



By: Michael Meeks

Considered on: January 3, 2017

Approved on: *January 10th 2017*

RESOLUTION # 2017-01

A RESOLUTION REQUESTING AUTHORIZATION FOR THE GENERAL MANAGER OF INTERIOR GAS UTILITY TO EXECUTE A NON-BINDING MEMORANDUM OF UNDERSTANDING WITH THE ALASKA INDUSTRIAL DEVELOPMENT EXPORT AUTHORITY FOR ACQUISITION OF PENTEX

WHEREAS, in October 2011, the Fairbanks North Star Borough (FNSB) put forth a solicitation for a firm to perform a definition and analysis of a supply-neutral plan for distribution within the Borough of natural gas as affordably as possible to the largest number of residences and businesses in the Borough possible; and

WHEREAS, the major findings of the June 2012 report, titled the "FNSB Gas Distribution System Analysis", estimated community-wide savings of \$315 million if operated under a non-private, not-for-profit distribution entity and community-wide conversion to natural gas for space heating would bring the Borough's PM_{2.5} non-attainment area into compliance with federal air quality standards; and

WHEREAS, the municipal governments of the City of Fairbanks, the City of North Pole and the FNSB, in 2012, determined that it is in the best interest of its citizens to create an area wide natural gas utility empowered to ensure its citizens affordable access to natural gas; and

WHEREAS, in October 2012, the community established the Interior Alaska Natural Gas Utility, known as the Interior Gas Utility (IGU) with the mission of ensuring provision of clean-burning natural gas to the most people in the FNSB, as soon as possible and at the lowest possible cost; and

WHEREAS, in November 2012, the IGU board sent a letter to then-Governor Parnell requesting State financial assistance for the construction of a liquefaction plant and for grants and low-cost loans to build a distribution system within the Borough; and

WHEREAS, in 2013, the State of Alaska initiated the Interior Energy Project (IEP) to assist the Interior in fulfilling its mission and provided financial support to advance development of expanded liquefied natural gas production and delivery capacity, expanded natural gas storage, regasification and distribution capacity, and associated infrastructure; and

WHEREAS, throughout 2014 and 2015, IEP funds were successfully deployed by IGU and Fairbanks Natural Gas (FNG), the privately-held natural gas utility also serving core Fairbanks, to expand natural gas delivery capacity within the FNSB; and

41 WHEREAS, in September, 2015 Alaska Industrial Development and Export Authority
42 (AIDEA) acquired Pentex Alaska Natural Gas Company, LLC (Pentex), the parent company of
43 FNG, for the purpose of facilitating unification of IGU and FNG into a single natural gas utility to
44 serve the FNSB and, possibly, establishment of a vertically integrated natural gas delivery and
45 distribution system under community ownership and control; and

46 WHEREAS, the IGU Board is committed to the goal of ensuring the availability of
47 affordable natural gas to the largest number of people in the FNSB in the shortest amount of time;
48 and

49
50 WHEREAS, economically and expeditiously integrating Pentex with IGU furthers the
51 long-term success of IGU and its mission; and

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53 WHEREAS, the IGU Board approved IGU Resolution 2016-05, on July 26, 2016,
54 authorizing a negotiating team to negotiate the purchase of Pentex from AIDEA and authorizing a
55 procurement process for professional services and other purchases and tasks related to the
56 acquisition, operation and construction of assets necessary to expeditiously integrate the two
57 utilities; and

58 WHEREAS, the IGU and AIDEA negotiating teams have sought to reach agreement, under
59 a non-binding Memorandum of Understanding (MOU), for the acquisition of Pentex by IGU and
60 deployment of IEP funds toward eventual achievement of IGU and IEP goals; and

61
62 WHEREAS, the IGU negotiating team has completed negotiations with AIDEA for the
63 acquisition of Pentex consistent with the Board's strategies and goals; and

64
65 WHEREAS, a MOU between IGU and AIDEA has been drafted for IGU Board
66 consideration. (Attachment A).


