Interior Energy Project

Quarterly Report to the Alaska State Legislature

Interior Energy Project

October 1, 2015

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ATTACHMENTS

ACRONYMS LIST

AEA	Alaska Energy Authority
AIDEA	Alaska Industrial Development and Export Authority
BAFO	best and final offer
BcF	billion standard cubic feet
BP	BP Exploration (Alaska)
FNG	Fairbanks Natural Gas
GVEA	Golden Valley Electric Association
HB	House Bill
IEP	Interior Energy Project
IGU	Interior Gas Utility
LLC	limited liability company
LNG	liquefied natural gas
McF	thousand standard cubic feet
RCA	Regulatory Commission of Alaska
RFI	Request for Information
RFP	Request for Proposals
SETS	Sustainable Energy Transmission and Supply Development Fund

INTRODUCTION

The 29th Alaska State Legislature passed HB105 on April 27, 2015. Governor Walker signed the bill on June 30, 2015. This legislation was enacted to advance the Interior Energy Project (IEP), an effort to bring low cost energy to as many Interior Alaska residents and businesses as possible, as quickly as possible. Financing tools provided to the Alaska Industrial Development and Export Authority (AIDEA) in this legislation are designed to help develop an integrated supply chain bringing low cost natural gas or propane to residents and businesses through local utilities.

HB105 requires AIDEA to report quarterly to the Alaska State Legislature on the status of the Interior Energy Project. Specific language included in the bill states:

"The Alaska Industrial Development and Export Authority shall submit quarterly to the legislature a written report on the Interior Energy Project. The authority shall deliver the report to the senate secretary and the chief clerk of the house of representatives and notify the legislature that the report is available. The report must include:

(1) a description of project progress on all components;
(2) an update on the status of local distribution infrastructure build-out;
(3) to-date and anticipated conversions; and
(4) a financial accounting of funds expended and funds anticipated to be spent, including loans, grants, and bonds."

This is the first quarterly report submitted in accordance with HB105. Each section of the report will correspond to one of the four items required by HB105. 2016 reports will be submitted on the first day of January, March, July, and October.

DESCRIPTION OF PROJECT PROGRESS ON ALL COMPONENTS

The IEP work effort is structured around the following project components: Supply, Liquefaction (or Alternate Supply), Transportation, Storage and Re-gasification, Distribution, and Conversions. As required by HB105, the status of each of these components is summarized below.

Supply

Gas supply for the IEP remains sourced from either the North Slope of Alaska or the Cook Inlet basin. North Slope gas is available from an existing supply contract between Golden Valley Electric Association (GVEA) and BP Exploration (Alaska) (BP). Cook Inlet gas is offered by independent producers in response to the Request for Information (RFI) for Cook Inlet gas supply, or offered in conjunction with liquefaction responses to AIDEA's Request for Proposals (RFP). Copies of the RFP and the RFI solicitation documents are included as Attachment A and Attachment B with this report.

Identification of the selected gas supply, costs, and expected terms for IEP supply will result from the AIDEA RFP process to select the recommended project partner outlined in detail in the Liquefaction component description.

Liquefaction

AIDEA issued RFP #15142 in June 2015 with an August 3, 2015 close date. AIDEA received proposals from 13 respondents which included proposals for North Slope liquefied natural gas (LNG), Cook Inlet LNG, a pipeline from Cook Inlet, imported LNG, and imported propane. The RFP evaluation team scored the proposals and selected five finalists to move to Phase 2 of the RFP process. These finalists (in alphabetical order) are: Harvest Alaska, LLC (Hilcorp Alaska, LLC); Phoenix Clean Fuels, LLC; Salix, Inc. (Avista Corporation); Spectrum LNG, LLC; and WesPac Midstream, LLC. Each finalist provided a publicly available five-page summary of their proposal. These summaries are included as Attachment C.

AIDEA, with Interior utility involvement, has entered into direct negotiations with each of the five finalists. These negotiations will lead to submission of best and final offers (BAFOs) from each finalist in the second half of October. The RFP evaluation team will review these BAFOs, and AIDEA management will take a project partner(s) recommendation to the AIDEA Board for approval in December.

Upon AIDEA Board approval of a project partner, the IEP team and Interior utilities will continue the process of finalizing commercial agreements for project financing and LNG purchase agreements. These agreements are expected to be executed in early 2016, leading to the sanction of LNG plant construction.

Transportation

The primary transportation focus of the IEP as of October 1, 2015 is LNG trucking. RFP respondents offered a combination of trucking and rail options as part of their proposals. If gas is sourced from the North Slope, trucking remains the only option. If gas is sourced from Cook Inlet, trucking is the primary option, with rail transport still under consideration. A summary of the transportation portion of the RFP finalists' proposals is included as Attachment D of this report.

As of October 1, 2015, the Alaska Railroad has yet to receive permission to transport LNG via rail. Permission for rail as a transport method was submitted to the Federal Railroad Administration on November 14, 2014. A copy of their application is included as Attachment E of this report.

Storage and Re-gasification

IEP storage needs are based on two components: security storage and load-leveling storage. The Regulatory Commission of Alaska (RCA) required, as a condition of the certificates of need for Interior Gas Utility (IGU) and Fairbanks Natural Gas (FNG), five days of security storage to be available for each utility. In addition to RCA required storage, additional storage can be added to the system to optimize the operation of an LNG facility. Seasonal variation in gas demand, LNG plant operation, and trucking operations can all be reduced by the addition of storage facilities either as part of the LNG plant construction or local distribution network.

The planned consolidation of FNG and IGU into a single operating entity allows for coordination of storage planning at the distribution end of the supply chain. AIDEA staff is coordinating the planning for security storage between the two distribution utilities, beginning with the evaluation of the 5.25 million gallon storage tank planned by FNG, and the bullet tank storage being planned by IGU for the North Pole area. The near term storage plan will be developed as part of the ongoing planning of the new combined utility under a Local Control Entity. A design charrette with FNG and IGU to optimize distribution system expansion and storage facilities is scheduled for October.

Distribution

The build-out of the distribution system in the Interior continued throughout the summer of 2015. FNG installed 29.46 miles of pipe in the core of Fairbanks during the 2015 summer construction season. This covered the Aurora Road main line, Trinidad North, Dartmouth main line, Wembly, Island Homes, Aurora Residential, and University West. FNG was able to take advantage of summer road construction projects, when possible. IGU installed 73 miles of pipe in the North Pole area during summer 2015. This covered the entirety of the City of North Pole and neighborhoods immediately adjacent to the city. Attachment F and Attachment G provide build-out reports from FNG and IGU respectively.

On June 11, 2015, the AIDEA Board authorized acquisition of Pentex Alaska Natural Gas Company, LLC, FNG's parent company. The Pentex acquisition advances the goals of the IEP in three ways: (1) immediately lowers rates to existing FNG customers by utilizing lower cost capital and a public ownership rate structure, (2) reduces the costs of building and operating FNG and IGU by integrating the two utilities, and (3) simplifies the commercial discussions to develop new supply of affordable energy to the Interior. Due diligence documents and the financial plan that provides details on the acquisition can be found at:
http://www.aidea.org/Programs/EnergyDevelopment/ProposedFNGPentexAcquisition.aspx

The acquisition is expected to close no later than October 15, 2015. Work on optimization of the two distribution utilities, transition of operations and ownership to a Local Control Entity, and combined capital construction planning will occur across the next nine months.

More information on the distribution system progress can be found in the next section of this report.

Conversions

A local Conversion Working Group comprised of representatives from IGU, FNG, local banks, mechanical contractors, heating contractors and suppliers, together with local government elected officials and staff is leading the conversion planning effort. The primary analysis of conversion rates and resulting demand curves was done by Cardno Entrix under a contract with the Alaska Energy Authority (AEA). This can be found in Section 3 of the Cardno report, available on the IEP website at interiorenergyproject.com.

No conversions are currently occurring prior to any increase of the gas supply. Until the supply of gas is increased through the efforts of the IEP utilizing the tools authorized by HB105, there is not sufficient gas in the winter to add additional customers. Recently installed lines are being pressurized and are available to supply gas to additional homes and businesses upon receipt of additional natural gas.

While work progresses on increasing the availability of natural gas to the Interior, the Conversion Working Group is focused on reviewing and supporting implementation and use of mechanisms that will assist businesses and residences with financing conversion to natural gas, along with determining possible sources of funds for such financing. The mechanisms under consideration are:

1. PACE financing for commercial structures;
2. On-bill financing for commercial and residential structures; and
3. Encouragement to use existing state energy audit and rebate programs to assist with conversion to natural gas.

The Conversion Working Group has initiated discussion with local financial institutions that have expressed interest in participating in natural gas conversion financing, and may be able to bring lower cost sources of capital to this effort. The Working Group is exploring the issuance of an RFI that would solicit input from any lender to assist with this effort. The group is also exploring sources of federal funds that may be available to assist with conversion financing, and is preparing a targeted public outreach plan that will advise business and residential property owners on steps they can take now that will ease conversion to gas when it becomes available. The group will emphasize the energy savings as a result of increased efficiency of new heating appliances, and streamlined conversion when gas is available.

UPDATE ON THE STATUS OF LOCAL DISTRIBUTION INFRASTRUCTURE BUILD-OUT

The distribution system build-out continued during the summer of 2015. FNG installed 29.46 miles of pipe within the core of Fairbanks. IGU installed 73 miles of pipe in and around the city of North Pole. Attachment F and Attachment G provide summer 2015 construction reports of each utility.

TO-DATE CONVERSIONS

No conversions are currently occurring prior to any increase of the gas supply. Until the supply of gas is increased through the efforts of the IEP utilizing the tools authorized by HB105, there is not sufficient gas in the winter to add additional customers. Recently installed lines are being pressurized and are available to supply gas to additional homes and businesses upon receipt of additional natural gas.

Anticipated Conversions

Natural gas conversions were projected by Cardno Entrix as part of the IEP project analysis. For planning purposes, the number of conversions is limited to 2,000 per year based on the number of service connections that could be scheduled in a 100-day summer construction season. The Cardno Entrix projections were adjusted accordingly. This adjustment somewhat slows Cardno Entrix's projected growth of Interior natural gas demand, but still provides for sufficient demand for the expansion of the distribution system and development of a new source of LNG supply to be economically viable.

Table 1 Natural Gas Customer Projection

	2015	2016	2017	2018	2019	2020	2021	2022	2023
FNG	959	959	1,601	2,776	3,647	4,611	5,339	5,822	5,930
IGU	-	-	485	1,309	2,439	3,475	4,747	5,318	5,446
Total	**959**	**959**	**2,086**	**4,086**	**6,086**	**8,086**	**10,086**	**11,141**	**11,377**

FNG currently has 959 residential, commercial and interruptible customers. Additional customers are not expected to convert until new volumes of natural gas become available with the construction of new LNG supply or storage capacity.

