



# House Resources

## 4/6/15

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# HB 105

## IEP Status Update

# IEP GOALS

- **Supply natural gas to Interior Alaska:**
  - **At the lowest cost possible**
  - **As many Alaska customers as possible**
  - **As soon as possible**
- **IEP investments compliment eventual sources of gas supply from a natural gas pipe line**
- **Lower PM2.5 in nonattainment areas of Interior**

# IEP: CURRENT STATUS

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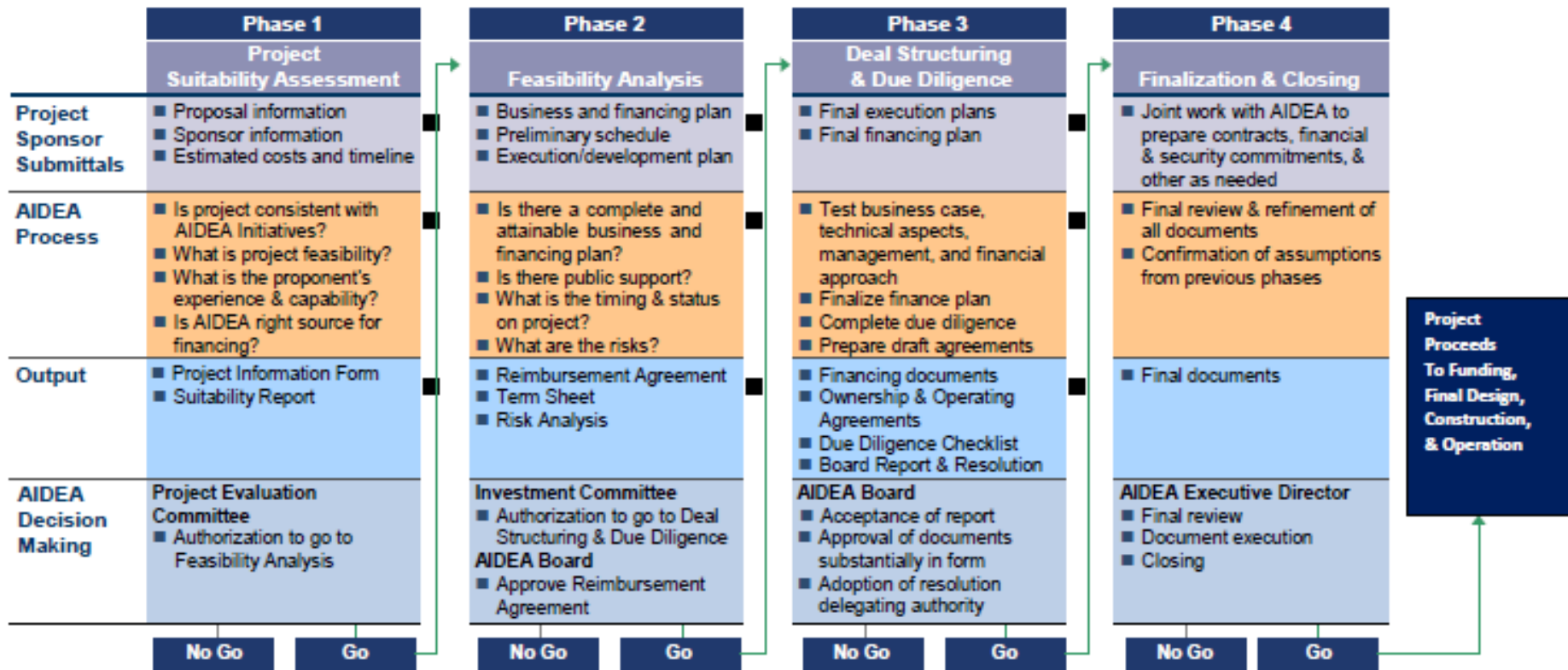
- Pursued development of a North Slope LNG supply through Concession Agreement
- AIDEA/AEA are now evaluating infrastructure to deliver natural gas from Cook Inlet
- AIDEA is financing the buildout of natural gas distribution in Fairbanks and North Pole

