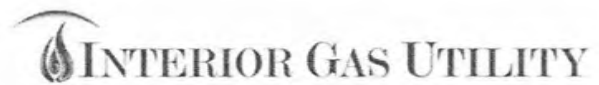


**03/31/2017
Presentation:
Update on
Interior
Energy
Project**

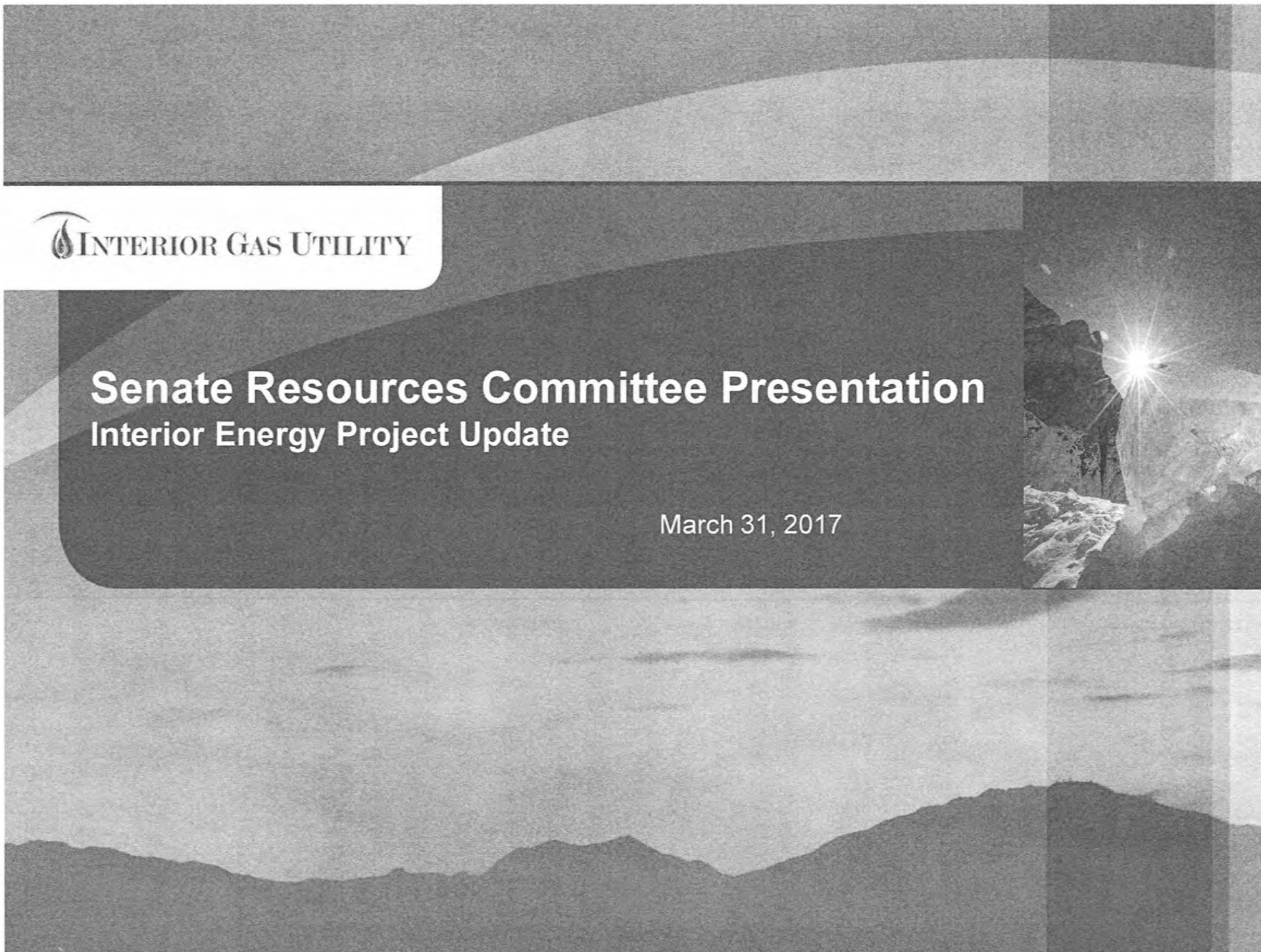
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Update on Interior Energy
Project</SUBJECT><COMM>SRES30</COMM></TARGET>