FINANCIAL ACCOUNTING OF FUNDS EXPENDED AND FUNDS ANTICIPATED TO BE SPENT, INCLUDING LOANS, GRANTS, AND BONDS

The table below outlines the IEP expenditures related to the $57.5 million capital appropriation, the $125 million of SETS fund capitalization, and the $150 million of SETS bond authorization.

Table 2 Expenditures from and Remaining Funds of Legislative Appropriation & Authorization(s)

Expenditures* from and Remaining Funds of Legislative Appropriation & Authorization(s):

		HCS CSSB 18 $57.5 mill Cap Approp	SB 25 SLA 2012 $125 mill SETS	SB 25 SLA 2012 $150 mill Bonds	Total
Development Costs	**IEP Phase 1 (Pre HB 105)**				
	LNG Plant	7,665,405	-	-	7,665,405
	North Slope Pad	6,003,418	-	-	6,003,418
	Distribution	496,169	-	-	496,169
	Total	**14,164,992**	**-**	**-**	**14,164,992**
	IEP Phase 2 (Post HB 105)				
	Commodity	10,998	-	-	10,998
	LNG Plant	17,791	-	-	17,791
	Trucking	4,659	-	-	4,659
	Storage	855	-	-	855
	Distribution	3,294	-	-	3,294
	Project Management	78,307	-	-	78,307
	Total	**115,904**	**-**	**-**	**115,904**
	Total	**14,280,896**	**-**	**-**	**14,280,896**
Loans & Investments	**LNG Plant**	-	-	-	-
	Trucking	-	-	-	-
	Storage	-	-	-	
	Distribution				-
	FNG Loan	-	15,000,000	-	15,000,000
	IGU Loan	-	37,780,000	-	37,780,000
	Total	**-**	**52,780,000**	**-**	**52,780,000**
Total	**Total Expenditure**	**14,280,896**	**52,780,000**	**-**	**67,060,896**
	Remaining Funds	**43,219,104**	**72,220,000**	**150,000,000**	**265,439,104**

Notes

Financial data per unaudited accounting system records as of 9/17/2015

**Expenditures include Actuals, Encumbrances, and Commitments as of 9/17/2015*

Legislative Appropriation & Authorization(s) only include those identified above and do not include AIDEA operating, Economic Development Fund, or other sources

SUMMARY

This status report represents the first quarterly report specified in HB105 on the status and progress of the Interior Energy Project. Actions since HB105 was signed into law have led to the selection of five project finalists vying to provide low cost energy to the Interior. The process to identify and select the finalists and a project approach is consistent with the presentations made during the 2015 Legislative session, and with the intent language included in HB105 guiding use of an open and competitive selection process.

AIDEA will continue to work with Interior utilities, RFP respondents, and Interior community leaders over the next three months to bring a project recommendation to the AIDEA Board in December 2015. The plan brought to the Board will be consistent with HB 105 requirements.

Attachment A
RFP Documents

Alaska Industrial Development Export Authority

PART **A**

REQUEST FOR PROPOSALS PACKAGE

TABLE OF CONTENTS

Other: None

ISSUING OFFICE

Agency Contact & Phone No..... : Tom Erickson, Chief Procurement Officer, (907) 771-3951

PROJECT

RFP NUMBER .....: **15142**

Project Site (City, Village, etc.).....: Interior Alaska

Project Title .....: Interior Energy Project (IEP)

The goal of the IEP is to provide energy relief and improve air quality through supply of low-cost energy to Interior Alaska. It is AIDEA's intent to finance and facilitate a Project that meets the goals of the IEP, including supplying the lowest cost gas; to as many people; as quickly as possible. AIDEA will consider proposals through this solicitation that accomplishes this goal. The primary option for this solicitation is to develop a facility in Cook Inlet capable of producing 200,000 gallons of Liquefied Natural Gas (LNG) per day initially, with expansion capacity up to 400,000 gallons of LNG per day. In addition to the primary option, the Authority encourages and will entertain alternate proposals during this process. Alternate proposals include, but are not limited to, propane, liquefaction capacity combined with gas supply, liquefaction capacity combined with gas supply and transportation, North Slope liquefaction capacity, or a small diameter pipeline.

SCHEDULE

Anticipated period for performance-Begin: January 2016.

SUBMITTAL DEADLINE AND LOCATION

OFFERORS ARE RESPONSIBLE TO ASSURE DELIVERY PRIOR TO DEADLINE.
ONLY PROPOSALS RECEIVED PRIOR TO THE FOLLOWING DATE AND TIME WILL BE OPENED

DATE: **August 3, 2015** PREVAILING TIME: **2:00 PM**

HAND DELIVER ONLY DIRECTLY TO FOLLOWING LOCATION (and person, if named):

Alaska Industrial Development & Export Authority
Attn: Procurement Department
Tom Erickson
813 W. Northern Lights
Anchorage, AK 99503

(When submitting proposals, please make sure to identify the project title and the RFP number on the outer envelope of the submittal package.)

IMPORTANT NOTICE: Your Firm must register with the AIDEA Procurement Office to receive subsequent addenda. Failure to register may adversely affect your proposal. Register online at http://www.aideaaeaprocurement.org/.

SELECTION PROCEDURE

PART **A**

This RFP represents the first step of a two-step public process. In this first step, interested parties can describe a proposed approach to supplying LNG or alternative energy supply to the Interior utilities as part of the IEP. It is expected that up to four selected proposals will advance to the second step of this process. The Authority reserves the right to add additional proposals as necessary to meet the requirements of this RFP. Successful proposers will enter into direct negotiation and project evaluation with AIDEA (and the local utilities as appropriate) to more fully develop a shared partnership/financing arrangement for each approach. Offerers received are not binding; however, the offerors are required to negotiate in good faith.

Step Two will culminate with a call for final project offers from each proposer and evaluated by committee as most likely to succeed. Selection criteria used in step one will not be used. The Evaluation Committee will review final project offers, evaluating and ranking as a group with the intent of coming to a consensus of their selection. The Evaluation Committee may, at its option, vote on the final ranking. The Evaluation Committee shall provide a narrative justification for their selection.

Selection of a single entity “preferred respondent” to act as an IEP private partner to fully develop the energy supply chain to the Interior, approved by the AIDEA Board of Directors, will be the final result of step two of this solicitation.

Scoring for each of the two steps will be processed as follows:

1. Proposals will be evaluated by a committee. Evaluation of responses to criteria set forth in Part C results in a numerical score for each proposal. Each criterion in Part C has an assigned weight for this RFP which demonstrates its relative importance. The total of all weights is 100.

2. Scoring of proposals will be accomplished as follows:

   2.1 Each Evaluator will read and rate each Offeror's response to each criterion described in Part C. Ratings will be based solely on contents of proposal and in compliance with standard instructions for Evaluation Committee.

   2.2 After completion of individual ratings in Part C the Evaluation Committee will meet to discuss proposals. Evaluators may then alter their ratings; however, any changes shall be based solely on the criteria set forth in Part C.

   2.3 The total score for each Offeror will be obtained by summing the scores determined for each criterion in Sections I, II, III, IV and V of Part C.

3. Evaluators may discuss factual knowledge of, and may investigate Offerors' and proposed Subcontractors' prior work experience and performance, including projects referenced in proposal, available written evaluations, etcetera, and may contact listed references or other persons knowledgeable of a Contractor's and/or a Subcontractor's past performance. Factors such as overall experience relative to the proposed contract, quality of work, control of cost, and ability to meet schedules may be addressed. If any issues of significant concern to the offer are discovered, the Committee may:

   3.1 Provide written recommendations for consideration during contract negotiations;

   3.2 Conduct discussions in accordance with paragraph 4, below.

4. The Committee may decide to conduct discussions (or "interviews") with responsible Offerors whose proposals are determined to be reasonably susceptible of being selected to advance to the second step for the purpose of clarification to assure full understanding of, and responsiveness to, the solicitation requirements. At the committee’s option offerors selected for discussions may be permitted to submit Best and Final Offers (BAFO) for final Committee Evaluation. After discussions and any BAFOs, Evaluators will determine the final scoring and ranking for contract negotiations by evaluating written and oral responses using only the criteria set forth in Part C of this RFP.

5. After completion of the two step process and negotiations with the successful offeror, a Notice of Intent will be provided to all Offerors. If contract negotiations are unsuccessful with Offeror(s) selected for negotiation, the Authority may cancel the solicitation or reserves the right to enter into negotiations with another offeror that advanced to the second step.

PART

A

NOTICES

1. The Authority is an equal opportunity employer.

2. The Authority shall not be liable for any cost incurred by an Offeror in response to this solicitation, including any work done, even in good faith, prior to execution of a contract and issuance of a Notice to Proceed.

3. The Authority expressly reserves the right to waive minor informalities, negotiate changes or reject any and all proposals and to not advance an offeror to the second step, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery, or contractual conditions and can be waived or corrected without prejudice to other Offerors

4. All proposals may be open for public inspection after a Notice of Intent is issued. Offerors should mark proprietary information in proposals if such information should not be disclosed to the public. Proprietary information will be confidential if expressly requested and agreed to by the Authority.

5. Offerors and proposed subcontractors shall be in compliance with the statutory requirements for Alaska business licensing and professional registrations included in the certification statement on Page 2 of Part D in this RFP package.

6. Standard insurance provisions for Worker's Compensation, General and Automobile Liability, and Professional Liability may be required for any contract established. Coverage may be modified under limited circumstances.

7. Pre-proposal Conference: The Authority reserves the right to schedule a Pre-proposal conference.

   Questions regarding this RFP should be sent to the Project Manager, in writing within the first 15 days of the public notice period; Questions should be sent by email to Kirk Warren at kwarren@aidea.org.

   Timely submission of questions will help the Authority determine if there is a need for a Pre-proposal Conference

8. Special Notices:

   An Alaska Business License is required of Contractors who do business in Alaska. Offerors should be aware of this requirement and are advised that proof of application for an Alaska Business License will satisfy this requirement. Information regarding applying for an Alaska Business License can be found on-line at http://www.dced.state.ak.us/occ/home_bus_licensing.html or by calling 1-907-465-2550. The business license must be in the name of the company under which the proposal is submitted. This is a requirement regardless of funding source

PART

B

SUBMITTAL CHECKLIST

Offeror may use left margin to check off items when completed.

[ ] 1. Offerors must carefully review this RFP Package for defects and questionable material and become familiar with submittal requirements. Submit written comments to the address shown under "Submittal Deadline and Location" on page 1 of Part A - RFP. Substantive issues will be addressed in a written addendum to all RFP recipients on record.

[ ] 2. Review Part A - RFP and the proposed Statement of Services and any other attached or referenced materials.