# CONCESSION AGREEMENT OUTCOME

- **Concession Agreement with MWH was a legal framework for a public-private partnership**
  - Northleaf, a Canadian investment firm, was the private partner proposing to finance, construct, and operate LNG facility
  - AIDEA would provide financing and would own LNG facility
- **Concession Agreement set out conditions for financial close**
  - AIDEA had to agree to project costs and commercial terms
  - MWH would provide construction and operating agreements
  - MWH would negotiate and secure LNG sales to utilities
- **Concession Agreement terminated due to inability to complete financial close by December 31, 2014**
  - Higher capital and operating cost than projected
  - LNG supply agreements were unacceptable to utilities and AIDEA
  - Delivered projected price and risk allocation did not meet the IEP's goals and AIDEA's investment requirements

# AIDEA'S DUE DILIGENCE PROCESS

The North Slope project under the Concession Agreement did not proceed because it did not pass AIDEA's due diligence process and Board Approval.



# SB 23 PROJECTING FUNDING AND DEPLOYMENT TO DATE (\$1,000'S)



## IEP Capital Appropriation

Legislative Funding	\$57,500
Plant Direct, Legal, & Financial	\$1,337
Pad Construction & Permitting	\$5,708
Plant Engineering & Design	\$5,064
Storage, Dist, & Conversion	\$332
<b>Total Expenditures</b>	<b>\$12,441</b>
<b>Remaining Funds</b>	<b>\$45,059</b>

## SB 23 SETS Loan

Legislative Funding	\$125,000
FNG Distribution Loan	\$15,000
IGU Distribution Loan	\$37,780
<b>Total Outstanding Loans</b>	<b>\$52,780</b>
<b>Remaining Funds</b>	<b>\$72,220</b>

## SB 23 SETS Bonds

Legislative Authorization	\$150,000
<b>Remaining Authorization</b>	<b>\$150,000</b>

AIDEA has spent \$12.1 million of SB 23 Capital Appropriation developing a North Slope LNG project.

AIDEA has issued \$52.8 million in loans to build out the distribution system in Interior Alaska.

# AIDEA IS EXPLORING LNG ALTERNATIVES IN COOK INLET



The Alaska natural gas and LNG markets have changed in the last two years and new information is now available.

## Status in 2013

- Cook Inlet utilities were actively developing LNG import plans amid gas supply fears
- Existing proposals for North Slope LNG indicated lower capital costs
- AIDEA had not selected a North Slope developer or project design

## Status in 2015

- Concession Agreement work revealed high cost of North Slope LNG
- Cook Inlet “Renaissance” provides opportunity for lower cost natural gas
- Downturn in global LNG market may reduce price for conventional LNG equipment