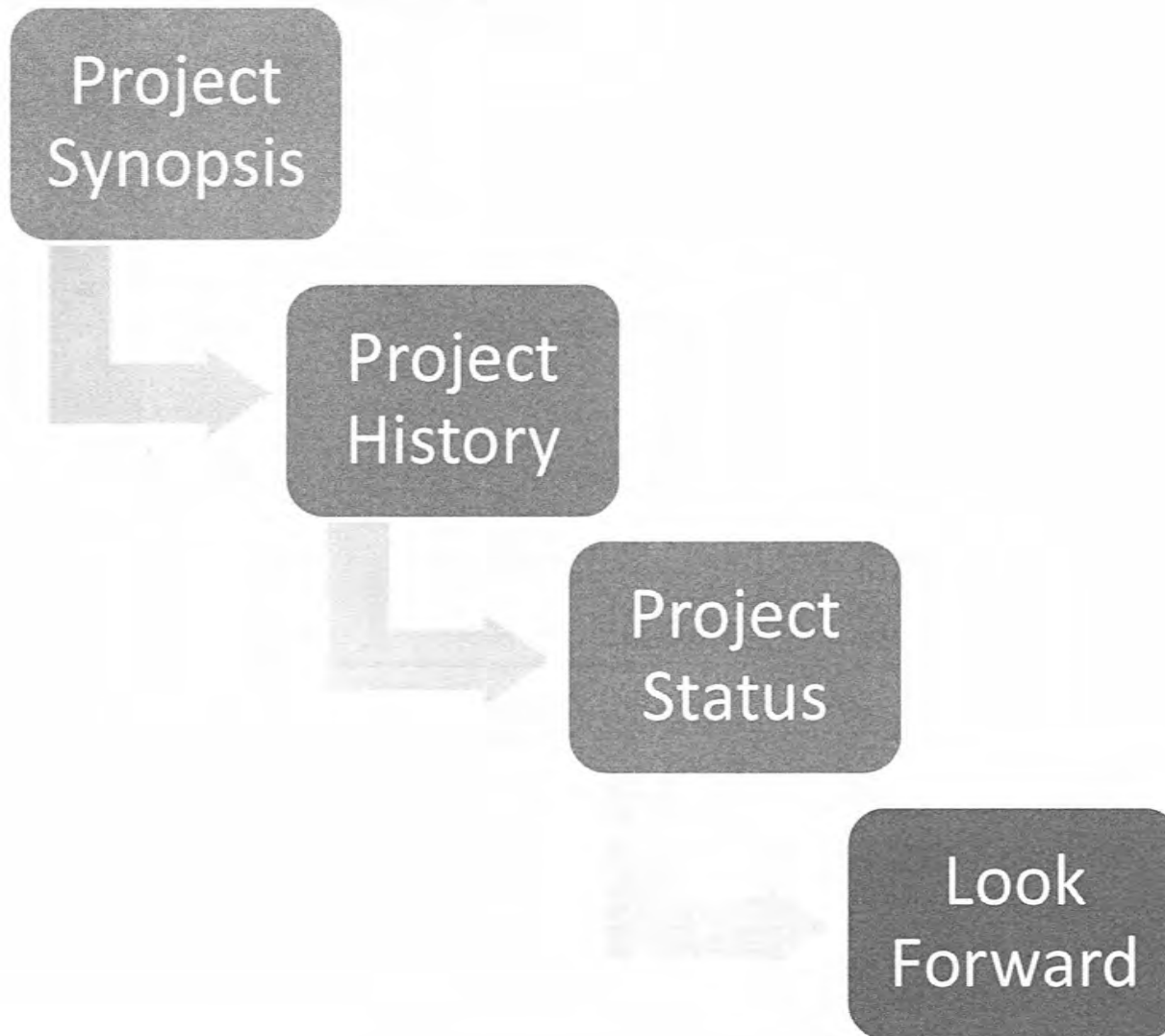
Senate Resources Committee Presentation

Interior Energy Project Update

March 31, 2017



Presentation Summary



Project Synopsis

Interior Energy Project PURPOSE AND GOALS

Interior Alaska

“ . . . to bring low-cost energy to as many residents and businesses of Interior Alaska as possible, as quickly as possible ... ”

Stabilize the Economy

Improve Air Quality

Interior Energy Project PURPOSE AND GOALS

Statewide

Provide “Proof of Concept” for an alternative, more sustainable Model of State Development Support

Blended Finance

- Grant
 - Low Grant Component

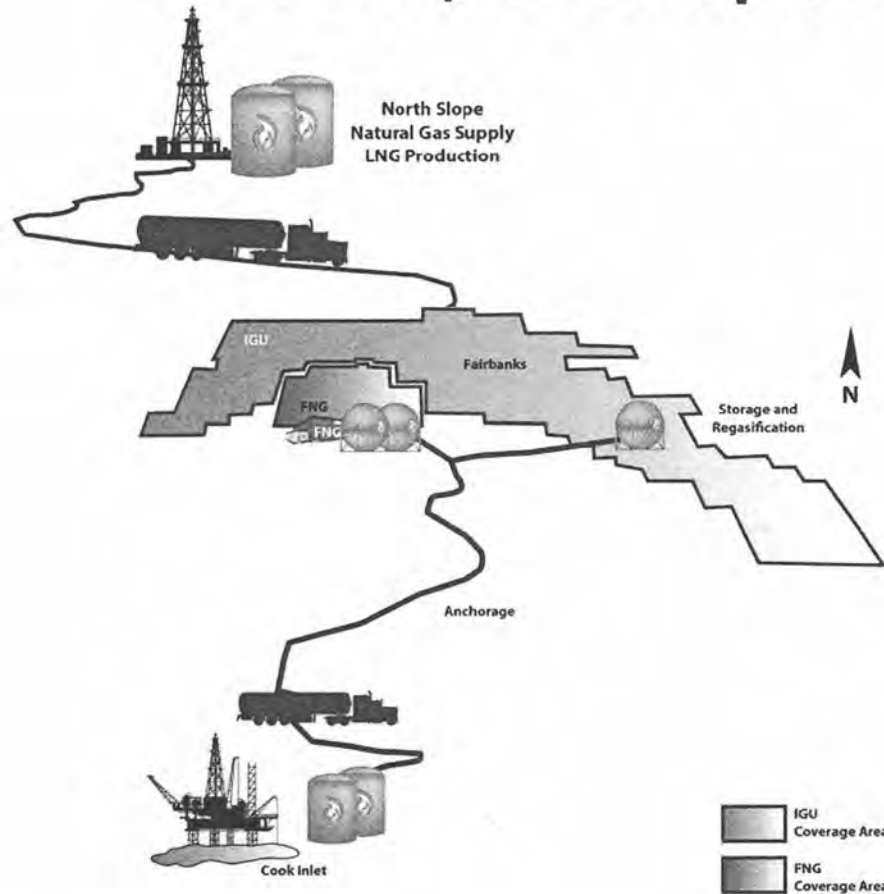
- Loan
 - Large Loan Component
 - Allowance for project-favorable terms

- Bonds
 - Market-based
 - State-backed but Project Supported

Recognizing that over 100 Alaska Communities, and hundreds of thousands of Alaskans, face the same energy challenge as Fairbanks, design and test a system where the state can, more sustainably, provide necessary project support of critical development even when it is no longer in a position to offer large Grants...

IEP – Project Definition

Transition Energy Economy from Oil (and Wood) to Clear, Less Expensive Natural Gas



- I. Increase LNG Production Capacity
- II. Increase LNG Delivery Capacity
- III. Increase LNG Storage Capacity
- IV. Increase NG Delivery Capacity
- V. Support Conversion to NG Use

Project History

Project History

- 2011
 - \$500,000 State Appropriation

- 2012
 - FNSB Gas Distribution System Analysis
 - Interior Gas Utility Established by FNSB

- 2013
 - “Interior Energy Project” Announced
 - Governor Requests for State Financial Support
 - \$362.5 Million Financing Package
 - \$57.5M Grant
 - \$125M SETS Loan
 - \$150M Bonding Authority
 - *Mandate for North Slope Focus
 - IGU acquires RCA Certified Service Area (CPCN)

Project History - Continued

- 2014
 - FNG System Expansion (Year 1 of 2)
 - Pursuit of NS Configuration
 - RFP Process
 - Selection of MWH as Partner

- 2015
 - FNG System Expansion (Year 2 of 2)
 - IGU Phase 1 Build-Out
 - Allowance for shift to Cook Inlet Configuration
 - Pursuit of NS Configuration
 - Salix selected as development partner
 - State (AIDEA) buys FNG/Pentex

Project History - Continued

▪ 2016

–Salix “Unwind”

- Precipitated by need for cost reduction against Oil
- Unwind Agreement allowed for:
 - » Retention of FEED work to date
 - » Retention to FEED Contractors

–Negotiations to:

- Transition Pentex LLC into local ownership
- Unite Local Natural Gas Utilities
- Finance IEP Total-System Expansion