[ ] 3. Review Part C - Evaluation Criteria. Read each criterion in light of the proposed Statement of Services. Note any project specific criteria which may have been added or any changes to standard criteria descriptions which may have been made. Be aware of the assigned weight for each criterion

[ ] 4. Prepare a distinct Response for each criterion. Failure to respond directly to any criteria will result in an evaluation score of zero for that criteria. Acceptable Responses must be specific and directly related to the proposed Statement of Services. Marketing brochures, marketing resumes, and other non-project specific materials will be discarded without evaluation and should not be submitted.

[ ] 5. ***Each criterion Response must be titled, numbered and assembled in the order in which the criteria are listed in Part C***, so the criterion to which information applies shall be plainly evident. Material not so identified or assembled may be discarded without evaluation.

[ ] 6. Complete all entries on Part D - Proposal Form. Note the requirements for Alaska business.

[ ] 7. Attach Criteria Responsej9s to Part D - Proposal Form. The maximum number of attached pages (***each printed side equals one page***) for Criteria Responses shall not exceed: **Twenty (20) pages**. Attached page limit does not include the four-page Part D - Proposal Form, resumes, proprietary or confidential information. **Any proprietary and confidential information shall be submitted under a separate cover and so marked.**

Criteria Responses shall be presented in ***8-1/2" X 11" format***, except for a minimal number of larger sheets (e.g. 11" x 17") that may be used (e.g. for schedules) if they are folded to 8-1/2" X 11" size. Large sheets will count as multiple pages at 93.5 square inches or fraction thereof per page.

[ ] 8. Parts A, B and C and the proposed Statement of Services shall not be returned to the Authority. ***Submittals shall consist of the following applicable items assembled as follows and in the order listed:***

[ ] 8.1 Completed Part D - Proposal Form (generally at least one copy with original signature) and Responses to all evaluation criteria -- attached.

[ ] 8.2 Number of copies of Part D (***all pages***) and Criteria Responses) required is: **One original, seven copies & an electronic copy on a flash drive. Confidential Information shall be marked as such on the electronic median.**

[ ] 8.3 **CAUTION:** If you replicate (other than by photocopy) Part D or any form in lieu of completing the forms provided by the Authority, provide a signed certification that lists such forms and attests that they are exact replicas of that issued by the Authority. Changed forms may result in rejection at the Authority's discretion. Any alteration - other than completion of the required entries - may be cause for rejection without recourse.

[ ] 9. Deliver ***submittals in one sealed package*** to the location and before the submittal deadline cited in Part A - RFP. ***Mark the outside of the package*** to identify the Project and the Offeror. Proposals must be received prior to the specified date and time. Late proposals will not be accepted or opened.

PART

C

EVALUATION CRITERIA

1. Project Understanding

1. Weight: 5

Proposals will be evaluated against the following questions:

- How well has the respondent demonstrated a thorough understanding of the purpose and scope of the project?
- How well has the respondent identified pertinent issues and potential problems related to the project?

2. Methodology

2. Weight: 15

Proposals will be evaluated against the following questions:

- To what extent has the respondent already initiated the development process? Does the respondent have control of a site? Has the respondent developed a permitting plan and schedule?
- Did the respondent supply evidence of their proposed financing such as through audited financial reports or letters of commitment from financiers?
- Is the respondent willing to accept, or is their proposal dependent upon, AIDEA financing?
- Has the respondent initiated design and selected a major equipment provider?
- Did the respondent provide substantiated project cost information such as vendor quotes and contractor proposals?
- Did the respondent present a substantiated project schedule supported by vendor quotes and contractor proposals?

3. Experience & Qualifications

3. Weight: 20

Proposals will be evaluated against the following questions:

Questions regarding the personnel:

- Do the individuals assigned to the project have experience on similar projects?
- Are resumes complete and do they demonstrate backgrounds that would be desirable for individuals engaged in the work the project requires?
- How extensive is the applicable education and experience of the personnel designated to work on the project?

Questions regarding the firm:

- Is the organization of the project team clear? Including partners and subcontractors?
- How well has each firm demonstrated experience in completing similar projects?
- Has the firm provided letters of reference from previous clients?
- Has the firm previously, or currently, operated/operating a similar facility?

4. Project Description and Costs

4. Weight: 30

Proposals will be evaluated against the following questions:

- What is the capital cost of the project including all construction, equipment and other capitalized costs?
- What is the operating cost of the project?
- What is the cost of the developer's financing (interest rate, IRR, term, etc.)?
- Does the proposal describe all relevant equipment, real estate, connection to the existing pipeline system, engineering, design, construction, overhead, third party developer fees, and any other associated capital costs?
- Does the proposal describe all relevant labor, fuel or purchased power, insurance, property tax, repair and replacement, overhead, administration, and any other associated operating costs?
- Does the proposal provide technical information sufficient to demonstrate the project, as submitted, is viable?

5. Ability to Meet IEP Goals | **4. Weight: 30**

Proposals will be evaluated against the following questions:

Does the project, as proposed, offer the opportunity to meet the community's need for low cost energy? The IEP goals of $15/mcf to the home/business, to as many as possible, as quickly as possible are the sole reason for selecting a private partner under this RFP. For planning purposes, proposers can expect that the storage and distribution components of the supply chain are estimated at $4-5/mcf (actual storage and distribution costs may be impacted in each proposal by the amount of available AIDEA financing remaining and additional storage requirements).

- Proposals should include narrative and/or financial models that demonstrates scenario(s) under which the proposed project, utilizing AIDEA financing tools, can meet the IEP pricing goals
- Proposals should indicate a timeline, beginning with acceptance of the selected project by the AIDEA Board, for availability of gas to the Interior Utilities.
- Proposals should indicate expansion capacity – both timeline and incremental costs in 100,000 gallon per day or equivalent increments.

Commercial structure of the project

- What will be the structure of the rates charged to buyers?
- What sort of commitment is required of the buyers?
- What is the term length of any proposed commitment from the buyer?
- What is the risk allocation (construction, operating, demand, State sponsored natural gas pipeline)?

Alaska Industrial Development Export Authority
PROPOSAL FORM

PART **D**

THIS FORM MUST BE THE FIRST PAGE OF PROPOSAL. Attach criteria responses as explained in Part B - Submittal Checklist. No transmittal letter or cover sheet will be used.

PROJECT

Project Title .....: Interior Energy Project
RFP No. .....: **15142**

OFFEROR (CONTRACTOR)

Contractor.....:

Street.....:
P.O. Box.....:
City, State, Zip.....:
Alaska Business License Number .....:
Federal Tax Identification No. .....:
Individual(s) to sign contract .....:
Title(s) .....:
Type of business enterprise (check one) .....: [ ] Corporation in the state of . :
[ ] Individual [ ] Partnership [ ] Other(specify) ..... :

PROPOSED PARTNER(S) AND SUBCONTRACTOR(S)

Partners/Subcontractor & Office Location	AK Business License No.

CERTIFICATIONS

I certify: that I am a duly authorized representative of the Contractor; that this Submittal accurately represents capabilities of the Contractor and Subcontractors identified herein for providing the services indicated; and, that the requirements of the Certifications on page 2 and 3 of this Part D for 1) Alaska Licenses/Registrations, 2) Insurance, 3) Cost and Pricing Data, and 4) Former Public Officer - will be complied with in full. These Certifications are material representations of fact upon which reliance will be placed if the proposed contract is awarded. Failure to comply with these Certifications is a fraudulent act. The Contracting Agency is hereby authorized to request any entity identified in this proposal to furnish information deemed necessary to verify the reputation and capabilities of the Contractor and Subcontractors.

Signature ..... : _____
Name ..... : Date:
Title ..... : Telephone (voice):
(fax):
Email Address:

PART **D**

CERTIFICATION FOR ALASKA BUSINESS LICENSES AND REGISTRATIONS

Contractor and all Subcontractors shall comply with the following applicable requirements of Alaska Statutes:

1. **Alaska Business License** (Form 08-070 issued under AS 43.70) An Alaska Business License is required of Contractors who do business in Alaska and required before contract award. Proof of application for an Alaska Business license will satisfy this requirement. Acceptable evidence that the offeror possesses a valid Alaska business license consists of any one of the following:
   a. Copy of the Alaska business license.
   b. Certification on the bid or proposal that the bidder/offeror has a valid Alaska business license number and has written the license number in the space provided on the proposal.
   c. A canceled check that demonstrates payment for the Alaska business license fee.
   d. A copy of the Alaska business license application with a receipt stamp from the State's business license office.
   e. A sworn notarized affidavit that the bidder/offeror applied and paid for the Alaska business license.
   f. Other forms of evidence acceptable to the Department of Law.

2. **Certificate of Incorporation** (Alaska firms) or **Certificate of Authorization for Foreign Firm** ("Out-of-State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).

3. **Joint Ventures**, regardless of type of services provided, must be licensed/registered in the legal name of the Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).

[For information about licensing, Offerors may contact the Alaska Department of Commerce and Economic Development, Division of Occupational Licensing at P.O. Box 110806, Juneau, AK 99811-0806, or at Telephone (907) 465-2550, or at Internet address: http://www.dced.state.ak.us/occ/home_bus_licensing.html.]

CERTIFICATION - COST AND PRICING DATA

Any cost and pricing data submitted herewith, or in any future price proposals for the proposed contract, will be accurate, complete and current as of the date submitted and will continue to be accurate and complete during the performance of the contract, if awarded.

CERTIFICATION – FORMER PUBLIC OFFICER

Any proposer listing as a member of the proposer's team a current public officer or a former public officer who has left state service within the past two years must submit a sworn statement from that individual that the Alaska Executive Branch Ethics Act does not prohibit his or her participation in this project. If a proposer fails to submit a required statement, the proposal may be deemed nonresponsive or non-responsible, and rejected, depending upon the materiality of the individual's proposed position.

The Ethics Act bars a public officer who leaves state service from representing, advising or assisting a person for compensation regarding a matter –

> that was under consideration by the administrative unit in which the officer served, and
> in which the officer participated personally and substantially through the exercise of official action,

for two years after leaving state service. See AS 39.52.180(a). "Public officer" includes a state employee, a member of a state board and commission, and a trustee of the Exxon Valdez Oil Spill Trust. "Official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction. Possible remedies for violating the bar include penalties against the former public officer and voiding the state grant, contract or lease in which the former public officer is involved.

Additionally, former public officers may not disclose or use information acquired in the course of their official duties that could in any way result in a benefit to the former public officers or their families, if the information has not been disseminated to the public or is confidential by law, without appropriate authorization. *See* AS 39.52.140.
Each current or former public officer is responsible for determining whether he or she may serve in the listed capacity on this project without violating the Ethics Act. A form that a former public officer may use to certify their eligibility is attached. Current public officers may seek advice from their designated ethics supervisors concerning the scope and application of the Ethics Act. Former public officers may, in writing, request advice from the Office of the Attorney General, Ethics Attorney concerning the application of the Ethics Act to their participation in this project. It is the responsibility of the individual and the proposer to seek resolution in a timely manner of any question concerning the individual's eligibility.