# NORTH SLOPE AND COOK INLET: COMPARING PROJECTS



## Cook Inlet

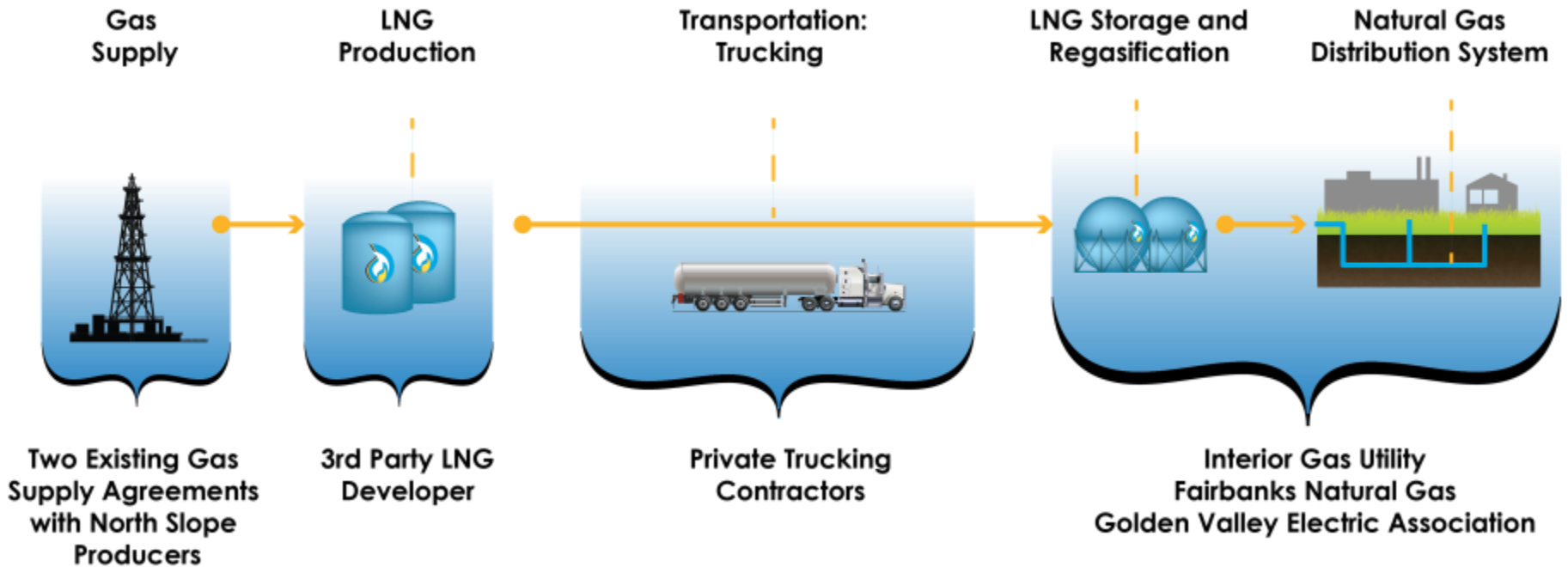
## North Slope

<b>Natural Gas Supply</b>	Supply still uncertain but indications are positive	Abundant supply at low cost, existing contracts in place
<b>LNG Plant Costs</b>	Cheaper to construct and operate, “off the shelf”	Expensive to design and construct for North Slope conditions
<b>Trucking/ Rail</b>	Lower trucking costs, large trailer potential, rail option	Trucking is more expensive but feasible
<b>Storage and distribution</b>	No significant change in design and costs	

**Conclusion:** If affordable natural gas is available, a Cook Inlet LNG project is favorable



# NORTH SLOPE LNG PROJECT



The North Slope LNG Project supply chain was well vetted, providing AIDEA and the Interior Utilities with estimated costs.

The LNG production cost for a North Slope project under the Concession Agreement was too high. Alternative North Slope LNG production projects will be considered.

# COOK INLET LNG ALTERNATIVE

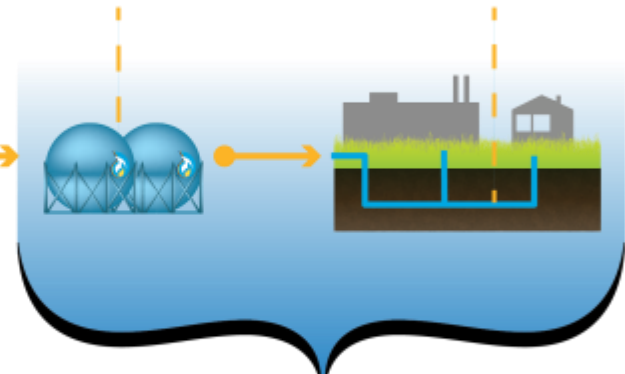
Gas Supply

LNG Production

Transportation:  
Trucking or Railroad

LNG Storage and  
Regasification

Natural Gas  
Distribution System



Gas Supply Agreement with Cook Inlet Producer(s)