–Memorandum of Understanding

Project Status

Memorandum of Understanding

for

Pentex Acquisition and IEP Financing

Definitions

▪ Titan LNG plants

- Titan 1 Current LNG plant providing FNG with approximately 1B* in LNG
- Titan 2 New LNG plant, integrated into Titan 1 that will provide 3B in LNG
- Titan 3 Expansion of the LNG plant (Titan 1 & 2) to meet increased demand as demand materialize. Will provide additional 3B in LNG

▪ Distribution System by Phase

IGU

- 1 Customer service lines and meters for the 73 miles of gas mains installed in 2015
- 2 Install 68 miles of gas mains along with customer service lines and meters
- 3 Install 128 miles of gas mains along with customer service lines and meters

FNG

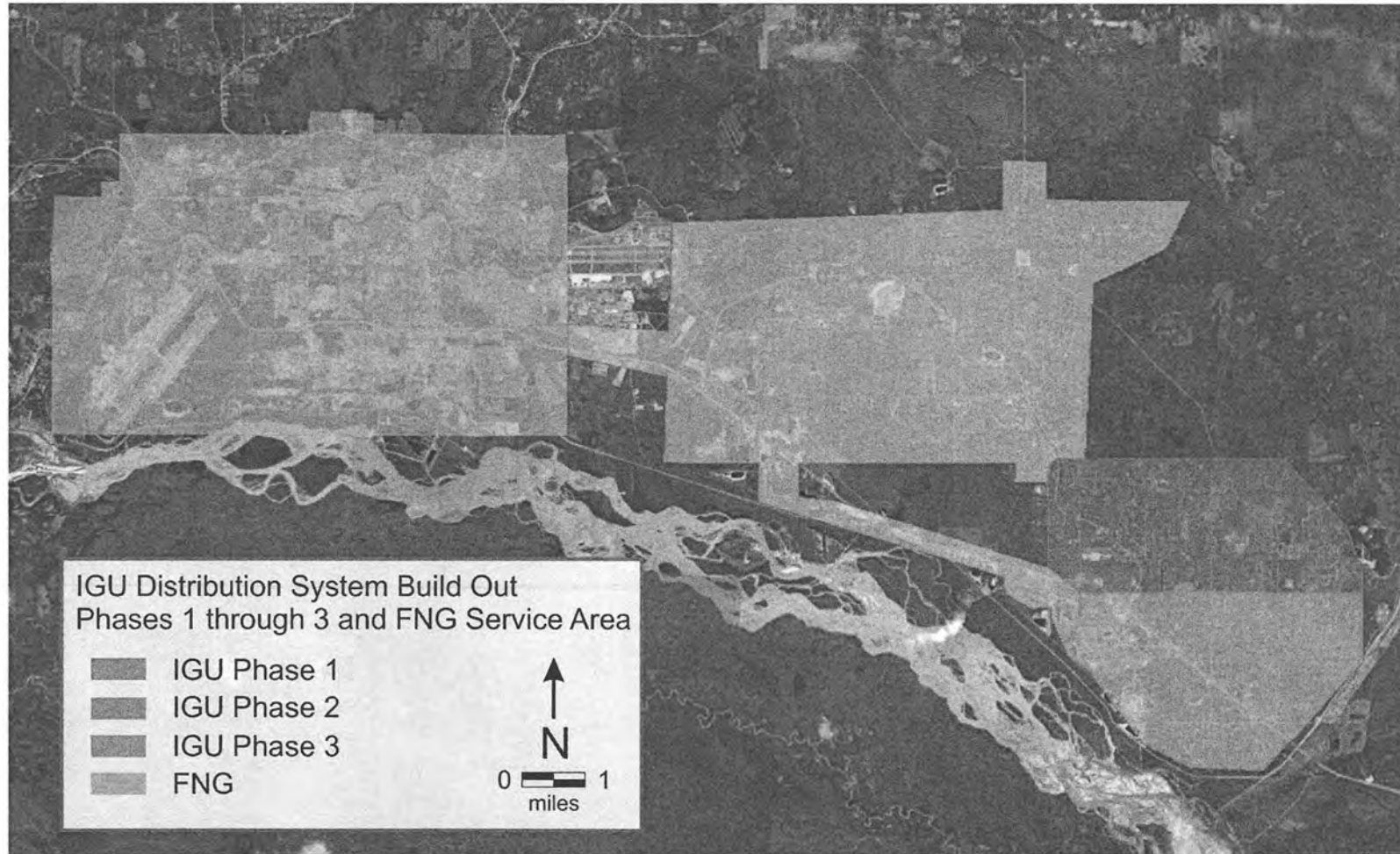
- Customer service lines and meters for the existing 134 miles of gas mains and expansion of up to 40 miles of gas main.

▪ Storage

- 5.2 Million gallons of storage located in Fairbanks
- Two 75,000 gallon tanks located in North Pole