Former Employee's Certification of Eligibility
Under the Alaska Executive Branch Ethics Act
(AS 39.52.140, AS 39.52.180)

I am a former employee of the State of Alaska and left state service within the last two years. My last position with the state was [*job title*] with the [*name of state agency and administrative unit*]. I propose to work on [*describe state contract or other matter*] on behalf of [*name of current employer*]. This work will not involve any matter (a) that was under consideration by the state administrative unit that I served, and (b) in which I participated personally and substantially during my state service through the exercise of official action ("official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction). I am therefore eligible to participate in this [*contract or matter*] under the Alaska Executive Branch Ethics Act. I also understand that as a former public officer I may not disclose or use information acquired in the course of my official duties that could in any way result in a benefit to me or my family, if the information has not been disseminated to the public, or that is confidential by law, without appropriate authorization.

I certify under penalty of perjury that the foregoing is true.

Dated: _____, 20__, at _____, Alaska.

_____
[*name of former state employee*]

STATE OF ALASKA)
) ss.
_____ JUDICIAL DISTRICT)

On this _____ day of _____, 20__, [*name of former state employee*], whom I know to be the individual described in and who executed this certification, personally appeared before me and acknowledged that [s]he signed the certification as [her or his] free and voluntary act.

IN WITNESS WHEREOF, I have placed my signature and affixed my official seal.

_____
Notary Public in and for Alaska
My commission expires: _____

If no notary or other official (judge, magistrate, U.S. postmaster or municipal clerk) is available, omit the notary certificate and include the following statement in the text: A notary or other official empowered to administer oaths is unavailable.

STATEMENT OF WORK AND TECHNICAL PROPOSAL

PART

E

Interior Energy Project

The goal of the IEP is to provide energy relief and improve air quality through supply of low-cost natural gas to Interior Alaska. It is AIDEA's intent to finance and facilitate a Project that meets the goals of the IEP, including supplying the lowest cost gas; to as many people; as quickly as possible. AIDEA will consider proposals through this solicitation that accomplishes this goal. The primary option for this solicitation is to develop a facility in Cook Inlet capable of producing 200,000 gallons of LNG per day initially, with expansion capacity up to 400,000 gallons of LNG per day. In addition to the primary option, the Authority encourages and will entertain alternate proposals during this process. Alternate proposals include, but are not limited to, propane, liquefaction capacity combined with gas supply, liquefaction capacity combined with gas supply and transportation, North Slope liquefaction capacity, or a small diameter pipeline.

Background

AIDEA is a public corporation created in 1967 by the Alaska Legislature to promote and advance the economic growth and diversification in Alaska by providing various means of financing and investment. AIDEA also has the ability to own and operate facilities that advance this goal.

The Alaska Legislature passed SB 23 in 2013 and HB 105 in 2015. This legislation implemented and provided financing tools for the Interior Energy Project (IEP). The project was to consist of a liquefied natural gas (LNG) plant, LNG trucking to Interior Alaska, gas storage and regasification facilities, and a distribution system. The Project now allows AIDEA to finance a small diameter pipeline (less than 12" diameter) or a propane project to meet the goals of the IEP. The objective of the IEP is to deliver natural gas to Interior homes and businesses at a rate of $15 per thousand cubic feet of gas, the energy equivalent of $2-per-gallon fuel oil.

AIDEA intends to advance the IEP through the following actions:

1. **Full supply chain.** AIDEA intends to work with Interior Utilities and the preferred respondent to this RFP, to plan the build out and coordination of transportation, storage, regasification and distribution of natural gas in the Interior.
2. **Negotiation on behalf of and in collaboration with the Interior Utilities.** AIDEA intends to negotiate commercial LNG sales and purchase agreement terms with the preferred respondent on behalf of the Interior Utilities. The Interior Utilities will ultimately execute any agreements.
3. **Financing liquefaction capacity.** AIDEA is in a position to provide low interest rate financing or zero cost equity to reduce the cost of LNG production (or alternative) to the extent needed by the preferred respondent and allowed by law. This RFP is intended to advance this action.

AIDEA is issuing this RFP as part of the IEP to facilitate and develop a low cost natural gas supply chain to provide energy relief for Interior Alaska and improve air quality in the Fairbanks North Star Borough. Under the State of Alaska's Administrative Order No. 272, AIDEA Board Resolution No. G15-02, and House Bill 105 AIDEA intends to work with the LNG Capacity developer on a project that meets the

objectives of the IEP. An LNG Capacity developer can either utilize or expand an existing LNG plant or propose the development of a new LNG plant in Cook Inlet.

Concurrent with this solicitation process, AIDEA will facilitate a Memorandum of Understanding (MOU) with Golden Valley Electric Association, Fairbanks Natural Gas, and the Interior Gas Utility (or a subset of the Interior Utilities willing to enter into such an MOU) which authorizes AIDEA to advance LNG sales and purchase agreements for the Interior natural gas demand. It is recognized that LNG Sales and Purchase Agreements are critical to advancing LNG Capacity project financing and subsequent development. After the LNG Sales and Purchase Agreement negotiation process, it is expected the Interior Utilities will execute the final contract individually or through a yet to be established entity that purchases gas on behalf of these utilities.

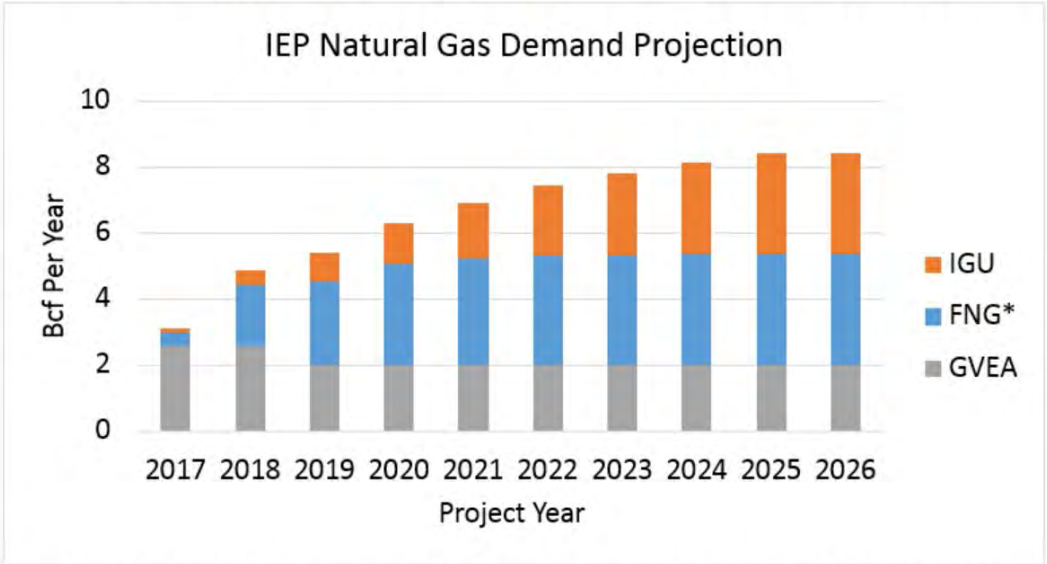
Projected Demand for Gas in the Interior

Demand projections have been estimated by the AIDEA/AEA project team utilizing work done by Cardno ENTRIX in 2014. The actual demand will vary from the projections as market conversion rates become known. Agreements will likely need to be structured so that the volumes delivered can be adjusted over time as demand grows.

The figures below are projections used for planning purposes. They show expected natural gas demand in the Interior by project year. Project year is defined as July to June, or the heating year. Due to seasonal swing, the project capacity needed each year is expected to exceed the total annual natural gas demand. Proposals may choose to identify other markets they intend to serve in addition to the identified Interior demand.

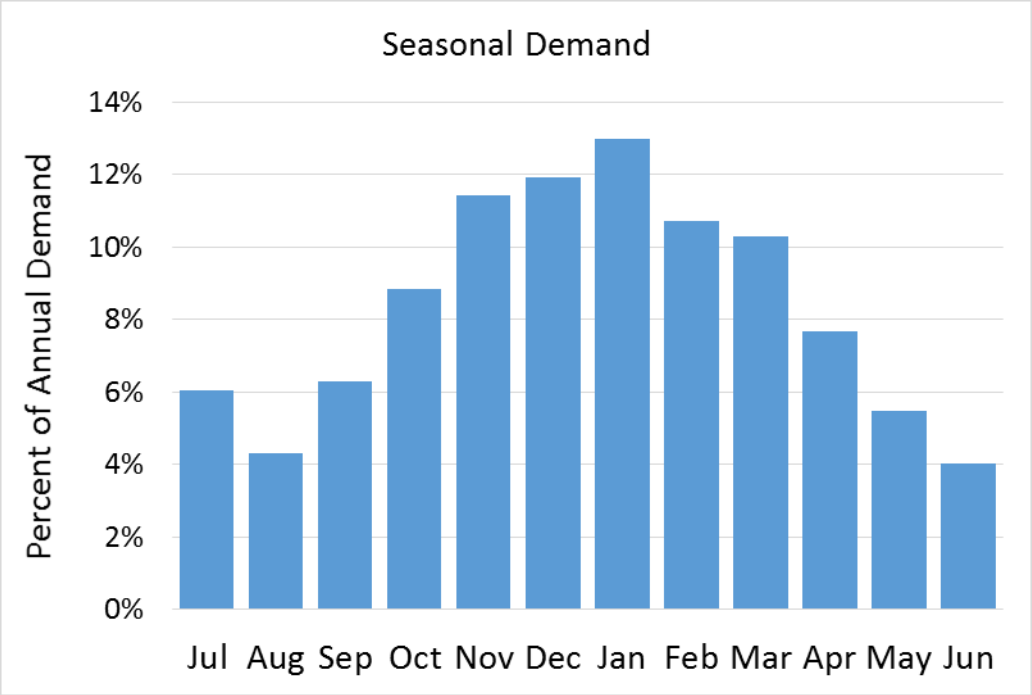
Natural Gas Demand by Year

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
FNG*	0.41	1.81	2.54	3.06	3.25	3.32	3.33	3.34	3.34	3.34
IGU	0.12	0.46	0.85	1.24	1.65	2.13	2.45	2.78	3.05	3.07
GVEA	2.60	2.60	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Total	**3.13**	**4.87**	**5.39**	**6.30**	**6.90**	**7.45**	**7.78**	**8.12**	**8.39**	**8.41**



**FNG demand does not include existing 0.95 Bcf provided under existing agreements*

The Interior utility market for natural gas has significant seasonal variability. The actual amount of seasonal swing needed for the IEP is not yet determined and will result from modeling the optimal combination of project capacity and storage. Proposals should indicate the project's ability to seasonally vary the supply and demonstrate an understanding of the entire supply chain components and their relationship to this seasonal swing.