3rd Party LNG Developer

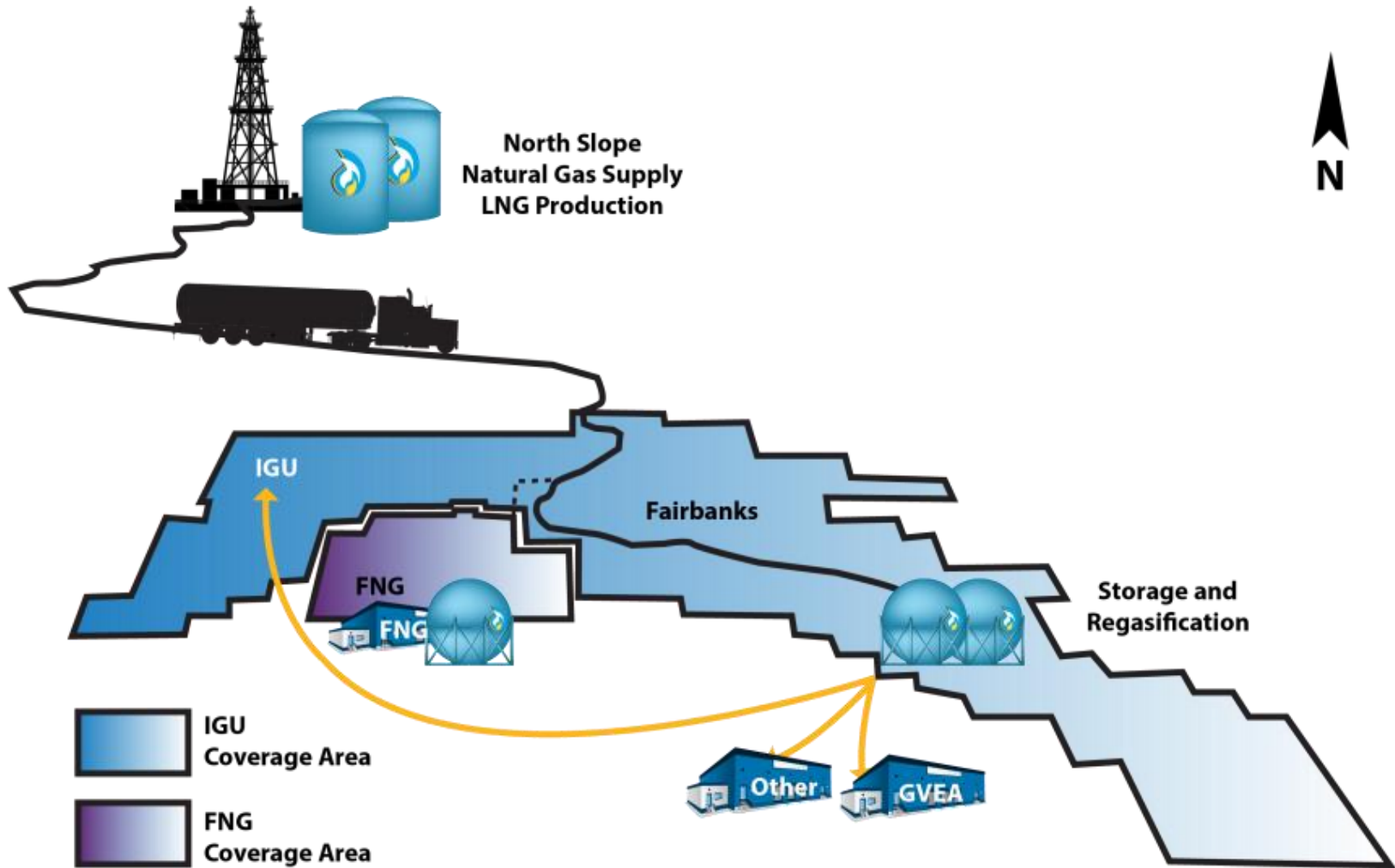
Private Trucking Contractors or Alaska Railroad

Interior Gas Utility  
Fairbanks Natural Gas  
Golden Valley Electric Association