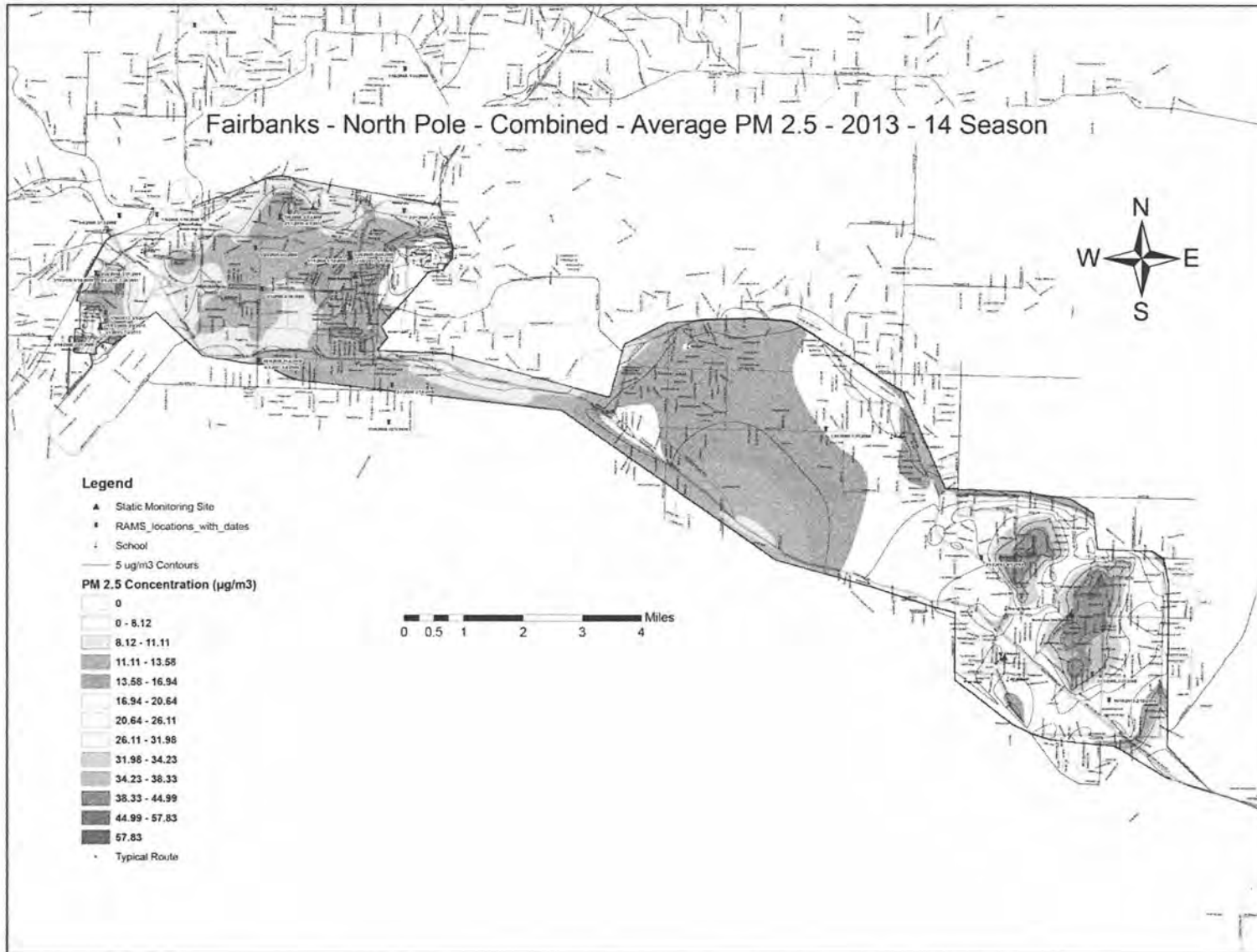
*1B = 1 billion ft³ of liquid natural gas = approx. 7.46 Million Gallons of fuel oil

IGU CAPITAL PLAN – 2017 thru 2022



Note: Service lines, meters and Conversion Program will be ongoing

AIR QUALITY 2013-2014 SEASONS



By the Numbers

Customers*	8,840
Existing FNG	1,140
FNG Buildout	4,000
IGU Buildout	3,700
Demand (BCF)	5.3
LNG Deliverability (BCF)	5.4
LNG Plant Capacity (BCF)	7.5
Estimated Gas Cost (\$ / MCF) **	15.50
Revenue/Yr (\$M)	88
Capital Plan (\$M)	333
Air Quality Improvement ***	
Fairbanks/FNG (%)	8.6
North Pole/IGU (%)	26.4

* Conversions based on Cardno Report, Sensitivity Analysis 2015

** Includes a volumetric charge of \$15 / MCF and a customer charge

*** "Order of Magnitude" Preliminary AQ Improvement forecast – Sierra Research

Utility Integration MOU (1 of 2)

SCOPE (CREATES FULLY INTEGRATED FNSB NATURAL GAS UTILITY)

- Titan 1 upgrades, Titan 2 and Titan 3 - construction
- Fairbanks LNG Storage - 5.2 million Gallons - construction
- North Pole LNG Storage – 150,000 Gallons - construction
- Full build-out of IGU Phases 1-3 Distribution System & FNG Expansion Area
- Services and Meters
- Customer Conversion Program

Utility Integration MOU (2 of 2)

Establishes Key Business & Financial Terms

- **Overall financing plan**
 - Commitment of \$330M in total to IGU's development & startup
 - Structure of \$125M SETS Loans
 - Standards and process for issuance of \$150M of AIDEA bonds for IGU capital program

- **IGU purchase of Pentex (including Titan, FNG, all Pentex assets)**

- **Process and timing of system integration**

- **Contingent upon**
 - Economically sufficient Gas Supply Contract
 - Due Diligence
 - RCA Approval

Financials – Fund Sources

SOURCE OF FUNDS -- CAPITAL FINANCING

Item (a)	Amount (b)
Capital Appropriations (HCS CSSB 18)	\$ 42,800,000
SETS Financing (SB 23 SLA 2013)	125,000,000
AIDEA Bonds (SB 23 SLA 2013)	140,614,200
Other Sources	
Commercial Financing (bridge & LNG trailers)	4,745,000
State Storage Credits - Fairbanks & North Pole	<u>20,500,000</u>
Other Sources	\$ 25,245,000
Total Source of Funds	\$ 333,659,200



Financials – Use of Funds

USE OF FUNDS -- MOU Appendix C - Integrated Gas Utility Capital Program -- 2016-28

Item	Amount
LNG Supply	
Titan 2 LNG Plant (inc. Titan 1 upgrades)	\$ 46,200,000
Titan 3 LNG Plant (future)	25,000,000
LNG Supply	\$ 71,200,000
Transportation	
LNG High-capacity Trailers & Equip	\$ 4,745,000
Storage & Regas	
FBKS 5.2mgal Storage	42,000,000
NP 150kgal Storage & Regas	11,000,000
Storage	\$ 53,000,000
Pentex Acquisition	
AIDEA sale of Pentex to IGU	\$ 58,206,000
Distribution	
Phase 1-3 IGU Buildout	87,360,000
FNG Expansion/Infill - Gas Mains	23,000,000
FNG - Future Peak Shaving Plant	2,000,000
IGU & FNG - New Services and Meters	19,648,200
Program Management	11,500,000
Customer Conversion Program	3,000,000
Distribution	\$ 146,508,200
Total Use of Funds	\$ 333,659,200