The figure above demonstrates the expected seasonal demand of the Interior Utilities by quarter. The average demand during the winter months of the year are about three times as high as the average demand during the summer months. A combination of project capacity and storage will be required to meet this seasonal variance.

Potential AIDEA Financing

AIDEA, to the extent allowed by law, is willing to assist in financing LNG Capacity. The intent of AIDEA financing will be to 1) reduce the cost of delivered energy to the Interior Utilities, 2) assume financial risk inherent in supplying the Interior Utilities, and 3) facilitate private investment in the project. All proposals are expected to demonstrate their ability to finance all or a portion of the project in excess of AIDEA participation.

In 2013, the Alaska State Legislature passed SB 23. SB 23 which authorized AIDEA to utilize up to $275 million of AIDEA SETS financing to advance the IEP, including $125 million of SETS fund capitalization and $150 million of AIDEA SETS bonding authority backed with a State of Alaska moral obligation.

Remaining SB 23 financing available for the IEP is $222.22 million. This includes $16.1 million of the original SETS appropriation (non IEP specific), $72.2 million of SB 23 SETS appropriation (IEP specific),

and $150 million of AIDEA SETS bonds. An AIDEA SB 23 SETS loan will have an interest rate of 0-3% and is capable of taking reasonable project risk and delayed repayment. AIDEA SETS bonds will be issued with market rates and commercial terms.

In addition, $45 million of the capital budget appropriation remains for the purposes of advancing the IEP. The capital appropriation can be invested by AIDEA into a project and earn no return. The intent is to directly reduce the cost of energy to Interior Utilities.

Scope of Work (Primary Option)

The Scope of Work covered under this RFP includes all financing, planning, permitting/real estate, engineering, procurement, construction and operation requirements for 200,000 gallons per day of LNG capacity which is expandable to meet the ultimate needs of the IEP in the future.

The preferred respondent is expected to enter into agreements with Interior utilities, or an entity representing the commercial interests of the Interior utilities, to provide LNG production associated with the newly constructed LNG capacity.

The preferred respondent is expected to procure all necessary equipment, secure a site, construct LNG capacity and operate the LNG plant. The preferred respondent is also expected to provide financing for a portion of the project, as determined by the allocation of AIDEA financing tools. AIDEA will only participate in the financing of LNG capacity to the extent authorized by law and approved by the AIDEA Board of Directors. The pricing components and structure, as well as the risk allocation of construction and operation, is expected to be transparent.

As a “primary option” project AIDEA intends to provide financing for a project that provides LNG Capacity. Therefore, “primary option” project proposals should exclude natural gas supply to the LNG Plant. The natural gas used as fuel and as the LNG product will be contractually provided by the Interior utilities or an associated entity. The purchaser of the LNG product is also responsible for the transportation of LNG from the LNG plant to Interior of Alaska City Gate.

Alternative proposals that provide for the development of all or part of the full supply chain including gas supply are encouraged. More detail on alternative proposals is mention in the section “Alternative Proposals.” If gas supply is contemplated as part of the proposal, proposers may also respond to the Request for Information that will be issued by the State of Alaska Department of Commerce, Community and Economic Development

Technical Proposal

In order for the AIDEA to evaluate proposals fairly and completely, respondents must follow the format set out in this RFP and provide information requested to the best of each respondent’s ability. All information provided to AIDEA under this RFP will be made publicly available unless expressly indicated as confidential. Publically available information should be presented as a maximum twenty (20) page proposal overview. Proprietary and confidential information shall be submitted under a separate cover and so marked.

- **Introduction**
- **Understanding of the Project**

- **Methodology**
  - Project development plan
  - Development progress and status: existing agreements, contracts, proposals and/or quotes
  - Project components and required infrastructure
    - Planning/permitting/real estate
    - Engineering/procurement/construction
  - Plant operations plan
  - Project schedule
  - Business/legal structure
- **Experience and Qualifications**
  - Firm experience and resources
  - Firm partners and subcontractors
  - Key project personnel
- **Project Cost and Description**
  - Capital cost breakdown, including all relevant:
    - Equipment
    - Real estate
    - Connection to the existing pipeline system
    - Engineering
    - Design
    - Construction
    - Overhead
    - Third party developer fees
    - Any other associated capital cost
  - Operating cost breakdown, including all relevant:
    - Labor
    - Fuel or purchased power
    - Insurance
    - Property tax
    - Repair and replacement
    - Overhead, administration, and any other associated operating cost
  - Financing cost breakdown
    - Expected equity and debt ratios and costs
    - Expected range of AIDEA financing partnership
  - Project reliability and redundancy
- **Ability to Meet IEP Goals**
  - Financial models
  - Rate and pricing structure
    - Commitment type, term
    - Risk allocation
  - Commercial plan
  - Future expansion
  - Utilization of AIDEA financing tools

Alternative Proposals

AIDEA understands that proposers to this RFP may be interested in providing solutions different from or broader in scope than "primary option" that is described in the Scope of Work for 200,000 gallons per day of LNG capacity. AIDEA welcomes and encourages such alternative proposals that meet the goals of the IEP. All alternative proposals will be evaluated and explored by AIDEA along with proposals for the "primary option" project.

Each alternative proposal shall include all information requested for "primary options" proposals described in Part C of this solicitation plus the following for each alternative proposal, as applicable.

LNG Delivered at the Flange of the LNG plant.

These proposals will include both natural gas supply and liquefaction. The Interior utilities, or representing entity, will be responsible for taking custody of the LNG at the outlet flange of the LNG plant and transporting it to the Interior. In addition to the information requested for the Technical Proposal above, these proposals should include information on:

Will the proposal sell LNG as a commodity or will they sell natural gas plus a capacity charge for the LNG plant? Any other information on the commercial structure for pricing is needed.

Offerors submitting these proposals should also respond to the Request for Information for Cook Inlet natural gas supply that will be issued by the State of Alaska Department of Commerce, Community and Economic Development.

LNG Delivered at the City Gate.

These proposals will include natural gas supply, liquefaction, and transportation to Interior Alaska, delivered to Interior Utilities. In addition to information requested for an "LNG Delivered at the Flange of the LNG Plant" proposal, these proposals should also provide information on:

Transportation plan, including costs, contractors and required equipment, to transport LNG to the Interior.

Different sized LNG Capacity.

These proposals will be for LNG plant capacity above or below the "primary option" 200,000 gallons per day of LNG capacity. Information on incremental costs to add capacity is needed for proposals of less than 200,000 gallons per day

LNG Capacity outside of Cook Inlet.

These proposals will be for LNG capacity in a location other than the Cook Inlet, including the North Slope of Alaska. Proposals on the North Slope should consider utilizing the existing AIDEA owned gravel pad on the North Slope and contact Golden Valley Electric Association regarding their gas supply agreement for North Slope natural gas. Proposals for LNG capacity outside of Cook Inlet are open to including gas supply and transportation in the same manner as the Cook Inlet LNG capacity alternatives.

Other means of transporting natural gas to Interior.
These proposals will be for projects that rely on a means of transporting natural gas other than LNG, e.g., a pipeline. These proposals may include natural gas sourced from outside of Cook Inlet. In addition to the information requested in the Technical Proposal above for a "primary option" proposal, these proposals should include information on:

Where do you propose to source natural gas?

What is your proposed means of transporting natural gas?

Is your proposed means capable of supplying the peak day of natural gas demand in the Interior?

An indication of what the proposer's understanding is of peak deliverability to interior utilities.

If gas supply is included in the proposals for a project meeting this category, Offerors should also respond to the Request for Information that will be issued by the State of Alaska Department of Commerce, Community and Economic Development.

Other types of fuel than Natural gas.
These proposals will include proposals for propane, propane-air, and other non-natural gas fuels. In addition to the requested information requested in the Technical Proposal above for a "primary option" proposal, these proposals should include information on:

What is the source of the fuel supply? Is there a contract currently in place for this fuel? Or what is the process expected to put this fuel under contract?

How compatible is this source of fuel with the pipe distribution systems in place or presently being installed by Interior utilities?

How does this source and the required infrastructure fit into the IEP goal of being a bridge to natural gas from a large diameter pipeline?

What infrastructure is needed, with associated costs, to deliver this fuel source to the home?

Attachment B
RFI Documents

THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Commerce, Community, and Economic Development

OFFICE OF THE COMMISSIONER

P.O. Box 110800
Juneau, AK 99811-0800
Main: 907.465.2500
Fax: 907.465.5442

Cover Letter

June 5, 2015

To: Interested Parties

Request for Information -- Interior Energy Project Gas Natural Gas Supply

The goal of the Interior Energy Project (IEP) is to provide energy relief and improve air quality through supply of low-cost natural gas to Interior Alaska. It is AIDEA's intent to finance and facilitate a project that meets the goals of the IEP, including supplying the lowest cost gas to as many Alaskans in the Interior as quickly as possible.

To advance the goals of the IEP, Governor Bill Walker in Administrative Order 272 instructed the Department of Commerce, Community and Economic Development (DCCED), with assistance from the Department of Revenue (DOR) and the Department of Natural Resources (DNR), to collaborate at the highest levels of the administration to advance the Interior Energy Project. Pursuant to that direction, DCCED hereby directs the Alaska Industrial Development and Export Authority (AIDEA) to seek information on the price and availability of Cook Inlet natural gas on a long-term contractual basis for the benefit of Interior utility customers.

With that direction, AIDEA is issuing the attached Request for Information (RFI) for Cook Inlet natural gas supply as part of the IEP.

Concurrent with this solicitation for Cook Inlet natural gas, AIDEA is also issuing a solicitation to develop a facility in Cook Inlet capable of producing 200,000 gallons of LNG per day initially, with expansion capacity up to 400,000 gallons of LNG per day. Through that solicitation AIDEA also encourages and will entertain alternate proposals. Alternate proposals include, but are not limited to, propane, liquefaction capacity combined with gas supply, liquefaction capacity combined with gas supply and transportation, North Slope liquefaction capacity, or a small diameter pipeline.

AIDEA will evaluate proposals in an open and competitive process as specifically stated in HB105, while applying the commercial confidentiality terms contained within AIDEA's applicable procurement statutes.