67
68
69 NOW, THEREFORE, BE IT RESOLVED that the IGU Board of Directors authorizes the
70 IGU General Manager, Jomo Stewart, to execute a non-binding MOU (Attachment A) between
71 IGU and AIDEA for the acquisition of Pentex and to negotiate in good faith to finalize executable
72 agreements with respect to the purpose of the MOU as expeditiously as possible, but no later than
73 March 31, 2017.

74
75
76 
77 _____
78 Michael Meeks - Chair, IGU Board



Date

79
80 
81 _____
82 Kimberly Templeton- Secretary to the IGU Board of Directors



Date

83
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UTILITY INTEGRATION MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (“MOU”) is entered into as of January __, 2017, between the Alaska Industrial Development & Export Authority (“AIDEA”) and the Interior Gas Utility (“IGU”). (IGU and AIDEA are sometimes referred to collectively as the “Parties.”).

WHEREAS, IGU and AIDEA are interested in achieving the goals of the Interior Energy Project (“IEP”), summarized for purposes of this MOU as the provision of affordable, reliable natural gas energy for Interior Alaska; and

WHEREAS, AIDEA desires to sell its membership interests in Pentex Alaska Natural Gas Company, LLC (“Pentex”) and IGU desires to buy AIDEA’s membership interests; and

WHEREAS, the Parties hereto wish to enter into agreements providing for the establishment and financing of an integrated natural gas utility in the Fairbanks North Star Borough (“FNSB”), referred to as the “Integrated Utility”; and

WHEREAS, the Parties have developed:

Appendix A – a draft Summary of Terms outlining the Parties’ mutual understanding of the plans for establishment of the Integrated Utility, purchase/sale of Pentex;

Appendix B – an Integrated Natural Gas Utility Capital Program;

Appendix C – an Integrated Utility Financing Plan – Sources and Uses of Funds;

Appendix D – a Natural Gas Demand Forecast for an Integrated Utility, and;

Appendix E – Development of a Comprehensive Plan for the Establishment of an Integrated Natural Gas Utility in the FNSB included as appendices to this MOU.

NOW, THEREFORE, the following Understandings exist between the Parties, which will form the basis of executable agreements implementing the IEP:

1. SCOPE AND PURPOSE OF THIS MOU

This MOU is intended to set forth the understandings of the Parties with respect to AIDEA’s sale of Pentex to IGU and the AIDEA financing of IGU through IEP-related funding sources and to establish the process and timelines for development of executable agreements for those purposes. Third-party financing,

potentially utilizing tax-exempt AIDEA bonds with a State moral obligation, is also contemplated as a source of financing.

The Parties intend to aggressively pursue the sale of Pentex by AIDEA, purchase of Pentex by IGU, and establishment and financing of the Integrated Utility based on the appendices included in this MOU and through the following actions:

I. DEVELOPMENT OF EXECUTABLE DOCUMENTS FOR THE PURCHASE AND SALE OF PENTEX ASSETS TO IGU

AIDEA and IGU will develop executable agreements for AIDEA's sale and IGU's purchase of 100% of the membership interests of Pentex.

II. DEVELOPMENT OF A COMPREHENSIVE PLAN FOR THE ESTABLISHMENT OF AN INTEGRATED NATURAL GAS UTILITY IN THE FNSB

IGU will develop an Integrated Utility Plan with the support of AIDEA for the establishment of an integrated natural gas utility (inclusive of natural gas purchase, liquid natural gas (LNG) production, transport, storage, re-gasification and natural gas distribution (FNG and IGU as an integrated natural gas delivery system) in the FNSB, including plans for utility capital improvements, organization, and any required regulatory approvals.

III. DEVELOPMENT OF EXECUTABLE AGREEMENTS FOR THE FINANCING BY AIDEA OF THE INTEGRATED NATURAL GAS UTILITY

AIDEA and IGU will develop executable agreements for the full financing of the Integrated Utility as planned in Item II above.

IV. DEVELOPMENT OF DETAILED PLANS AND TIMELINES FOR THE PURCHASE AND SALE, ESTABLISHMENT, AND FINANCING CONTEMPLATED BY THIS MOU

AIDEA and IGU will develop detailed plans and timelines for the completion of the transactions contemplated in this MOU.