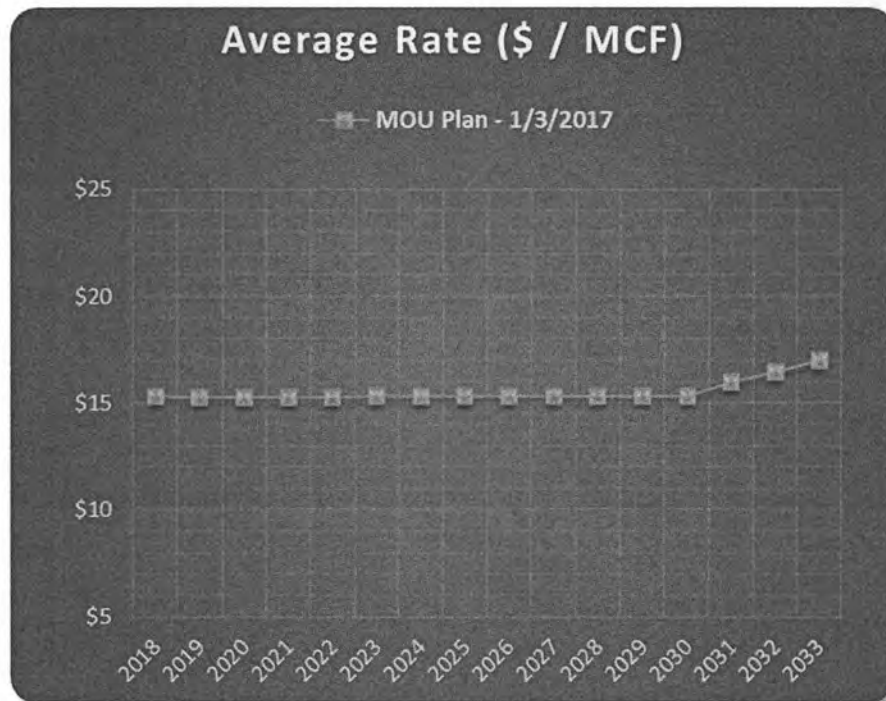
SETS Financing Terms

- **SETS financing flexibility includes:**
 - 15 Year Deferment
 - 0.25% Interest Rate
 - 50-year payback term *
 - SETS repayment is in a secondary position to AIDEA Bonds

▪ Summary of SETS Loan Terms

Item	Deferment	Repayment Term	Total Loan Term*	Interest Rate	Annual Debt Service
SETS Loan Terms	15 yrs	35 yrs	50 yrs	0.25%	\$3.73 m

MOU Plan – Average Rate and Cash Position



Proposed MOU (12/16/2016):

- High probability of meeting goal of \$15 per MCF rate for a 10-year period
- Provides natural gas service to **8,850 customers** in Fairbanks/North Pole area
 - Based on Conversion Analyses performed in 2014 & 2015 by Cardno Entrix

Next Steps

NEXT STEPS (SHORT TERM)

- Drafting of executable Pentex Purchase / IEP Financing Agreements (initiated - to be completed by March 31)
- Due Diligence and Utility Integration Planning (ongoing)
- **Gas Supply Contract** (ongoing)
- Immediate Capital Programming
 - LNG Plant Facility Front End Engineering & Design (FEED)
 - LNG Storage Development in FNSB

- AIDEA certification of “HB 105 Plan”
- RCA Approval of Ownership Transfer
- Execution of MOU-related Agreements
- IGU / FNG Integration

Look Forward: “HB 105 Compliant Plan”

AIDEA Resolution Required to allow expenditure of further IEP Funds

LAWS OF ALASKA
2015

Source: [2015 COMPILATION](#) Chapter No. _____

AN ACT

Relating to the program and funds of the Alaska Industrial Development and Export Authority; relating to the Alaska Industrial Development and Export Authority sustainable energy transmission and supply development fund; relating to the authority of the Alaska Industrial Development and Export Authority; relating to the authority of the Alaska Industrial Development and Export Authority of a liquefied natural gas production plant and related gas energy projects and distribution systems in the state; relating to the Alaska Industrial Development and Export Authority to adhere to the legislative intent relating to the natural energy project and providing for an effective date.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

THE ACT FOLLOWS ON PAGE 1

Enrolled HB 105

the State of Alaska enacted by sec. 11(a), ch. 26, SLA 2013.

Industrial Development and Export Authority, through the
Industrial Development and Export Authority sustainable energy transmission
fund (AS 44 88.660), may provide financing up to a principal
of the development, construction, and installation of, and the
operation and maintenance for, a liquefied natural gas production
plant and related infrastructure in the state that will provide natural
gas to a primary market [ON THE NORTH SLOPE] and [A]
distribution systems [SYSTEM] and affiliated infrastructure
gas to [IN] Interior Alaska, if the members of the Alaska

22 Industrial Development and Export Authority approve by resolution a project
23 plan. The project plan must
24 (1) identify the source of the natural gas;
25 (2) include the estimated cost of the project; and
26 (3) include the estimated price of natural gas supplied to natural
27 gas utilities in Interior Alaska before distribution to consumers.

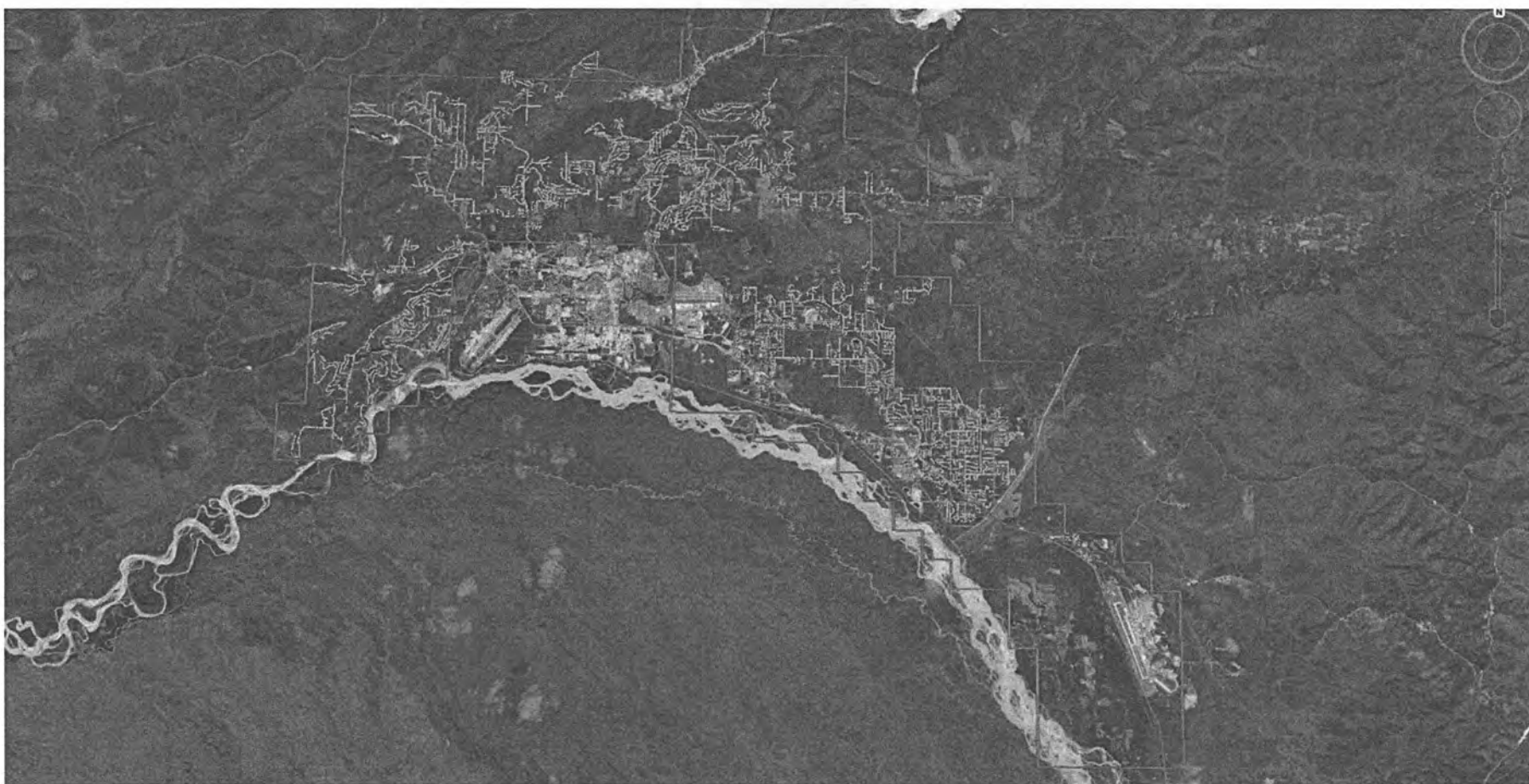
HB 105 requires a project plan within the AIDEA Board Resolution to include:

1. Source of natural gas
2. Estimated total project cost
3. Estimated “pre-distribution” cost of supplied gas

Next Steps (LONGER TERM)

- Conversion program
- Storage tanks constructed
 - LNG storage reimbursement
- LNG plants constructed
- Finalize transportation plan
- Distribution system expansion planning and construction

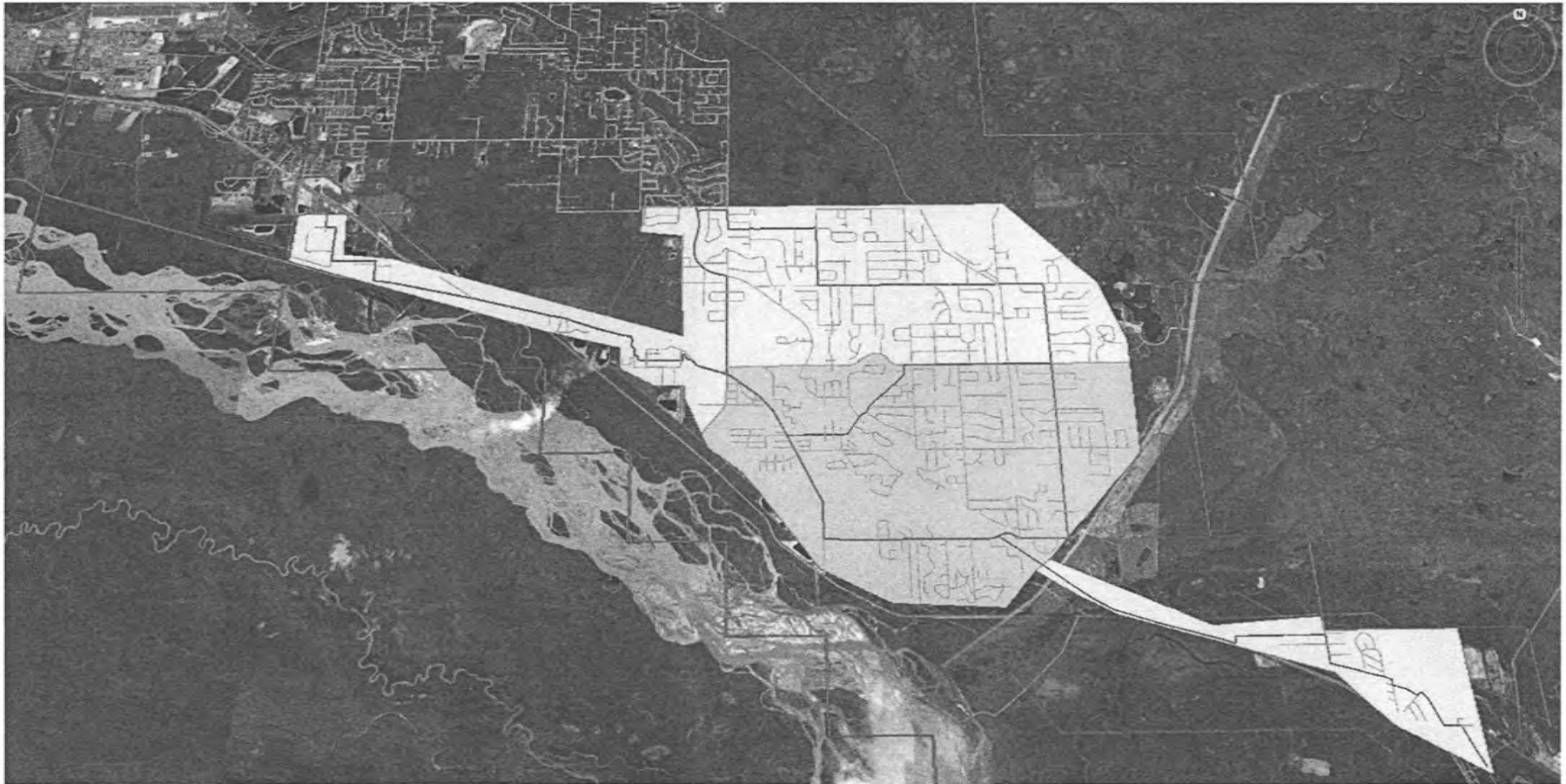
IGU Service Area



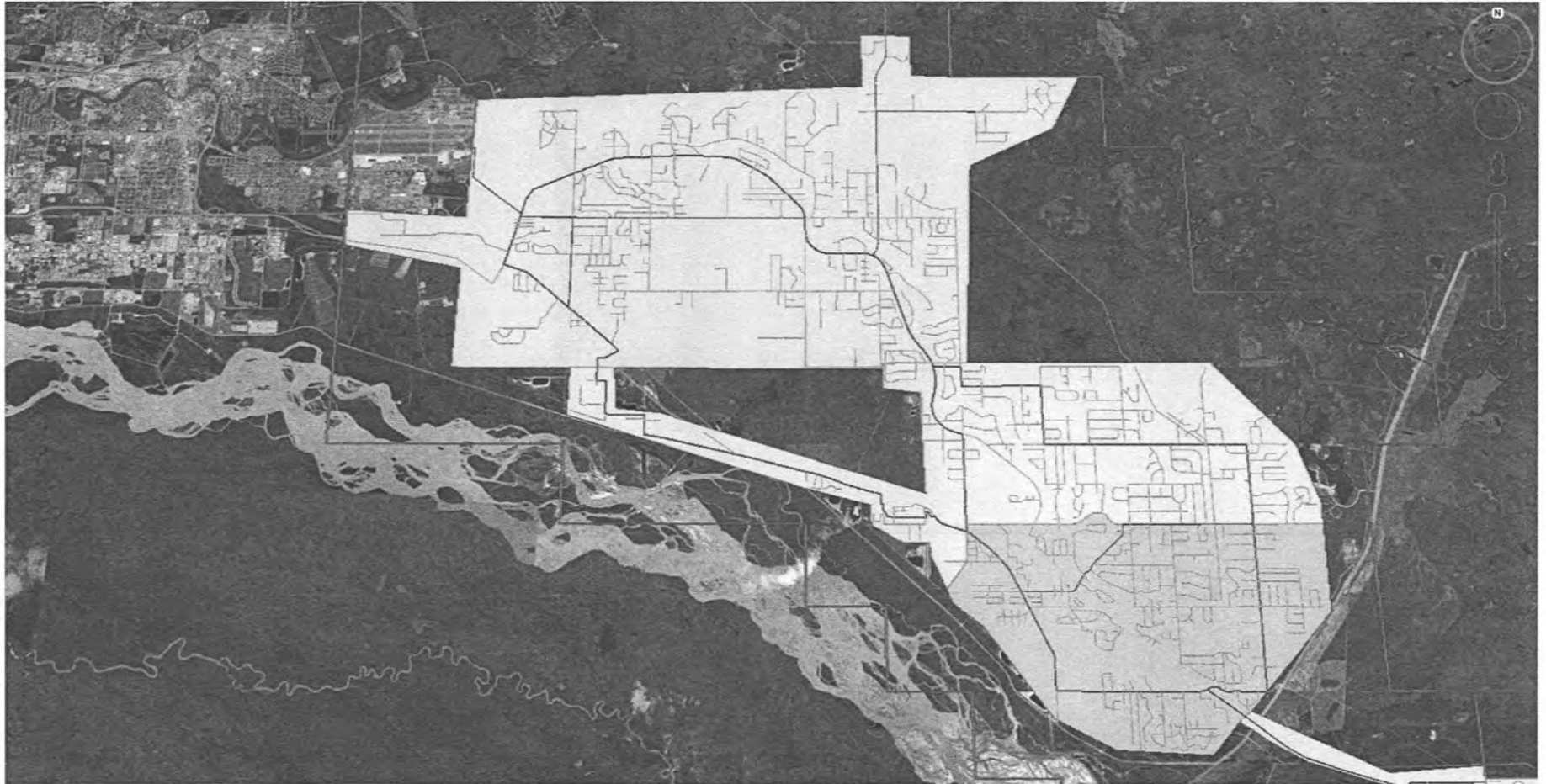
IGU SYSTEM – Phase 1 – Installed 2015



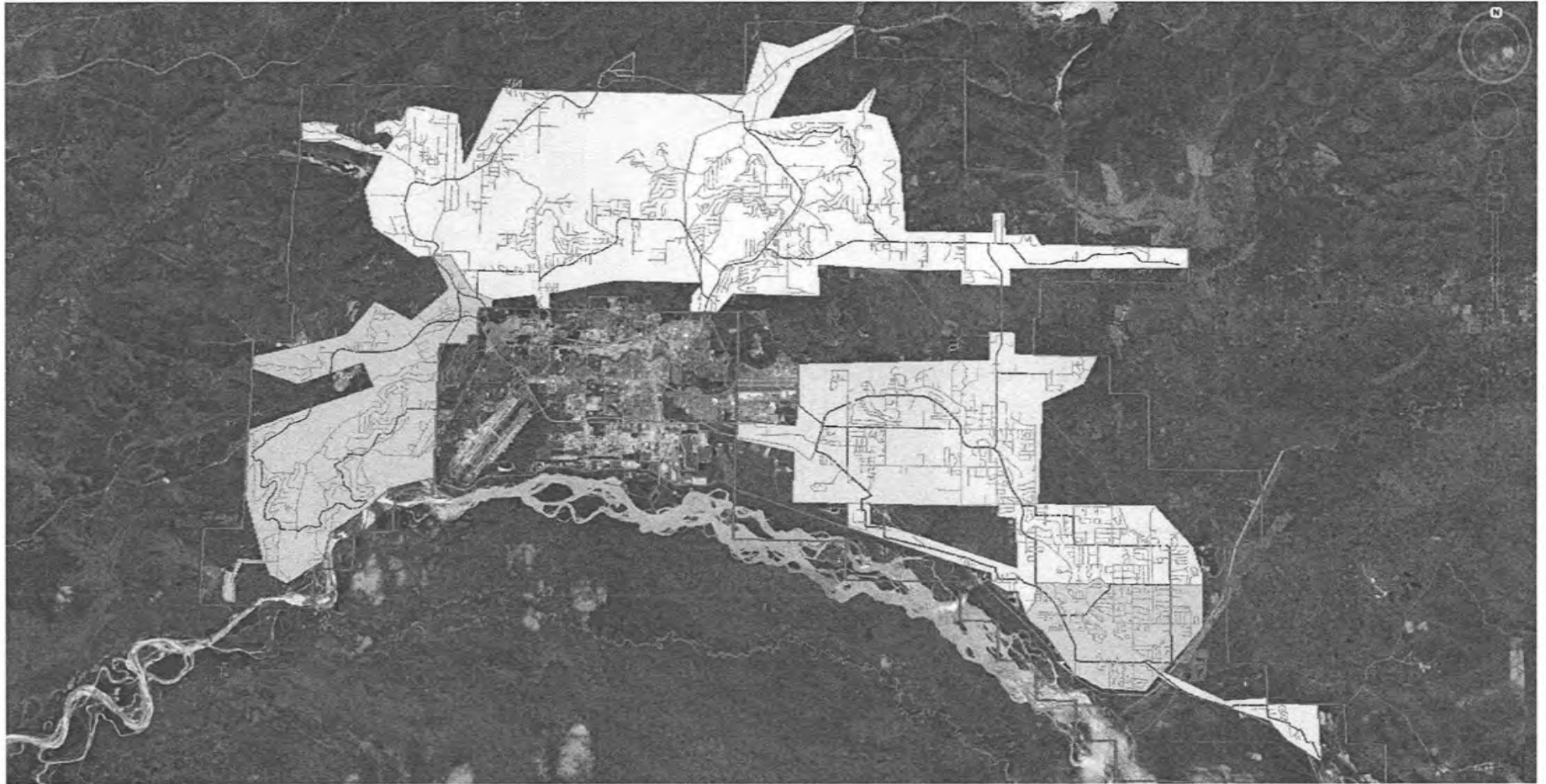
IGU SYSTEM – Phase 2 – Planned for 2018/21



IGU SYSTEM – Phase 3 – Planned for 2019/22



IGU SYSTEM – Full Build-Out



Interior Energy Project PURPOSE AND GOALS

“ . . . to bring low-cost energy to as many residents and businesses of Interior Alaska as possible, as quickly as possible ... ”

- Stabilize the Economy
- Improve Air Quality
- Model of Development:
 - Other Alaska Communities can Follow
 - Alaska can Sustainably Support

QUESTIONS



INTERIOR GAS UTILITY



April 11, 2017

The Honorable Cathy Giessel, Chair
Senate Resources Committee
Alaska State Senate
State Capitol, Room 427
Juneau, Alaska 99801

Dear Senator Giessel:

Jomo Stewart, with the Interior Gas Utility, and I appreciate the time you scheduled on March 31st for the Senate Resources Committee to hear an update on the Interior Energy Project. As a follow up to that presentation, you posed the following questions on aspects of this project. I would like to submit the following responses which contain input from Mr. Stewart.