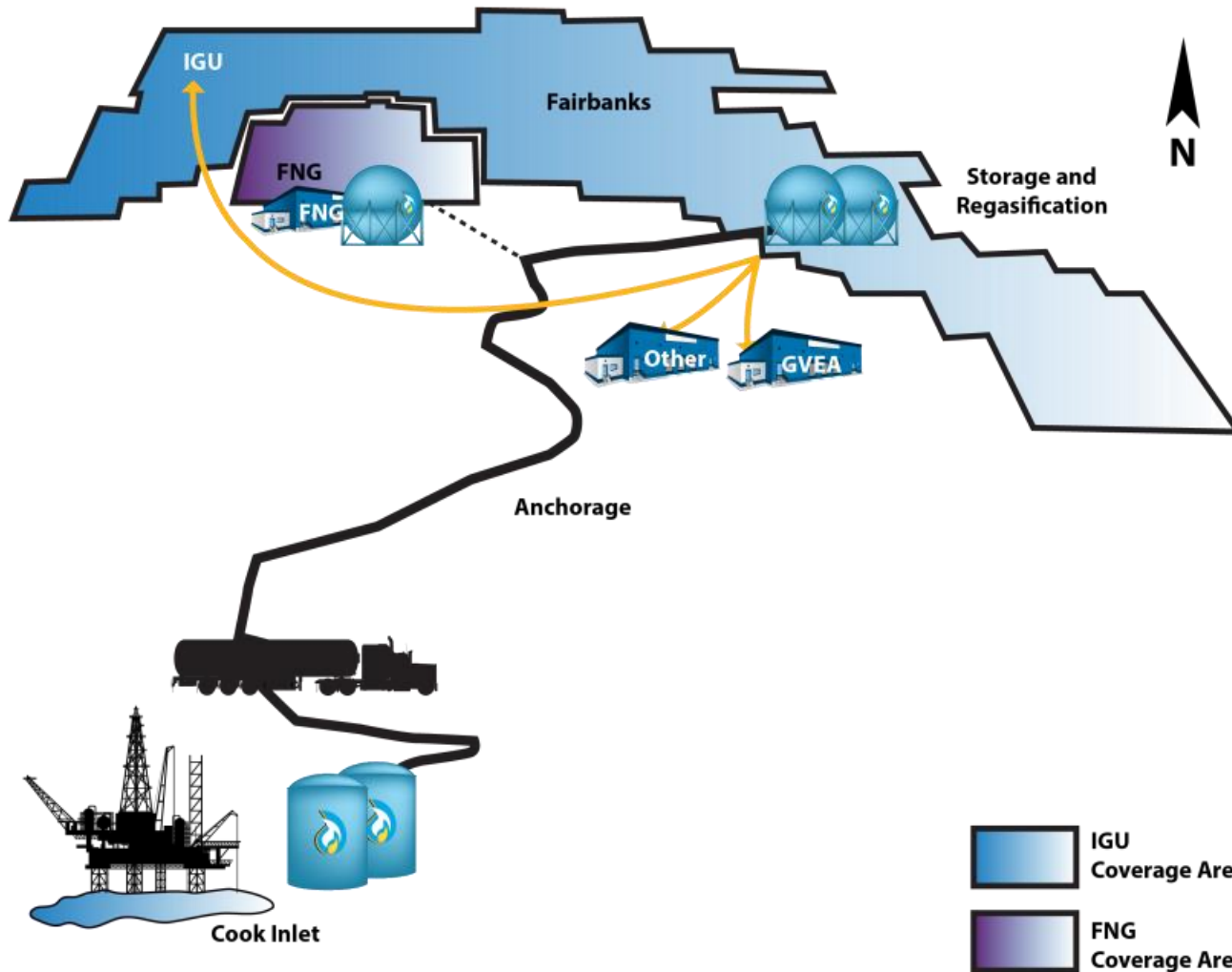
Allowance of this alternative, in addition to the North Slope supply chain authorized in 2013, is the purpose of HB105's IEP changes.

AIDEA is also encouraging and will evaluate all proposals to achieve the goals of the IEP (e.g., small diameter pipelines, full supply chain solutions, etc.)