2. NON-BINDING

Other than the covenants contained in paragraphs 3b, 3c, 5 and 6, sections titled Negotiation of Executable Agreements, Confidentiality, and Expenses, of this MOU (the “Binding Provisions”), this MOU is not binding upon either AIDEA or IGU. Neither AIDEA nor IGU will be obligated to consummate the transactions contemplated hereby unless and until the Parties have reached agreements as to all of the terms of the transactions and executable agreements satisfactory to both parties have been executed. The covenants in the Binding Provisions are binding upon AIDEA and IGU whether or not the parties reach executable agreements with respect to the purposes of this MOU.

3. NEGOTIATION OF EXECUTABLE AGREEMENTS

- a. The parties agree to negotiate in good faith to seek to finalize executable agreements with respect to the purposes of this MOU as expeditiously as possible, but no later than March 31, 2017.
- b. Effective with the enactment of this MOU and continuing during the negotiations for executable agreements, AIDEA and/or Pentex will not take any action having a material impact on any Pentex asset or enter into any material contracts or agreements binding or committing any Pentex asset or Pentex successors or assigns without the prior consent of the IGU or explicitly made subject to IGU consent.
- c. Effective with the enactment of this MOU and continuing during the negotiations for executable agreements, IGU will not take any action having a material impact on the IEP Financing Plan or enter into any material contracts or agreements binding or committing IGU without the prior consent of AIDEA or explicitly made subject to AIDEA consent.

4. DUE DILIGENCE

AIDEA agrees to cooperate with IGU’s due diligence investigation of Pentex in support of IGU’s potential acquisition of Pentex.

IGU agrees to cooperate with AIDEA’s due diligence investigation of IGU in support of the establishment of an Integrated Utility and AIDEA’s potential financing thereof.

5. CONFIDENTIALITY

The Parties acknowledge and agree that each Party has signed mutual Non-Disclosure Agreements, and that the terms and conditions of those NDAs continue to apply.

6. EXPENSES

Each party will pay all of its expenses, including legal fees, incurred in connection with the implementation of plans, agreements, etc. under this MOU.

7. TERMINATION

Either IGU or AIDEA may terminate this MOU for any reason at any time by sending written notice thereof to the other party, provided, however, that Paragraphs 5 and 6 shall remain in effect following such termination.

8. GOVERNING LAW

This MOU, the rights and obligations of the parties hereto, and any claims or disputes relating thereto, shall be governed by and construed in accordance with the laws of the State of Alaska without giving effect to any conflicts of law provisions that would result in the application of the substantive law of any other jurisdiction.

IN WITNESS WHEREOF, the undersigned have duly executed this MOU, as of the day and year first hereinabove set forth.

AIDEA

By: _____
John Springsteen, Executive Director

Date: _____

IGU

By: _____
Jomo Stewart, General Manager

Date: _____

APPENDIX A

SUMMARY OF TERMS

PENTEX PURCHASE & SALE

- AIDEA will sell and IGU will purchase AIDEA's membership interests in Pentex which will permit IGU to acquire control over 100 percent of Pentex assets, including Pentex's interest in any of its subsidiaries. AIDEA estimates that the Pentex assets at the time of sale will include approximately \$4 million in cash generated by operations.
- Upon financial close, AIDEA will transfer to IGU ownership of the "AIDEA North Slope Pad".
- AIDEA will sell Pentex Alaska LNG LLC at the AIDEA purchase price plus AIDEA's required return— total estimated to be approximately \$58.2 million.

IGU INTEGRATED UTILITY CAPITAL PROGRAM

- The initial IGU Integrated Utility capital program is in Appendix B, providing for:
 - Titan LNG Facility natural gas liquefaction capacity
 - Titan 1 (upgrades to existing facility)
 - Titan 2 (100,000 gpd liquefaction capacity)
 - Titan 3 (100,000 gpd liquefaction capacity)
 - Integrated plant systems
 - Natural gas supply pipeline, metering, etc.
 - LNG Transportation facilities and equipment
 - Titan Facility LNG truck loading
 - LNG trailers (contracted tractors & hauling)
 - LNG truck unloading (Fairbanks & North Pole)
 - Use of Alaska Railroad for a portion of or all LNG transportation will be considered as an alternative if found to be feasible
 - IGU Integrated Utility Storage & Re-gas
 - 5.25 MG LNG storage and re-gas facility in Fairbanks
 - LNG unloading, 150,000 gallon LNG storage and re-gas facility in North Pole
 - Seasonal peak shaving facility for potential area of low pressure in the current FNG system (i.e. College Road area north).