Question 1

Pursuant to the AIDEA Board Resolution of June 11, 2015, authorizing the purchase of Pentex Alaska Natural Gas Company, how much has AIDEA paid for the acquisition of the Pentex assets to date?

As authorized by Board Resolution G15-09, AIDEA paid \$54,000,000 to purchase all of the Pentex LLC assets.

Question 2

What are the projected personnel needs for the IGU capital plan, both in terms of direct employees, contractors, and sub-contractors?

Each major capital project will have a small contracted project team to include owners engineer and project manager. The bulk of the work will be performed using contractors and sub-contractors to avoid growing the number of direct utility personnel. Modification and expansion of the existing Titan LNG plant could involve 50 contract employees depending on the stage of the project. Construction of new LNG storage in the Fairbanks North Star Borough would likely use a similar number of contract employees.

Future expansions of the distribution system would also be performed primarily with contractor and sub-contractor employees with the number varying between 50 and 100, depending on the size of the seasonal project. Small distribution expansion work, in conjunction with municipal or state road projects, may be able to be performed with in-house personnel at a lower cost.

Question 3

What is the projected average conversion cost to natural gas for a residential, commercial and industrial customer?

Depending on equipment requirements, capital cost of converting home to natural gas heating is expected to range from approximately \$2,300 to \$10,700. The range of total installation costs for high-efficiency boilers with a water heater is \$7,300 to \$13,500, with the average installation cost being \$10,700. The range of medium-efficiency boilers with a water heater is \$7,500 to \$10,000, with the average installation cost being \$9,000. The weighted average conversion cost for a boiler system is estimated to be \$9,100. Total installation costs for a furnace with a water heater ranges from \$4,000 to \$9,000, with the average cost being \$6,400.

The total installations costs for burners range between \$1,000 and \$4,000, with the average being \$2,700. The total space heater installation cost range between \$2,000 and \$3,500 with the average being \$2,750.

Commercial and industrial conversion costs are much harder to estimate due to variety and complexity of these systems. However, the Fairbanks North Star Borough School District has converted a number of schools to natural gas when the service became available. The cost to convert a 600 student elementary school has been approximately \$40,000.

Detailed cost and conversion information can be found in the Cardno ENTRIX IEP Natural Gas Conversion Analysis. The full report can be found at:
interiorenergyproject.com/Resources%20and%20Documents/IEP_Conversion_Analysis_Final.pdf

Questions 4

Has IGU and/or AIDEA corresponded in any official or unofficial way with the Regulatory Commission of Alaska (RCA) on the IEP? If so, what have been the topics of those communications?

AIDEA and IGU both interacted with the RCA regarding the issuance of the Commission order U-15-090(2) on August 13, 2015. As a result of this order, AIDEA, through the retention of the Fairbanks Natural Gas (FNG) management and operations, was declared to be fit to acquire controlling interest in FNG. Order U-15-090(2) also acknowledged AIDEA's acquisition of Pentex was a strategic investment intended to play a significant role in helping to achieve the long-term success of the IEP through work with the community to transition to a single utility serving the Interior. The RCA order further

The Honorable Cathy Giessel
Chair, Senate Resources Committee
April 11, 2017

acknowledged that AIDEA intended to hold the Pentex assets for a limited period of time to allow the FNG and IGU service territories and operations to be combined under a single local control entity.

RCA order U-15-090(2) required AIDEA to provide official notice to the Commission when the final transaction occurred to acquire Pentex LLC. This notice was sent to the RCA on October 5, 2015.

Question 5

Has a source of natural gas been definitively identified from a particular basin (only North Slope or Cook Inlet) or is the option for a blended source model still open?

The IEP natural gas negotiating team is focused primarily on securing natural gas from the Cook Inlet basin to supply the existing Titan 1 Bcf/year LNG plant in the MatSu Borough and a 3 Bcf/year expansion of that facility. However, the team is also assessing potential supply from alternative geographic sources against prevailing Cook Inlet prices as part of prudent due diligence for a long term IEP supply. Natural gas required to meet future needs of the Interior may come from alternative locations.

Questions 6

Is there an anticipated request for a capital budget appropriation for any further work on the IEP?

No. With full availability of the financing tools provided to the IEP in 2013, and receipt of applicable LNG storage reimbursement, there is no anticipated request for further capital funds.

Question 7

Have there been any discussions or plans for IGU or AIDEA to purchase the State of Alaska's (SOA) royalty gas for the IEP?

In line with the gas acquisition strategy of assessing all available sourcing options, a letter was sent to the Department of Natural Resources to determine if royalty natural gas may be available as a component of supply for the IEP.

Question 8

What impact would the indebtedness of the IEP have on the state or AIDEA's bond rating?

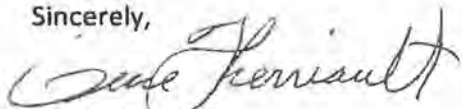
The IEP indebtedness has two components:

The Honorable Cathy Giessel
Chair, Senate Resources Committee
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1. \$125 million in SETS loans which are covered 100% by funds deposited into the AIDEA SETS account and have no relationship to AIDEA's or the State's bond rating.
2. Up to \$150 million in AIDEA state moral-obligation bonds. These bonds will be "non-recourse" to AIDEA – secured solely by the utility's revenues and the state's obligation to refill debt service reserve – so no direct effect on AIDEA's rating. The State's obligation to refill the reserve could be a rating issue, but it's extremely unlikely for the following two reasons,
 - o IGU's access to the bond market is limited to investment-grade obligations that will require a conservative business plan, and
 - o the relative small size of the reserve requirement.

Please let me know if you have any additional questions regarding the Interior Energy Project.

Sincerely,



Gene Therriault

AIDEA

Interior Energy Project Team Lead

Cc Jomo Stewart