

**North Slope Borough
Department of Public Works**

October 23, 2009

AFN Convention

**House and Senate Energy and Senate Resources Committees
Rural Energy Issues**

Local Energy Resource Use





NSB Energy Problem

- ✓ **Imported Oil**
- ✓ **Transportation of Oil**
- ✓ **Oil Regulations**



*Not only are the prices
unstable and climbing, new and
upcoming federal and state regulations
will also drive up the cost of
using fuel oil.*



Recent Regulation Changes

- ✓ **DEC Regulation C-Plan Amendments 2006 - 2008**
- ✓ **DEC Air Permit Emissions Fee Rate doubled in 2007**
- ✓ **EPA STI,(small tank inspections) – July 1, 2009**
- ✓ **EPA – Rural Alaska is required to use Ultra Low Sulfur Diesel in diesel engines by October 2010**
- ✓ **EPA New Source Performance Standards Tier III & IV–lower air emission levels of new diesel gensets, 2007 to 2012**

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IMPACT of ULTRA LOW SULFUR DIESEL REGULATIONS

EPA requires all diesel fueled vehicles in rural Alaska to transition to ULSD by October 2010.

ISSUES:

- \$0.10 to 0.30 per gallon increase in product cost.
- unknown additional costs to transport ULSD in dedicated barges and aircraft.
- Only one supplier of Arctic Grade ULSD #1 in 2010.
- ULSD cannot be mixed with any other fuels. Additional storage tankage, supply and distribution pipelines are required in the Villages.



How do we do this?



Energy Cost Reduction Measures

Since the 70's the NSB has completed many conservation projects and used several fuel purchasing strategies :

- **Weatherization and End-use Efficiency Technology Projects**
 - **Home Energy-Saving Practices Education Programs**
- **Electric Power Plant & Distribution Efficiency and Upgrade Projects**
 - **Waste Heat Utilization Projects**
- **Building Lighting, HVAC and Motion Sensor Projects**
 - **Consolidated Fuel Purchases**
- **Use of Fuel Pricing Options**

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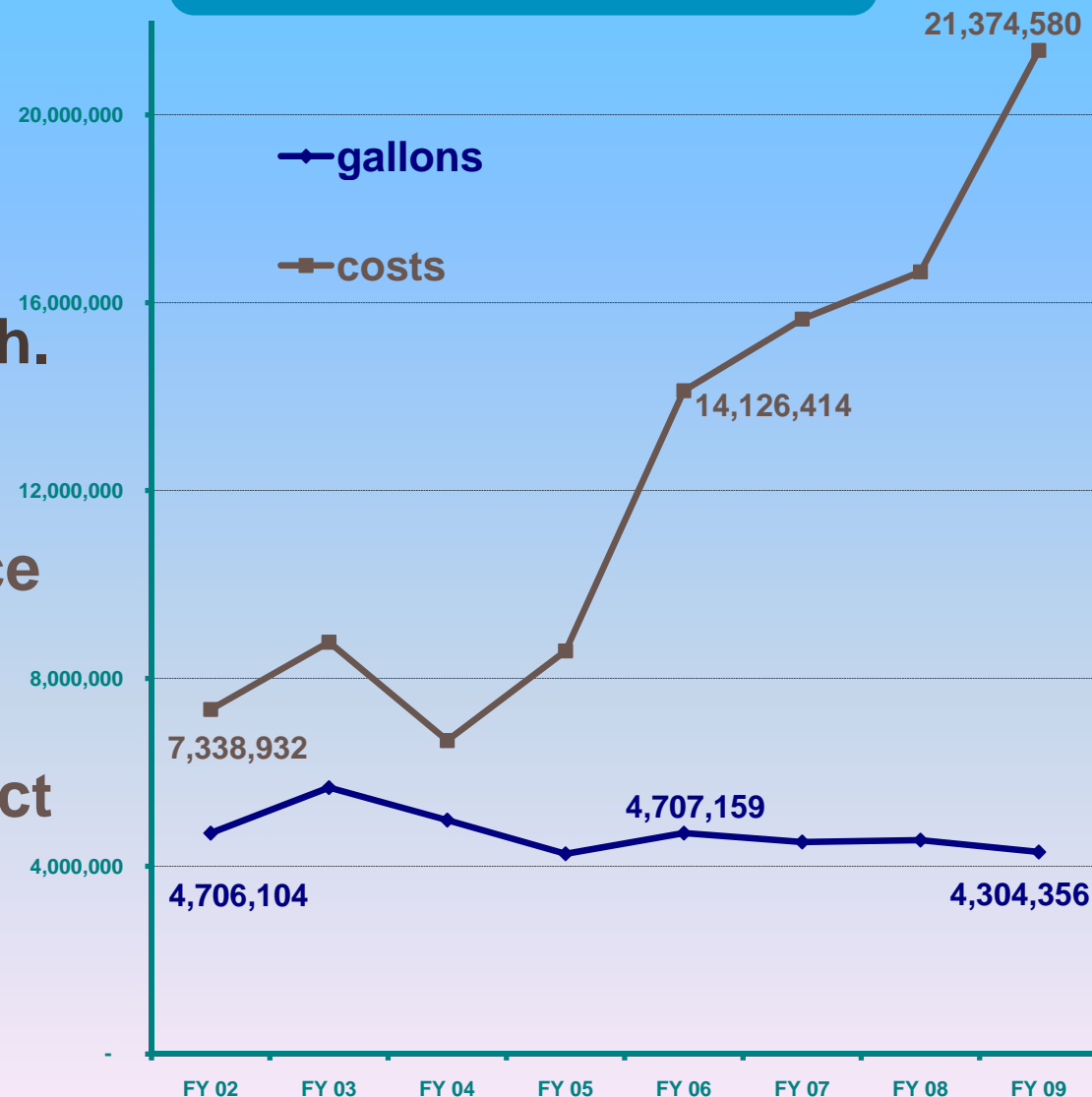
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Conclusion:

- Energy conservation, efficiency and purchasing strategy efforts are not enough.
- As long as our energy source is tied into the forces of the global oil market we are subject to high and unstable energy costs

Annual Fuel Consumption
And Cost



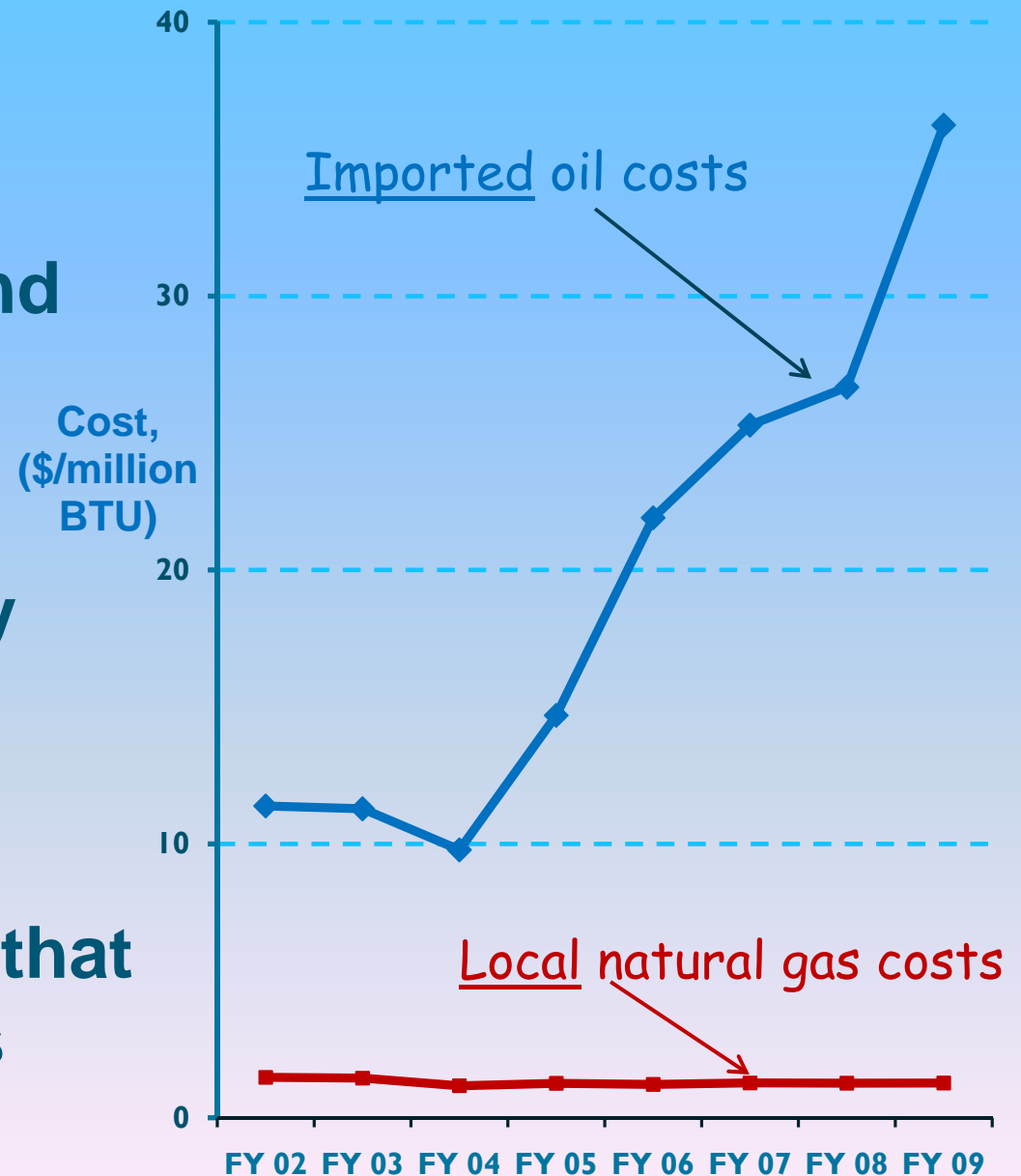
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Solution:

1. Partnership with government, private and academic entities
2. Develop both non and renewable local energy sources
3. Develop an electrical transmission highway that connects communities



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NSB Projects:

<i>Project</i>	<i>Agencys</i>	<i>Status</i>	<i>Annual Savings</i>
Nuiqsut Conversion to Natural Gas	NSB, NPRA Grants	Phase I near completion	\$2 million
Borough Wide Waste Heat Recovery	NSB	Phase II upgrades starting	\$2 million
Borough Wide Wind Assessment	NSB	RFP issued for installation	N/A
Atqasuk Energy Assessment	NPRA Grant	Study Draft Report Complete	N/A
AKP NSB Buildings Energy Audit	NSB	Construction start up	\$300,000
Methane Hydrates Characterization	NSB, NETL	Phase I near completion	N/A
AIN Coal Bed Methane	NSB, BLM, ASRC	Phase I completed	N/A

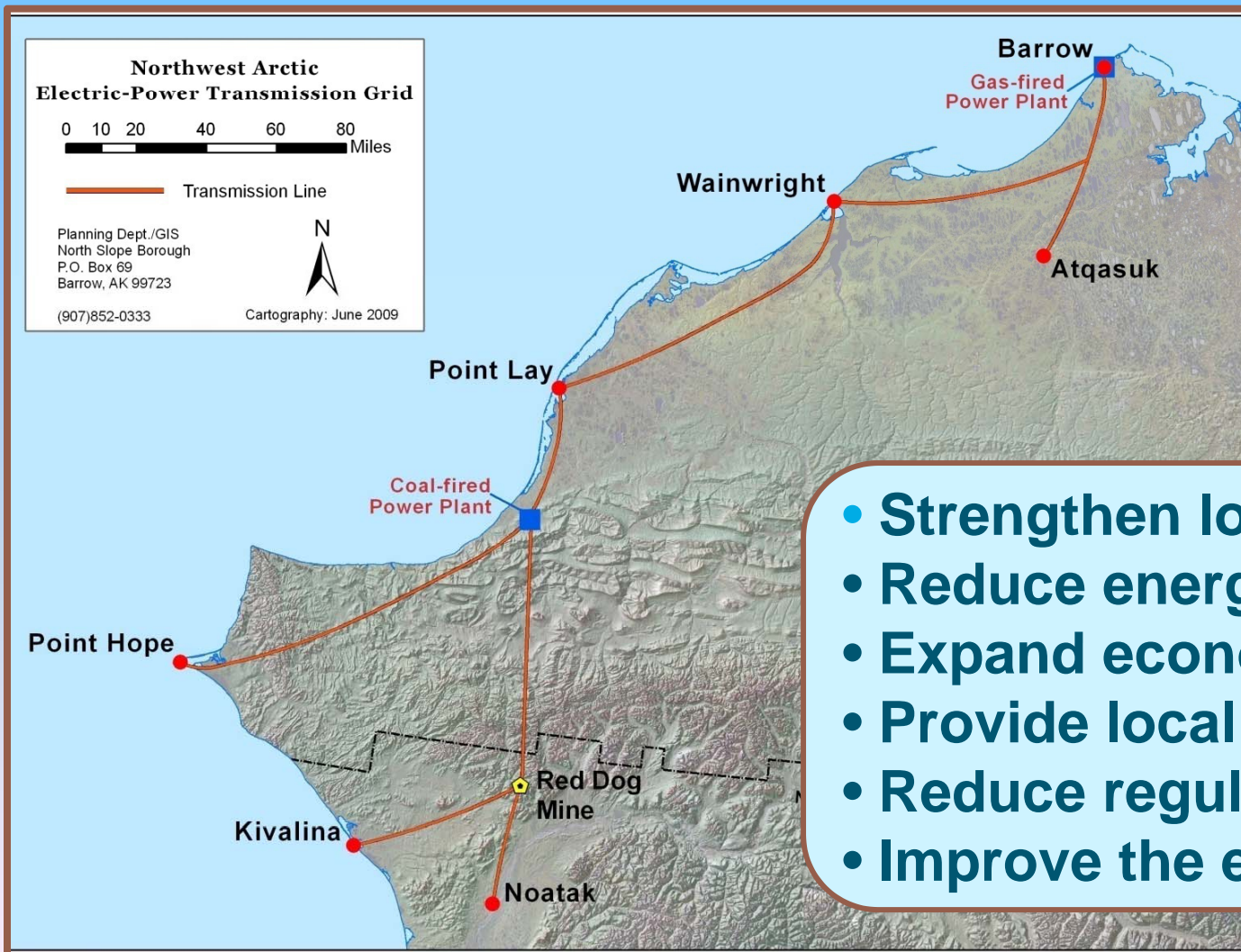
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Future Consideration

Development of a Northwest Arctic Power Grid



Goals:

- Strengthen local economy
- Reduce energy cost to residence
- Expand economic opportunities.
- Provide local jobs
- Reduce regulatory influence
- Improve the environment