Attachment A

- IGU Integrated natural gas distribution system
 - FNG currently installed distribution system
 - FNG expansion and infill
 - IGU currently installed distribution system (Phase 1)
 - IGU Phase 2 and Phase 3 of its distribution system
 - FNG and IGU new services and meters
- AIDEA and IGU also intend to provide additional liquefaction and distribution so as to provide service into Phases 4-6 of its distribution system as soon as practicable.

IGU INTEGRATED UTILITY FINANCING PLAN

- The IGU Integrated Utility Capital Program (“uses of funds”) described more fully in Appendix B will be financed as outlined in the IGU Integrated Utility Financing Plan (“sources of funds”) in Appendix C.
- AIDEA and IGU will develop the financing plan to:
 - Optimize use of low-cost State funds and financing in the full integrated natural gas utility system by applying the dedicated funding:
 - State Capital Appropriations
 - SETS Loans
 - State Moral Obligation Bonds
 - Make full use of the flexibility of SETS funding to enable “pacing” of financing requirements with Integrated Utility demand and revenue growth.
 - SETS funds will be loaned for a 50 year term at a 0.25% interest rate, with a deferral of principal and interest payments. The deferral period will be for 15 years with no capitalized interest.
 - Payments on State Moral Obligation Bond, and on any other revenue-backed IGU borrowing, will have priority call on IGU net revenues.
 - IGU must verify that it has legal authority to borrow and that it qualifies for tax exempt financing as a municipal utility,
- IGU and AIDEA will contractually commit to Integrated Utility operations in the context of establishing IGU as an “investment-grade” municipal utility with the enactment of related purchase and financing agreements.
- AIDEA will commit to facilitate IGU securing the lowest possible cost of capital on any revenue bonds in the financing program.

Attachment A

- AIDEA sold State Moral Obligation bonds will be treated as a pass through form of debt to IGU (costs only).
- Each State Moral Obligation Bond financing will be premised on a 3rd-party determination that the capital program and pro forma financial projections meet all standards for feasibility as an investment grade municipal utility financing. Investment Grade shall mean either a BBB- or higher rating by Standard & Poor's or a Baa3 rating or higher by Moody's.
- The 3rd party will be fully qualified to issue such a determination and will be selected and retained by the Integrated Utility.
- All tests (rates/depreciation) to be done on a cash basis.
- Revenue bond structure would be conventional municipal bonds – amortized over 30-years with capitalized interest and deferred principal for a 2 to 3 year period, and level debt service over term of the Bonds – with a debt service reserve of approximately 1-year – or such other more favorable terms as may be available for investment grade municipal utility financing at the time.
- The IGU Board will be contractually obligated to set rates to generate annual net revenues sufficient to cover the debt service for investment grade municipal utility financing on any State Moral Obligation Bonds and the 1.00x debt service on all IGU SETS Loans.
- Should natural gas demand growth not meet projected levels after bonds have been sold, the Financing Plan will provide for deferred repayment of the SETS loans proportionally as required to maintain projected rates.