Deputy Commissioner Fred Parady
Department of Commerce Community and Economic Development

Alaska Industrial Development Export Authority

PART **A**

REQUEST FOR INFORMATION PACKAGE

TABLE OF CONTENTS

ISSUING OFFICE

Agency Contact & Phone No..... : Tom Erickson, Chief Procurement Officer, (907) 771-3951

PROJECT

RFI NUMBER.....: **15143**
Project Site (City, Village, etc.).....: Interior Alaska
Project Title .....: Interior Energy Project Natural Gas Supply

Under direction from Governor Bill Walker (see Administrative Order 272 (AO272)), the Department of Commerce, Community and Economic Development (DCCED), the Department of Revenue (DOR) and the Department of Natural Resources (DNR), in conjunction with the Alaska Industrial Development and Export Authority (AIDEA) are seeking information regarding your willingness and ability to sell natural gas on a long-term contractual basis for the benefit of Interior utility customers. Pursuant to AO272 and the direction of DCCED, this Request for Information (RFI) is being issued by AIDEA for purposes of the Interior Energy Project (IEP).

SCHEDULE

Anticipated period for performance: Minimum 5 year supply

SUBMITTAL DEADLINE AND LOCATION

RESPONDENTS ARE RESPONSIBLE TO ASSURE DELIVERY PRIOR TO DEADLINE.
INORMATION RECEIVED AFTER THE FOLLOWING DATE AND TIME MAY NOT BE ACCEPTED

DATE: **July 16, 2015** PREVAILING TIME: **2:00 PM**

HAND DELIVER ONLY DIRECTLY TO FOLLOWING LOCATION:
Alaska Industrial Development & Export Authority
Attn: Procurement Department
Tom Erickson
813 W. Northern Lights
Anchorage, AK 99503

(When submitting information, please make sure to identify the project title and the RFI number on the outer envelope of the submittal package.)

IMPORTANT NOTICE: Your Firm must register with the AIDEA Procurement Office to receive subsequent addenda. Register online at http://www.aideaaeaprocurement.org/.

PART

A

NOTICES

1. The Authority is an equal opportunity employer.

2. The Authority shall not be liable for any cost incurred by a Respondent in response to this RFI.

3. The Authority expressly reserves the right to waive minor informalities, negotiate changes or reject any and all information, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery, or contractual conditions and can be waived or corrected without prejudice to other Respondents.

4. Respondents should mark proprietary information in the Information if such information should not be disclosed to the public. Proprietary information will be confidential if expressly requested and agreed to by the Authority.

5. Questions regarding this RFI should be sent to the Project Manager, in writing within the first 15 days of the public notice period; Questions should be sent by email to Nick Szymoniak at nszymoniak@aidea.org.

   Timely submission of questions will help the Authority determine if there is a need to provide clarifications or to conduct a Pre-Respondents Conference.

PART

Request for Information -- Interior Energy Project Natural Gas Supply

B

Purpose

Under direction from Governor Bill Walker (see Administrative Order 272 (AO272)), the Department of Commerce, Community and Economic Development (DCCED), the Department of Revenue (DOR) and the Department of Natural Resources (DNR), in conjunction with the Alaska Industrial Development and Export Authority (AIDEA) are seeking information regarding your willingness and ability to sell natural gas on a long-term (minimum five-year) contractual basis for the benefit of Interior utility customers. Pursuant to AO272 and the direction of DCCED, this Request for Information (RFI) is being issued by AIDEA for purposes of the Interior Energy Project (IEP).

The results of this RFI are expected to lead to direct negotiations for gas supply agreements (GSAs) to meet the demand for natural gas in the Interior. Such a negotiated contract will be finalized by the Interior utilities or a developer of LNG capacity for shipment to Interior Alaska as a primary anchor market. The intent of this process is to develop a commercial structure that best meets the goals of the IEP. The goals of the IEP are to provide energy relief to Interior homes and business:

- At $15 per Mcf (or equivalent)
- To as many as possible
- As quickly as possible
- Improve air quality by reducing PM 2.5

Concurrent with this solicitation process, DCCED and AIDEA will facilitate a Memorandum of Understanding (MOU) with Golden Valley Electric Association, Fairbanks Natural Gas, and the Interior Gas Utility. In this way, the role of DCCED and AIDEA will be limited after the GSAs are signed between the suppliers and their buyers.

Responses should be marked confidential and submitted to AIDEA by July 16, 2015.
Please address responses to:

Tom Erickson
Chief Procurement Officer
813 West Northern Lights Blvd.
Anchorage AK, 99503
907-771-3951

Information provided will not be interpreted as binding but should be an accurate representation of expected commercial terms. AIDEA has the ability to keep certain business information confidential under AS 44.88.215. Recognizing the need to preserve confidentiality to encourage as many respondents to the RFI as possible, AIDEA's executive director has made the determination that any information submitted that pertains to natural gas price, marketing strategy, reserves, business plan or financial information is **confidential and not subject to**

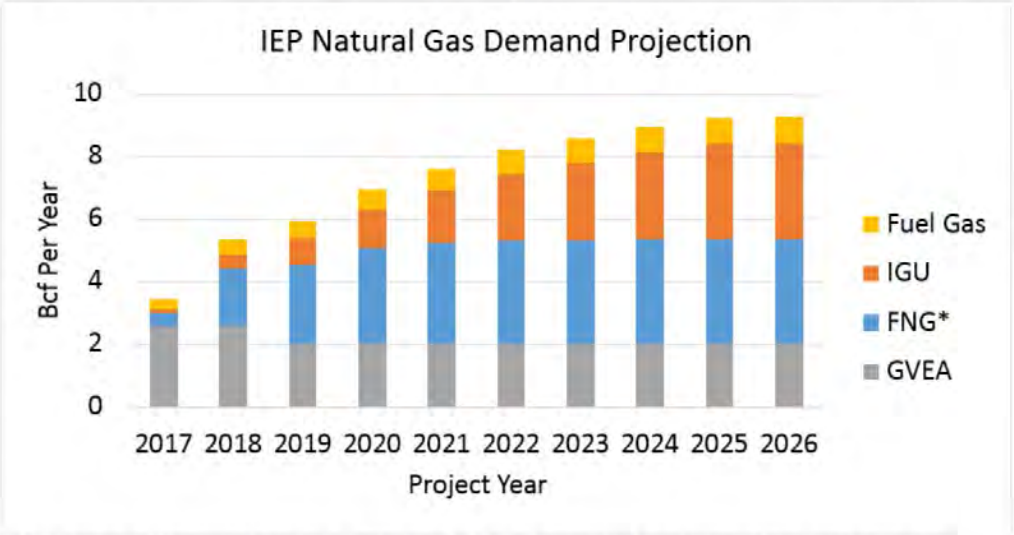
public records request. If a Respondent wishes to submit other information as confidential it should be marked as such for review by AIDEA's executive director.

Projected Interior Gas Volume Requirements

Demand projections have been estimated by the AIDEA/AEA project team utilizing work done by Cardno ENTRIX in 2014. The actual demand will vary from the projections as market conversion rates become known. Natural gas supply agreements will need to be structured so that the volumes delivered can be adjusted over time as demand grows. The figures below are projections for planning purposes.

Natural Gas Demand by Year (Bcf)

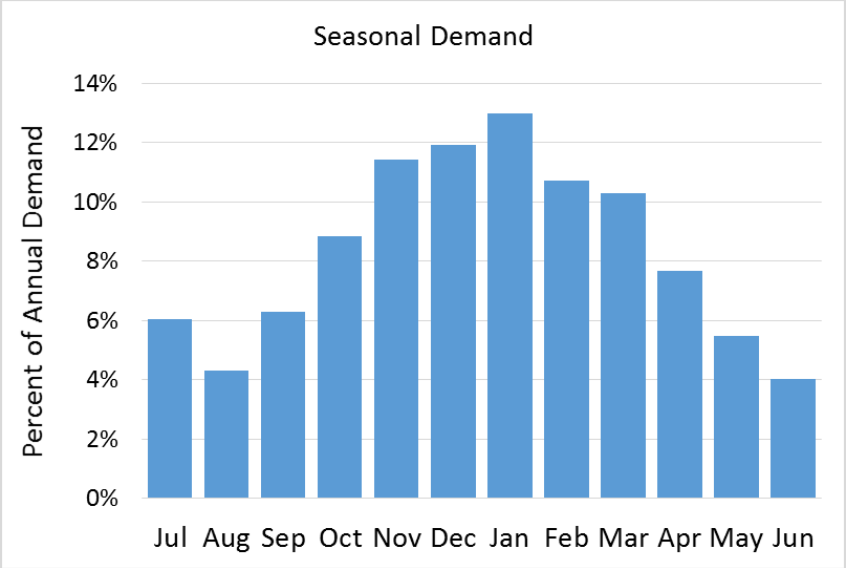
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
FNG*	0.41	1.81	2.54	3.06	3.25	3.32	3.33	3.34	3.34	3.34
IGU	0.12	0.46	0.85	1.24	1.65	2.13	2.45	2.78	3.05	3.07
GVEA	2.60	2.60	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Fuel Gas	0.31	0.49	0.54	0.63	0.69	0.74	0.78	0.81	0.84	0.84
Total	**3.44**	**5.35**	**5.93**	**6.93**	**7.59**	**8.19**	**8.56**	**8.93**	**9.23**	**9.25**



**FNG demand does not include existing 0.95 Bcf provided under existing agreements*

In addition to the Interior natural gas demand, an LNG plant may require approximately 10% of its total output as fuel gas. These volumes are also sought as part of this RFI.

The Interior utility market for natural gas has significant seasonal variability. Unlike Cook Inlet, the Interior market will be supplied with natural gas processed into LNG, transported to Interior and stored until needed. The additional steps in the supply chain eliminate the need for natural gas supply to directly track daily Interior natural gas needs somewhat smoothing day to day gas supply requirements. The actual amount of seasonal swing for the IEP is not yet determined and will result from modeling the optimal combination of plant capacity and LNG storage. Responses should indicate the supplier's ability to seasonally vary natural gas supply.



The seasonal demand figure identifies expected seasonal demand of the Interior Utilities by month. The average demand during the winter months of the year are about three times as high as the average demand during the summer months.

Information Requested

When responding to the RFI, Respondents should provide information that is sufficient to evaluate the credibility of their gas supply responses based on the surety of supply commitments and price.

1. **Term**
   The IEP is seeking a contract term of at least five years with a preference for longer term contracts. The IEP will entertain responses that include provisions for contract extensions beyond a fixed initial contract term. Respondents should include what provisions should apply to trigger such contract extensions.

2. **Commencement of Deliveries**
   Indicate when Respondent can commence gas deliveries under the GSA.

3. **Volume**
   Given the "Projected Interior Gas Volume Requirements" listed above, the Respondent should indicate what annual base load quantity of gas it can commit. In addition to this annual quantity amount, the Respondent may also include a high and low amount with an explanation and provide any circumstances or provisions that might trigger an amount different than the annual quantity.

   Base load and swing quantities should be indicated as daily rates (MMcf/day) by month for the initial term of the GSA.

   Respondent may provide their own estimate of seasonal variability of Interior gas demand and indicate their commitment to provide "swing" volumes and their capability to meet this variability.

