wind-diesel

Geothermal – world’s first
Denali Commission Training Funds:

- Training rural Wind Technicians in Vermont
- STG Construction working with Northern Power
- Diesel-wind projects in Gambell, Savoonga, Chevak & Hooper Bay
Finding new energy solutions – will an in-river hydrokinetic turbine work?

Photos courtesy of UEK Corporation
Summer 2009 – the turbine will be placed at the bottom of the Yukon River
Eagle Hydrokinetic Turbine Project

Turbine Installation Views
Will the turbine survive annual ice breakup?
Building for climate change: This investment is safe if Koyukuk stays or relocates
Denali Commission/AEA 07-08 Energy RFP Results (closed 2/12/08)

- Alternative Energy 96 proposals  Total Requested: $1.19 Billion
- Energy Cost Reduction 12 proposals  Total Requested: $11.6 Million

Past Energy Cost Reduction Projects: saving or will save 1.4 million GPY diesel equivalent

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<th>Benefit</th>
<th>Cost</th>
<th>DC Grant</th>
<th>Local / AEA Loan</th>
<th>Life Cycle Savings</th>
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$ Million
Alaska Alternative Energy Projects
Request for Proposals
Final Ranking
June 2008
Denali Commission & coal gasification

- Authorized in 2005 Energy Policy Act
- We invested $2m of $22m Agrium Blue Sky Study
- Positive findings:
  - Fischer-Tropsch technology deemed sound
  - Permits could be obtained
  - Stable & low cost coal feedstock available
  - High, but doable coal transportation costs
- Bottom line:
  - Global economics unfavorable for financing
  - Local utilities not “well positioned” for such a large project
Each region needs a private Sector anchor
Sustainable Development – A Challenging Concept!
- Is the project desired at the local level?
Can the project pass a business plan? Does it comply with our policies?
Are there multiple funding partners?
Will it work in our “gated” process?
Is it located in an environmentally safe location? Will it contribute to the village & the region?
Can Villages Survive?
It’s about our children and grandchildren.
Alaska must have a new energy vision that delivers:

- Pioneering, bold, daring, risk-taking tipping points and solutions

- Long-term opportunities for our communities

- Worldwide leadership in rural living, celebration of cultures and responsible development

Let’s do this together!
For example -- With vision, political will and luck, Iceland has gone from the poor man of Europe to one of the world’s most prosperous regions on the planet in a single generation. We can too!
- Green building design
- Push hard for real renewable solutions
- Finish the legacy programs
- Find regional rural energy solutions
- Engage in the Arctic policy dialogue
- Share lessons learned

What else is next for Denali Commission?
Thank You!

P.S. Man and polar bear are both safe!