OTHER MATTERS / COOPERATION / CLOSING

- AIDEA and IGU will continue to cooperate on the development of the full IEP system – from natural gas supply to distribution through the meter and in conjunction with a natural gas conversion program – with the intent that integration of the IGU system (from natural gas supply through natural gas conversion) will be accomplished by IGU as soon as possible to achieve the goals set forth for the IEP.
- IGU intends to integrate the existing FNG staff for the continuity of efficient and effective utility operations by continuing the employment of the existing FNG management, engineering and operations systems and staffing.
- FNG, as an operating natural gas utility, must continue to ensure the long-term ability to provide service to its customers even in the absence of agreement with IGU.
- “Closing” will occur when all of the below are achieved:

Attachment A

- Titan and/or IGU finalizes a long-term natural gas supply contract (acceptable to AIDEA and to the IGU Board) for the existing and future expansion of the Titan LNG plant.
 - IGU completes its due diligence on Pentex, Pentex's subsidiaries, and Pentex's assets.
 - AIDEA completes its due diligence investigation of IGU.
 - AIDEA & IGU adoption of a plan of development for Titan 2 & 3.
 - AIDEA & IGU adoption of the Integrated Utility Capital Program set forth in Appendix C.
 - AIDEA & IGU adoption of the Integrated Utility Natural Gas Demand Forecast set forth in Appendix C.
 - IGU, with support from AIDEA, will develop a comprehensive plan for the establishment of the Integrated Gas Utility.
 - IGU and AIDEA Board approvals and execution of purchase and sale agreement for AIDEA's membership interests in Pentex and AIDEA's interests in the "AIDEA North Slope Pad."
 - IGU and AIDEA execution of the IEP financing plan agreement(s).
 - RCA approval of acquisition of Pentex by IGU or the transfer of the existing Pentex/FNG certificate to IGU.
- IGU will assume full control of Pentex at Closing

APPENDIX B

INTEGRATED NATURAL GAS UTILITY CAPITAL PROGRAM

Appendix B - Integrated Gas Utility Capital Program

Capital Improvement Budget for IGU Phase 1-3 - REVISED 12/15/2016														
Item	Estimated 2016	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Total
Demand (MCF)	0.71	0.75	0.75	1.19	1.83	2.55	3.25	3.90	4.41	4.75	4.95	5.11	5.20	
LNG Supply														
Titan 2 LNG Plant (inc. Titan 1 upgrades)	-	11,550,000	23,100,000	11,550,000	-	-	-	-	-	-	-	-	-	46,200,000
Titan 3 LNG Plant	-	-	-	-	-	-	12,500,000	12,500,000	-	-	-	-	-	25,000,000
ST - LNG Supply	\$ -	\$ 11,550,000	\$ 23,100,000	\$ 11,550,000	\$ -	\$ -	\$ 12,500,000	\$ 12,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 71,200,000
Transportation														
LNG High-capacity Trailers & Equip	\$ -	\$ -	\$ -	\$ -	\$ 3,285,000	\$ 1,460,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,745,000
Storage and Vaporization														
FBKS 5.2mgal Storage	-	10,500,000	21,000,000	10,500,000	-	-	-	-	-	-	-	-	-	42,000,000
NP 150kgal Storage	-	2,750,000	5,500,000	2,750,000	-	-	-	-	-	-	-	-	-	11,000,000
ST - Storage	\$ -	\$ 13,250,000	\$ 26,500,000	\$ 13,250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,000,000
Transmission Line														
High-pressure NG transmission line	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pentex Acquisition														
AIDEA sale of Pentex to IGU	\$ 58,206,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 58,206,000
Distribution														
Phase 1 IGU Buildout	23,400,000	-	-	-	-	-	-	-	-	-	-	-	-	23,400,000
Phase 2 IGU Buildout	-	-	-	6,417,500	12,835,000	6,417,500	-	-	-	-	-	-	-	25,670,000
Phase 3 IGU Buildout	-	-	-	500,000	11,072,500	17,145,000	9,572,500	-	-	-	-	-	-	38,290,000
ST	\$ 23,400,000	\$ -	\$ -	\$ 6,917,500	\$ 23,907,500	\$ 23,562,500	\$ 9,572,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,860,000
FNG Expansion/Infill - Gas Mains														
FNG - Future Peak Shaving Plant	15,000,000	-	-	2,000,000	2,000,000	2,000,000	2,000,000	-	-	-	-	-	-	23,000,000
IGU & FNG - New Services and Meters Program Management	-	-	-	1,141,400	2,574,000	3,096,600	3,036,800	-	2,459,600	1,742,000	1,170,000	819,000	499,200	19,648,200
Customer Conversion Program	4,000,000	1,500,000	1,500,000	1,000,000	1,000,000	1,000,000	500,000	500,000	-	-	-	-	-	11,500,000
ST	\$ 19,000,000	\$ 1,500,000	\$ 1,500,000	\$ 4,391,400	\$ 8,074,000	\$ 6,596,600	\$ 6,609,600	\$ 4,056,800	\$ 2,709,600	\$ 1,867,000	\$ 1,295,000	\$ 944,000	\$ 624,200	\$ 59,148,200
ST - Distribution														
ST - Distribution	\$ 42,400,000	\$ 1,500,000	\$ 1,500,000	\$ 11,308,900	\$ 31,981,500	\$ 30,159,100	\$ 16,182,100	\$ 4,056,800	\$ 2,709,600	\$ 1,867,000	\$ 1,295,000	\$ 944,000	\$ 624,200	\$ 146,508,200
Grand Total	\$ 100,606,000	\$ 26,300,000	\$ 51,100,000	\$ 36,108,900	\$ 35,266,500	\$ 31,619,100	\$ 28,682,100	\$ 16,536,800	\$ 2,709,600	\$ 1,867,000	\$ 1,295,000	\$ 944,000	\$ 624,200	\$ 333,659,200