Respondent shall describe any priority commitments that might affect the deliveries of gas volumes offered in this RFI.

The Respondent should indicate if they are willing and able to increase gas supply volumes as the Interior demand for gas grows in the future.

4. **Gas Balancing Arrangements**
   Describe any potential provisions Respondent may want to include in a GSA to manage gas balancing volumes. This should include how the supplier and buyers are to coordinate and correct for shortages, surpluses, routine volume adjustments, or market outs (e.g., the buyer loses a major customer).

5. **Source of Gas Supply**
   Respondent must provide information about the source of their gas, which unit or field, and their ownership or control of the gas supply. The Respondent must provide estimates of their proven or risked probable reserves that will support the volumes to be committed to the GSAs arising from this RFI.

   The Respondent must provide the status of their development plans for expanded or new production if required to meet the volumes that are subject to this RFI and the level of commitment to execute these plans (e.g., AFEs or FID). The Respondent should provide a discussion of their financial capabilities that will be required to supply gas.

6. **Delivery Point**
   Indicate delivery points into the Cook Inlet natural gas pipeline system. A description of how gas is delivered to this point should be included.

7. **Gas price**
   Gas prices should be indicated for base load, swing, and other proposed supplies as a per-Mcf amount for each year of the contract term. Prices should apply to the delivery points described above. Respondents should indicate how the gas price would be impacted by other contract terms, such as volume commitments and seasonal supply.

8. **Credit quality**
   Respondent should provide both qualitative and quantitative information regarding their credit worthiness and balance sheet.

9. **Natural Gas Storage**
   Respondent should indicate whether they have access or plan to access natural gas storage in Cook Inlet to meet the Interior's seasonal demand profile.

Attachment C
Finalist Summaries

Finalist Summary:
Harvest Alaska, LLC (Hilcorp Alaska, LLC)

Hilcorp Alaska, LLC

Kurtis K. Gibson
VP – Marketing and
Business Development

Post Office Box 244027
Anchorage, AK 99524

3800 Centerpoint Dr.
Suite 1400
Anchorage, AK 99503

Phone: 907/777-8407
Email:kgibson@hilcorp.com

September 3, 2015

Alaska Industrial Development and Export Authority
Attn: Procurement Department
Tom Erickson
813 Northern Lights Blvd
Anchorage, AK 99503

RE: Five-page Summary of Hilcorp/Harvest Response to RFP 15142

Dear Mr. Erickson,

Hilcorp Alaska LLC and Harvest Alaska LLC submit the attached summary of the Hilcorp/Harvest response to AIDEA RFP 15142. The summary addresses each of the seven categories identified in your letter dated August 27, 2015.

We look forward to continuing the dialogue with AIDEA and providing solutions to Interior Alaska's high energy cost. Please feel free to contact me with any questions about the attached summary, the associated response to RFP 15142, or any other related matter.

Sincerely,

Kurtis K. Gibson
Vice President - Marketing and Bus. Dev.
Hilcorp Alaska, LLC

I. Proposal Summary

On August 3, 2015 Hilcorp Alaska LLC and Harvest Alaska LLC submitted a response to AIDEA RFP 15142 indicating a willingness to provide any of the following project alternatives for addressing Interior Alaska's high cost of energy:

1. Merchant facility with LNG capacity for use by owners of Cook Inlet gas (described in RFP 15142 as Primary Option)
2. Delivered LNG to the Fairbanks city gate (described in RFP 15142 as Alternate Proposal 1)
3. LNG for sale FOB at the tailgate of an LNG facility located in Southcentral Alaska (described in RFP 15142 as Alternate Proposal 2)

As indicated in the Project Description and Cost section of the Hilcorp/Harvest RFP response, Hilcorp/Harvest proposes building either a 100,000 or 200,000 gallon per day liquefaction facility to serve the needs of the Fairbanks and North Pole markets. The design capacity of the liquefaction facility will depend in large part on the success of the commercial negotiations between the Alaska Industrial Development and Export Authority (AIDEA), the Interior Energy Project (IEP) and the Interior utilities. Commitments of capacity for LNG off-take will underpin Hilcorp/Harvest's investment in any facility.

Immediately upon having executed definitive agreements with responsible parties (AIDEA, IEP, Interior utilities or some combination thereof), Hilcorp/Harvest will sanction the project (make a Final Investment Decision or "FID"), pursue the necessary permits, and begin procuring long lead equipment and materials in order to expedite "first LNG" to Fairbanks and North Pole customers.

Except in the case of the Merchant Facility or Primary Option, natural gas would be sourced from Hilcorp's existing and future production in the Cook Inlet.

II. Background and Experience of Proposer's firm

The parent company for Hilcorp Alaska, LLC and Harvest Alaska, LLC is Hilcorp Energy I, L.P., a privately held Texas limited partnership, formed in 1994, engaged in the exploration, production and development of oil and natural gas properties and pipelines. Hilcorp's reserves and production are located onshore and in inland waters along the Gulf Coast of Louisiana and Texas, onshore South Texas, in the Cook Inlet and North Slope of Alaska and in the Utica Shale in northeast Ohio and western Pennsylvania. These properties generally consist of long-lived fields with well-established production histories. Our strategy is to increase our reserves, production, cash flow and earnings through the exploration and development of our existing properties and through strategic acquisitions of additional oil and natural gas properties.

As of March 31, 2014, Hilcorp owned interests in over 265 fields containing over 6,800 wells, and a reserve mix of 54% natural gas and 46% oil. Approximately 66% of our proved reserves were classified as proved developed and 39% were classified as proved developed producing. Hilcorp operates approximately 95% of our net production.

Harvest Alaska now operates and owns, directly or indirectly, the entire Cook Inlet gas pipeline system, which it recently consolidated into a single regulated transmission system, along with the CIPL and Swanson River oil Pipelines. Harvest Alaska now also owns an interest in and operates three oil pipelines on the North Slope: Milne Point Pipeline, Endicott Pipeline, and Northstar Pipeline. In addition to Hilcorp Alaska's existing pipeline expertise and personnel, Harvest Alaska also has access to the pipeline operating expertise of Harvest Pipeline Company ("Harvest Pipeline"), its affiliate in the Lower 49. Harvest Pipeline currently has more than 100 employees, and its management team has more than 120 years of cumulative experience in the ownership and operation of petroleum pipeline systems, some of which are operated as common carriers. Harvest Pipeline owns and operates over 1,500 miles of pipelines, transporting crude oil and natural gas as well as performing processing and treating of natural gas.

Hilcorp and Harvest's primary competitive strengths are our technical expertise in operations and reservoir engineering, our cost-focused operations, our acquisition and development expertise, our experienced management team and our disciplined hedging program. We have been successful in increasing both reserves and production from our properties through a combination of exploration and development drilling, workovers, recompletions, secondary recovery operations and cost management.

All vendor quotes and/or contractor proposals are protected as confidential and proprietary under non-disclosure agreements between Hilcorp/Harvest and its vendor/contractor counterparties.

III. Project Description and Costs

The indicative project fees provided below represent the alternatives described in the Proposal Summary section. More specifically, the following project scenarios are:

1. Two separate volume alternatives for a merchant LNG facility which offers liquefaction capacity only (AIDEA Primary Option);
2. Two separate volume alternatives for delivery of LNG at the Fairbanks city gate (Alternate Proposal 1); and
3. Two separate volume alternatives for LNG sales at the tailgate of an LNG facility (Alternate Proposal 2).

The indicative proposals provided below are based upon detailed discussions with LNG equipment and contracting companies within the previous 12 months. They are project specific

and subject to change until such time as commercial agreements can be reached between Hilcorp/Harvest and an Interior Alaska LNG buyer.

AIDEA Primary Option: With respect to merchant liquefaction capacity, the offer is for cost-of-service based rates and consequently is subject to adjustment over the life of the asset. Interested parties should expect to enter into contracts for capacity with a 10-year initial term. Cost components that may affect adjustments to the per-unit rate will receive periodic evaluation.

100,000 gallons per day capacity: $0.41/gallon or $4.95/mcf
200,000 gallons per day capacity: $0.41/gallon or $4.95/mcf

Alternative Proposal 1 – Delivery at Fairbanks city gate: Hilcorp will provide LNG delivered to the inlet flange of the regasification facility of a Fairbanks utility or business at a fixed price of $15/mcf in year one and escalating at a rate of 2% annually for the initial term of the contract. Interested parties should expect to enter into contracts for service with a 10-year initial term. Delivered price beyond the initial term of the contract will be determined during subsequent negotiations for natural gas supply, liquefaction and transportation services. This alternative will be made available at initial rates of either 100,000 or 200,000 gallons per day depending upon interest expressed by buyers. Expansions of capacity beyond initial capacity rates and in 100,000 gallon per day increments are also subject to sufficient market interest.

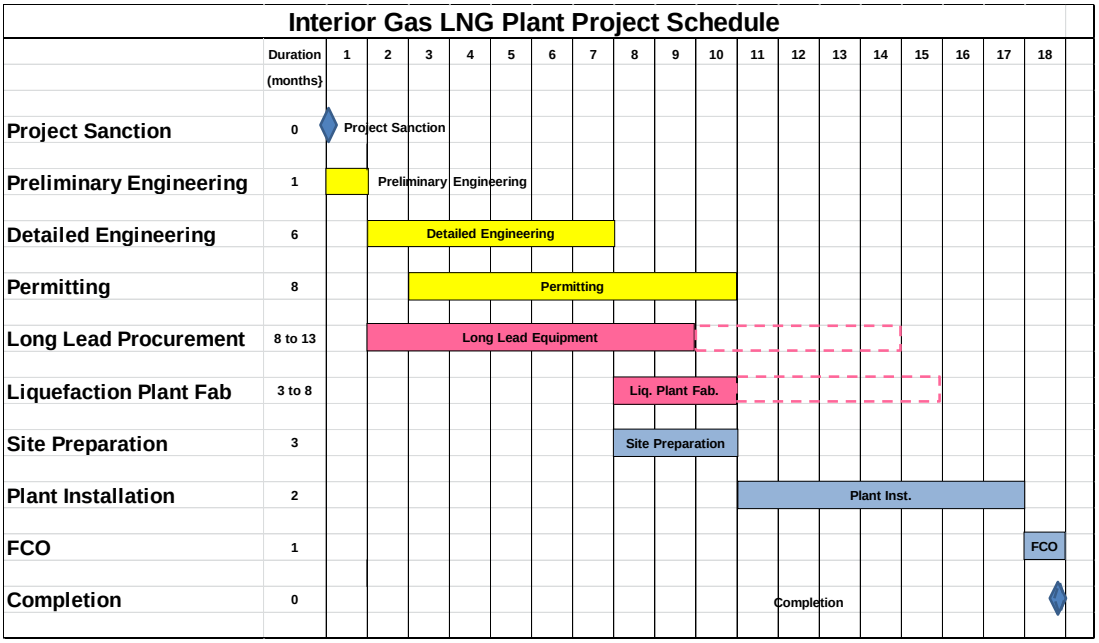
Alternative Proposal 2 – FOB at Plant Tailgate: Hilcorp will provide LNG delivered at the tailgate of an LNG plant for receipt by buyer into ISO containers, rail car, or tank trailer at a cost-of-service based price of $12.25/mcf. Interested parties should expect to enter into contracts for service with a 10-year initial term. The price for gas (delivered at the plant tailgate) beyond the initial term of the contract will be determined during subsequent negotiations for natural gas supply and liquefaction services. Cost components that may affect adjustments to the per-unit rate will receive periodic evaluation. This alternative will be made available at initial rates of either 100,000 or 200,000 gallons per day depending upon interest expressed by buyers. Expansions of capacity beyond the initial capacity rates and in 100,000 gallon per day increments are also subject to sufficient market interest.