# NORTH SLOPE PROJECT MAP

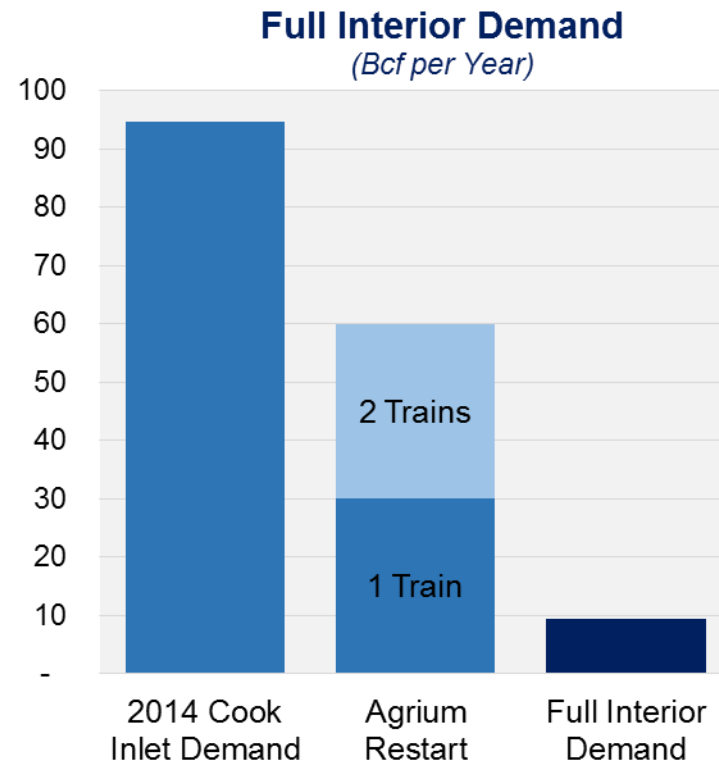
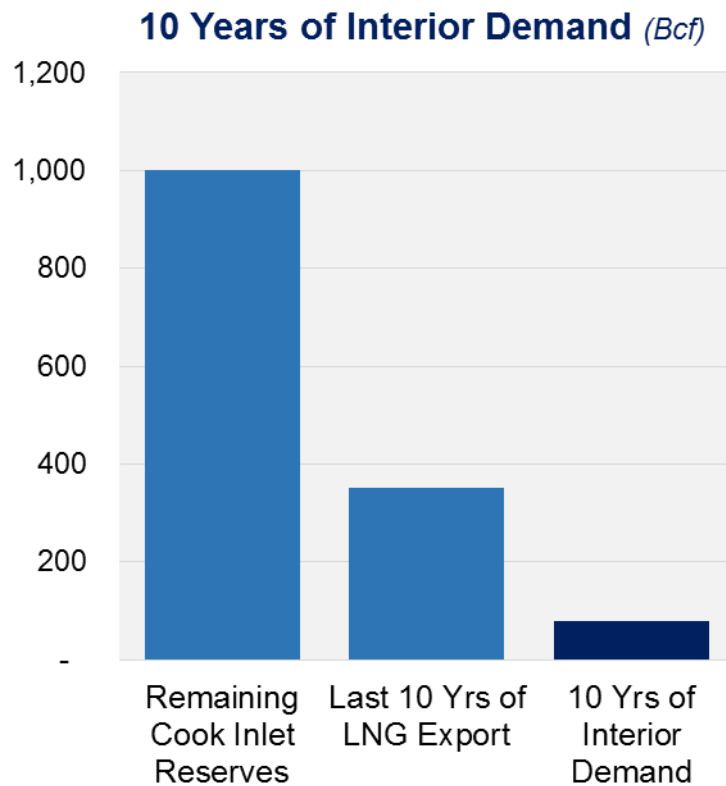


# COOK INLET PROJECT MAP



# HOW DOES THE INTERIOR DEMAND COMPARE?

- 1st 10 Years Projected Total Demand: **80 Bcf**
- Annual Demand at Full Buildout: **9.5 Bcf**



# IMPACT OF HB 105

## What HB 105 does

- **HB 105 gives AIDEA flexibility to use SB 23 financing tools with non-North Slope liquefaction location**

## What HB 105 does not do

- **Does not increase funding for the IEP**
- **Does not increase AIDEA's investment authority beyond geographic flexibility**
- **Does not alter AIDEA's policy of supporting the private sector**
- **Does not change the intent or goals of the IEP**

# AIDEA BOARD RESOLUTION NO. G15-02



- **Approves expenditures to evaluate alternatives to the North Slope Concession Agreement**
  - January 14, 2015
  - \$500k SETS funds (non-SB 23)
  - \$200k AIDEA funds (for personnel and facilities)
- **Resolution and related funding is being utilized for the current RFP process**
  - Direct commercial process, not a “study”
  - Project Execution Plan