APPENDIX C

**INTEGRATED UTILITY FINANCING PLAN –
SOURCES AND USES OF FUNDS
Source and Use of Funds**

IGU-FNG Integrated Utility - Capital Plan and Financing Assumptions**SOURCE OF FUNDS -- CAPITAL FINANCING**

Line No.	Item	Amount
1	(a)	(b)
2	Capital Appropriations (HCS CSSB 18)	\$ 42,800,000
3		
4	SETS Financing (SB 23 SLA 2013)	125,000,000
5		
6	AIDEA Bonds (SB 23 SLA 2013)	140,614,200
7		
8	Other Sources	
9	Commercial Financing (bridge & LNG trailers)	4,745,000
10	State Storage Credits - Fairbanks & North Pole	20,500,000
11	ST - Other Sources	\$ 25,245,000
12		
13	Total Source of Funds	\$ 333,659,200

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

Line No.	Item	Amount
19	LNG Supply	
20	Titan 2 LNG Plant (inc. Titan 1 upgrades)	\$ 46,200,000
21	Titan 3 LNG Plant (future)	25,000,000
22	ST - LNG supply	\$ 71,200,000
23	Transportation	
24	LNG High-capacity Trailers & Equip	\$ 4,745,000
25		
26	Storage & Regas	
27	FBKS 5.2mgal Storage	42,000,000
28	NP 150kgal Storage & Regas	11,000,000
29	ST - Storage	\$ 53,000,000
30		
31	Pentex Acquisition	
32	AIDEA sale of Pentex to IGU	\$ 58,206,000
33		
34	Distribution	
35	Phase 1-3 IGU Buildout	87,360,000
36	FNG Expansion/Infill - Gas Mains	23,000,000
37	FNG - Future Peak Shaving Plant	2,000,000
38	IGU & FNG - New Services and Meters	19,648,200
39	Program Management	11,500,000
40	Customer Conversion Program	3,000,000
41	ST - Distribution	\$ 146,508,200
42	Total Use of Funds	\$ 333,659,200

APPENDIX D**NATURAL GAS DEMAND FORECAST FOR AN INTEGRATED UTILITY****Table D-1 Number of New Customers Estimated for Natural Gas Demand Forecast**

Item	2017	2018	2019	2020	2021	2022	2023	2024
IGU Phase 1-3	-	-	212	672	1,235	1,795	2,346	2,781
FNG	1,144	1,144	1,371	1,901	2,529	3,165	3,782	4,293
Total Demand	1,144	1,144	1,583	2,573	3,764	4,960	6,128	7,074
Item	2025	2026	2027	2028	2029	2030	2031	2032
IGU Phase 1-3	3,101	3,331	3,497	3,608	3,662	3,672	3,672	3,672
FNG	4,643	4,863	5,012	5,093	5,141	5,167	5,179	5,179
Total Demand	7,744	8,194	8,509	8,701	8,803	8,839	8,851	8,851

