Interior Energy Plan: Goals

- Provide affordable energy to Interior Alaska customers as soon as possible
- After providing the Interior with natural gas, assure long-term access to natural gas and propane for all Alaskans
- Use private-sector mechanisms as much as possible
Interior Energy Plan: Basics

- Community-set pricing goal
- Acts as a catalyst for AIDEA/private sector partnerships
- Natural gas will be liquefied on the North Slope and trucked to Fairbanks for regasification
- Propane will be produced and delivered to Interior and Rural Alaskans
- Primary LNG demand anticipated to be Fairbanks and North Pole
SB23 Finance Package

$150 Million
AIDEA Bonds

$50 Million
General Fund

$125 Million
SETS Capitalization

+ Private Sector

+ Municipal Utility

9 Bcf North Slope Liquefaction Plant

+ Gas Distribution System
   Residential/Industrial
Financing Components

- **Sustainable Energy Transmission & Supply Development Program (SETS)**
  - $57.5 million appropriation to directly reduce LNG cost
  - $125 million SETS capitalization to provide optimal commercial structure at 3 percent interest

- **AIDEA bonds**
  - $150 million to provide low-cost capital for the distribution system buildout
  - 3 to 4.5 percent interest rate (depending on tax-exempt status of component financed and market rates)

- **Existing Natural Gas Storage Credits**
  - $15 million per qualifying storage tank to directly reduce the customer utility price
LNG Trucking Value Chain

- Gas Supply
- North Slope Liquefaction Plant
- Trucking
- Regasification
- Seasonal Storage
- Distribution

- Space Heating
- Electric
- Industrial

[Images of a power tower, a factory building, a tanker truck, storage tanks, and a factory building]

[Logos: ALASKA ENERGY AUTHORITY and AIDEA]
LNG Lowers Energy Costs

- **Expected Utility Price per Mcf**
  - Wholesale LNG: $10.15
  - Natural Gas to Home: $13.42-$17
  - Delivered Price is equal to $1.79-$2.27 per gallon of fuel oil
Trucked LNG is the lowest-cost option for Interior Heating
## Household Heating Savings

- **Typical Home Heating Savings**
  - $2,900 - $3,750 annually
  - 43 – 55% cost reduction

- **Key Assumptions**
  - Typical Interior household will use 225 Mcf of gas annually (equivalent to 1,700 gallons of fuel oil)
  - Does not account for expected improvement in heating efficiency

*Graph showing monthly gas bills (range) vs. monthly fuel oil bills, with a significant reduction in gas bills from Jan to Jul and increased costs from Jul to Nov.*
1. The size of the LNG plant and LNG storage
   - Expandable to serve customer growth
   - LNG plant and storage sized to meet peak demand

2. Distribution buildout rate
   - Provides customers with access to natural gas

3. Customer conversion rate
   - Rate at which customers with gas access convert to gas
Natural Gas Customers: Growth Estimate

- Customer estimate forthcoming
  - Buildout rates
  - Conversion rates
- Identified opportunity to increase natural gas conversion rates

![Chart showing growth of natural gas customers over project years.](chart.png)
Natural Gas Customers: Price Impact

- Gas price decreases with more customers
  - Spreads the fixed costs over more units
  - Increasing buildout rate or conversion rate reduces price
- Ability to serve large customers (GVEA, Flint Hills)
Air Quality

Natural Gas Should Reduce Air Pollutant Emissions

- Will reduce PM 2.5 emissions
- Fairbanks a non-attainment area
- Substantial potential health benefits

Economic Development

- Non-attainment risks Federal funds
- Hurdles for future development
- Cleaner, healthier air will promote economic development
Engineering Brief:
Technical Feasibility

Recommends Advancing a Project

- Project is feasible from engineering perspective
- An aggressive schedule can bring natural gas in 2015
- Accommodates different pipeline scenarios
Cost Estimate

- Compares favorable to initial estimates
- Contingent on demand growth timing
- Trucking: $4.42 per Mcf

### Capital Cost Estimate

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2025</th>
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<tbody>
<tr>
<td>Plant Size (Bcf per year)</td>
<td>9.0</td>
<td>20.0</td>
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<tr>
<td>LNG Plant ($MM)</td>
<td>$208</td>
<td>$265</td>
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<tr>
<td>Storage &amp; Regas ($MM)</td>
<td>$42</td>
<td>$88</td>
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<tr>
<td>Distribution ($MM)</td>
<td>$59</td>
<td>$170</td>
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</table>
LNG Plant requires customer commitments
- LNG sold Free-on Board (FOB) on the North Slope. Buyer is responsible for LNG delivery
- Firm contracts for plant capacity

Customers will contract for their own trucking

Natural gas utility independently operated
- Firm contracts with LNG plant will be source of gas
- AIDEA financing for distribution and storage buildout
- Utility responsible for design, construction and operation of distribution, storage and regasification
Critical Milestones

1. Natural gas service area RCA resolution
2. Negotiate contracts for LNG plant capacity
3. Select LNG producer and/or EPC contractor
4. Construction start
5. First gas
AIDEA Interior Energy Plan - Schedule

May 17, 2013

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<thead>
<tr>
<th>Task</th>
<th>Start</th>
<th>End</th>
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<tr>
<td>LNG Facility</td>
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<td>AIDEA RFI</td>
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<td>Selection of Engineering Consultant</td>
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<td>Analysis of RFI Responses</td>
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<td>Preliminary Plans</td>
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<td>Plan of Development</td>
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<td>Air Permitting</td>
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<td>Project Suitability Assessment</td>
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<td>Commercial &amp; Financial - Feasibility Analysis</td>
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<td>Commercial &amp; Financial - Structuring &amp; Due Diligence</td>
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<td>Develop Business Structure/Select Partners</td>
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<td>Conduct Partner Due Diligence</td>
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<td>DNR Pipeline and Pad ROW Application</td>
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<td>Solicit for and Retain EPC</td>
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<td>Component and Facility Construction</td>
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<td>RCA Service Area Resolution</td>
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<td>AEA/AIDEA Transfer Work to LDC</td>
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<td>Sign and File Gas Contracts with RCA</td>
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<td>Distribution System Construction</td>
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<td>LNG from North Slope Plant/Storage Fill</td>
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<td>Commence Expanded LDC Operations</td>
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Coming soon: InteriorEnergyPlan.com