# AIDEA RESOLUTION G15-02 BUDGET



- **The full \$500k authorization for professional services may not be spent**
- **Spending to date has been on advancing a Cook Inlet project**
  - **Technical analysis and review of private partner proposals**
  - **Commercial and legal to issue RFP and partner with private partners**
- **Full \$200k for AIDEA/AEA staff time not expected to be spent**

## AIDEA Resolution G15-02 Budget\*, \$500k

<b>Total Budget</b>	<b>\$500,000</b>
Plant Cost Estimate	\$25,500
Liquefaction RFP	\$25,200
Transportation Modeling	\$42,100
Dist & Storage Design	\$25,000
Outreach, Website	\$19,200
Project Management	\$108,000
Legal - DOL	\$25,000
Legal - External	\$25,000
<b>Total Budgeted Expense</b>	<b>\$295,000</b>
<b>Remaining Budget</b>	<b>\$205,000</b>

*\*Draft, subject to modification*



# PROJECT EXECUTION PLAN

- ④ **Supply**
- ④ **Liquefaction**
- ④ **Transportation**
- ④ **Storage and Regasification**
- ④ **Distribution and conversion**
- ④ **Plus cross-component tasks of**
  - **Legislative**
  - **Full Supply Chain Cost Modeling**
  - **Alternative Approaches**

- **DCCED leading effort to facilitate Cook Inlet natural gas**
  - Solicitation to all Cook Inlet gas vendors in process
  - IEP team, DNR, DOR on team
  - Determine availability/price and help utilities secure natural gas supply/LNG supply agreements
  - All current and potential suppliers invited to participate in competitive process
- **New LNG capacity**
  - RFP to be issued for LNG capacity – Focus on Cook Inlet; Consideration of North Slope and alternates
  - Will evaluate proposals that include natural gas supply and LNG capacity
  - Competition between private developers to achieve lowest price with IEP tools

## Storage and Transportation

- Optimize use of capital to meet IEP goals
- North Slope analysis tools applicable to these components
- For example, is it more economic to invest in LNG plant capacity, trucks or LNG storage?

## Transportation logistics and cost

- Trucking vs. rail cost estimates
- Levelized vs seasonal swing

## LNG storage size driven by supply chain

- Trucking vs. rail cost estimates
- Size and capital cost of selected plant
- Cost of seasonal swing vs cost of storage

# DISTRIBUTION AND CONVERSIONS

- ① **Interior distribution build-out need is not impacted by LNG from Cook Inlet vs. North Slope**
  - Gas trucking remains a transition to piped gas
  - Distribution build-out required, regardless of source
  - Build-out continues summer 2015
  - Distribution adjustments expected for summer 2016 based on LNG capacity and Pentex outcomes
  
- ① **Potential acquisition of Pentex/FNG**
  - Due Diligence continues
  - If acquisition occurs: Fall 2015 savings to current customers; Long-term efficiencies to benefit all residents
  - AIDEA approach to divest ownership and operation structures into integrated FNG and IGU entity
  
- ① **Conversions Key Component**
  - Local program leveraging private bank financing for residential conversions
  - PACE legislation to allow local option for commercial conversion
  - Capacity building and coordination with local contractors and suppliers
  - Delivered gas costs low enough to generate conversions

# IEP PLANNING: JUNE 30 TARGETS

- ④ **Gas Supply Agreement**
  - Term sheet level with secure supplier
- ④ **Supply Chain Partner(s) identified**
  - Project to AIDEA Board
  - Development agreements
  - Recommended capital stack
- ④ **Potential Pentex Acquisition**
  - Due diligence and Board approval
  - Plan for integrating Pentex and IGU
- ④ **Timeline and component pricing set**
  - Based on selected supply chain partners and natural gas contract

# SUMMARY

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- **IEP continues to work towards project goals set forth by the Legislature under SB 23**
- **HB 105 increases project flexibility and improves likelihood of project success**
- **The IEP welcomes the chance to work with the Legislature and this committee on HB 105**



# House Resources

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HB 105  
IEP Status Update