Table D-2 Natural Gas Demand Estimated Forecast (BCF/YR)

Item	2017	2018	2019	2020	2021	2022	2023	2024
IGU Phase 1-3	-	-	0.07	0.22	0.40	0.58	0.76	0.89
FNG	0.75	0.75	1.12	1.61	2.15	2.67	3.14	3.53
Total Demand	0.75	0.75	1.19	1.83	2.55	3.25	3.90	4.41
Item	2025	2026	2027	2028	2029	2030	2031	2032
IGU Phase 1-3	0.98	1.04	1.09	1.12	1.14	1.14	1.14	1.14
FNG	3.77	3.90	4.02	4.08	4.12	4.14	4.15	4.15
Total Demand	4.75	4.95	5.11	5.20	5.26	5.29	5.29	5.29

APPENDIX E

**DEVELOPMENT OF A COMPEHENSIVE PLAN
FOR THE ESTABLISHMENT OF AN
INTEGRATED NATURAL GAS UTILITY IN THE FNSB**

INTRODUCTION

IGU proposes to incorporate all of Pentex LLC assets and operations into an integrated utility serving the City of Fairbanks, City of North Pole and the urbanized area of the Fairbanks North Star Borough, to meet the goals of the IEP. This integrated natural gas utility will have operational control of supplying natural gas to all IGU customers from the Titan LNG facility to the existing (presently Fairbanks Natural Gas) customers and the future IGU integrated utility customers. IGU will also be responsible for continued natural gas service area planning and the envisioned capital improvement program.

The IGU Board will serve as the Governance body and the utility will be managed by the IGU General Manager. IGU intends to offer to all existing Pentex employees continued employment for the continuity of efficient and effective utility operations.

ASSETS

The major portions of the combined assets of the Integrated Utility are defined as follows:

Pentex LLC is a holding entity that owns Fairbanks Natural Gas (“FNG”) (a natural gas local distribution company), Titan LLC (“Titan”), Artic Energy Transportation (“AET”), Polar and Cassini. Pentex LLC is owned by AIDEA.

FNG represents the largest portion, roughly 80 percent, of Pentex’s assets. The LNG storage sites include regasification, odorization and heating facilities at both the Donald Avenue and Tria Road locations which have capacities of 90,000 and 250,000 USG respectively in Fairbanks. The current gas distribution network consists of approximately 134 miles of high density polyethylene (HDPE) mains varying in size from 2” to 8” operating at a Maximum Operating Pressure (MAOP) of 60 psig (note that approximately 68 miles of the mains were installed in 2014 and 2015). The system also contains valves, casings and other appurtenances. The system currently serves approximately 1100 customers with service lines and meters to these customers.

Attachment A

The Titan assets include both the Point Mackenzie natural gas liquefaction facility with a capacity rating of 50,000 GPD (1.5 BCF/yr.) and 2-LNG-powered trucks and approximately 14 tanker trailers of varying ages and the Talkeetna Lodge Storage and Vaporization equipment. The Arctic Energy Transportation (AET) assets include two LNG fueling facilities. Cassini was a business unit set up to operate the LNG storage and currently has no assets. Polar is the business unit for the assets on the North Slope that currently consist institutional knowledge such as including engineering, design and other planning services.

IGU assets currently include approximately 73 miles of two, four and eight inch natural gas distribution pipe installed in 2015. These pipes are all high density polyethylene (HDPE) and have an MAOP of 100 psig. The natural gas distribution system also consists of valves, casing, and other miscellaneous appurtenances. There are also currently 15 natural gas services line to customer facilities which are currently being used to monitor pressure within the system. The system is currently charged with nitrogen pending receipt of natural gas.

ORGANIZATIONAL STRUCTURE

The IGU Board is authorized to manage and operate the utility in accordance with prevailing industry practices and general standards common to utilities providing the same service. Prior to closing, the IGU Board will approve a proposed capital plan and organizational structure, and obtain RCA approval of the transfer of the existing Pentex / FNG certificate to IGU of the intergraded utility.