IV. Timeline to First Gas

The following project characteristics apply to all three alternative projects:

Project Timeline: As a consequence of Hilcorp/Harvest's ongoing engagement with LNG equipment and contracting companies occurring over the previous 12+ months, and assuming rapid resolution of commercial issues between Hilcorp/Harvest and Interior Alaska LNG buyers, it is possible the typical 36-month LNG project timeline could be accelerated as indicated below.

Hilcorp/Harvest recognizes the importance of expediting First Gas to Interior end-users and is fully aligned with its customers in terms of providing cheaper energy to Fairbanks and North Pole as quickly as possible. Execution of definitive agreements will ultimately determine the specific timing of First Gas for any of the project alternatives. An aggressive but achievable project execution timeline would allow for deliveries of First Gas to the Fairbanks and North Pole markets within 14-18 months of finalizing definitive agreements.



V. Major Assumptions/Financing Considerations

This proposal does not require AIDEA financing, however Hilcorp/Harvest is always interested in discussing creative financing alternatives that will improve the economics of the project. Lower cost natural gas to the Interior residents will increase the likelihood of fuel conversion for homes and businesses and consequently grow the market for LNG which is in the interest of all stakeholders.

Equity capitalization, rates of return, and cost of debt are sensitivities that can be described and discussed during the course of commercial negotiations.

As indicated in the Project Cost and Description section, Buyers of the service(s) offered herein should expect to make a commitment of no less than 10 years initial contract term. Longer term commitments will likely result in more attractive fuel costs for Interior buyers due to the improved economic certainty realized by Hilcorp/Harvest.

VI. How the Proposed Project(s) will meet/fit into IEP Goals

All energy costs are either identified or indicated in the Project Cost and Description section.

VII. Conclusion

In less than three years as an oil and gas operator in Alaska, Hilcorp and Harvest have had a profound impact on the Cook Inlet basin and the energy consumers that rely upon Cook Inlet resource development. Crude oil production in the Cook Inlet has more than doubled since Hilcorp acquired Chevron's assets in 2012 and Cook Inlet gas consumers have witnessed a shift from supply shortage bordering on crisis to contract certainty well into the next decade. Consolidation of the Cook Inlet gas pipeline system into a single regulated transmission system has further enhanced reliability and driven down costs for all Cook Inlet natural gas consumers. Since late 2014 Hilcorp has worked tirelessly to provide similar relief to Interior Alaska, specifically in the form of the agreements executed in November 2014 to purchase and expand the Titan LNG facility formerly owned by Pentex Alaska LLC. Our extraordinary project execution and operational excellence are a direct consequence of our constant focus on cost control and growing our production and reserves. Hilcorp Energy has made over $3 billion dollars in investments in Alaska since 2012 and will continue to explore ways to be part of Alaska's energy solution.

Finalist Summary:
Phoenix Clean Fuels, LLC

PHOENIX CLEAN FUELS PROJECT SUMMARY

PROPOSAL SUMMARY

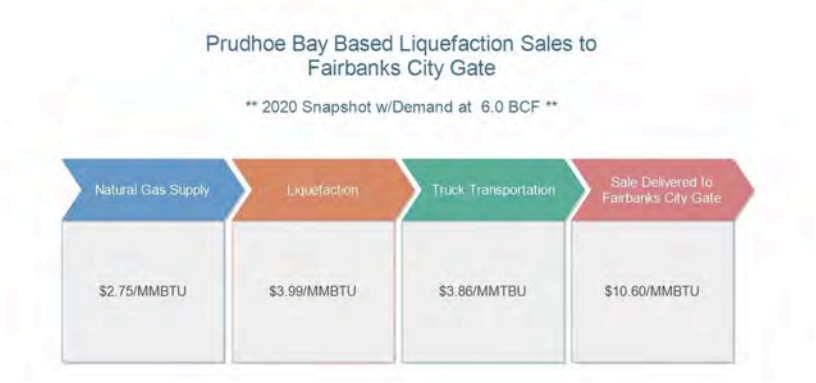
In response to the issuance of the Interior Energy Project (IEP) liquefaction Request for Proposal (RFP), a new project entity has been organized named "Phoenix Clean Fuels". Phoenix has been organized to serve as a project development and operations company for a proposed North Slope liquefaction facility in response to the RFP. Phoenix has identified and organized a group of companies with expertise in project management, engineering, permitting, technology, construction and operations and there are currently seven firms working together with Phoenix to develop the project.

Several of our team members were subcontractors to the MWH team that participated in the IEP project in 2014 to provide operation and maintenance (O&M) expertise for the proposed North Slope liquefaction plant. Following MWH's withdrawal from the project in early 2015, the O&M subcontractor team began discussions with AIDEA to share ideas of how to construct and operate the North Slope liquefaction facility and supply chain more efficiently.

Phoenix has provided an attractive business proposition for supplying liquefied natural gas (LNG) to Fairbanks at a price that has been suggested as a target in order to make the IEP successful. The RFP requested the respondents develop a proposal for Cook Inlet LNG capacity, with alternate proposals being encouraged for (but not limited to) a North Slope liquefaction facility.

Phoenix has proposed to manage all facets of the supply chain including: source and contract the natural gas feedstock, construct and operate a 6.0 BCF/year liquefaction facility on the North Slope (with expansion up to 9.0 BCF/year), manage the LNG sales agreements, and finally provide the transportation of LNG to Fairbanks. The proposed liquefaction facility will be located on AIDEA's recently constructed pad in Prudhoe Bay.

Phoenix plans on delivering LNG to Fairbanks utilizing project owned trailers and contracting with a reputable transportation and logistics company to provide the tractors and drivers. The following value chain analysis depicts LNG delivered to Fairbanks from Phoenix in 2020 when the liquefaction plant will be running at capacity.



BACKGROUND AND EXPERIENCE

The Phoenix project team consists of Scimation (project development/management), TDX Power and Norgasco (who will provide O&M of the liquefaction facility), General Electric Oil and Gas (the technology provider), SLR Consulting (environmental consulting and permitting), Alaska Industrial (transportation and logistics), and Crowley Marine (future business development to potentially expand the liquefaction plant and supply LNG to other remote Alaska markets).

Scimation is the project development/project management lead for Phoenix and has assembled the group of companies presented in this proposal. Scimation was founded in 2003 by several senior energy industry professionals with backgrounds in operations, engineering, process technology development, remote logistics, business development, project finance and strategic business planning. Scimation has a track record of pulling

together complex teams to address large process industry projects including the design, construction and installation of an advanced fuel processing plant in Deadhorse in 2014.

TDX Power serves as a technology advisor and plant operations O&M provider on the Phoenix team. TDX Power has over twenty-five years of experience of O&M in some of the most austere and protected environments of Alaska, including on the North Slope. TDX Power has also been providing remote power generation services in support to the U.S. Government at multiple remote international locations since 2009. TDX Power provides O&M, upgrades, and total engineering solutions both for its regulated utility assets, as well as assets they install (and often operate) for their clients.

Norgasco serves as a technology and natural gas handling advisor as well as a plant operations O&M provider on the Phoenix team. Since 1989, Norgasco has delivered approximately 22 BCF to customers in the Deadhorse area. Norgasco's skilled staff on the North Slope performs all routine and non-routine O&M of plant and gas distribution assets.

GE Oil & Gas has designed systems for LNG production, liquefaction, regasification & storage - both onshore & offshore since the 1990's. GE has extensive experience as one of the world's foremost developers of compression technology for LNG production, having supplied compression trains since the inception of the industry. All of their products are fully supported by one of the industry's most comprehensive global networks of manufacturing, testing and service facilities.

SLR Consulting is a leading international environmental consultancy specializing in providing advice and support on a wide range of strategic and site-specific issues to the oil and gas industry sector. A selection of SLR's global Oil & Gas clients includes: Shell, BP Exploration, Total, and Alyeska Pipeline Service Company.

Alaska Industrial currently operates a 35-tractor fleet, specializing in transportation from Fairbanks to Prudhoe Bay. They are mainline carriers for Halliburton Energy Services supporting Baroid's fracking services. Alaska Industrial currently averages approximately 2,300 loads per year between Fairbanks and the North Slope oil fields.

Crowley LNG and Phoenix have been in discussions about the future potential to develop additional LNG markets, which may justify further expanding the liquefaction facility. These markets include remote villages, mines, etc.

On-site EPC Contractor (TBD), Phoenix intends to solicit competitive bids for the site preparation and construction portion of the project from well-qualified Alaska companies that have extensive work experience on the North Slope, once the front end engineering and design of the facility is complete. A selection of the companies likely to be solicited for proposal are: Peak Oilfield Services; Conam Construction; CH2MHILL; and ASRC.

PROJECT DESCRIPTION AND COSTS

Capital Costs

The initial capacity of the liquefaction facility will be 6.0 BCF/year, with the ability to increase to 9.0 BCF/year by adding a second modular liquefaction train. Phoenix elected to pursue two different paths when evaluating the technology solutions and constructability of a liquefaction facility for the North Slope: 1) a "design-build" approach for a hybrid expander/cascade propane/ethylene system much like the existing plant in Pt. Mackenzie, AK; and 2) an open loop methane expander system from GE Oil and Gas provided in a modular "plug-and-play" design.

The result of this exercise determined that the GE Oil and Gas solution could provide the liquefaction processing equipment, storage tanks, truck loading bays, and associated piping using their modular design, at a competitive cost and on a delivery schedule which will meet the project's challenging economic needs and implementation schedule. All modules, interconnecting piping and cable trays are mechanically fit-tested, and an end-to-end test of the control system is performed at GE's Texas fabrication facility. The plant is then disassembled and shipped to the construction site for reassembly. This approach reduces the risk of cost overruns due to breaks in the scope between multiple major equipment vendors, fabricators, and installation contractors.

Once a preliminary design package (PDP) for the major equipment is complete, Phoenix will utilize a turnkey firm price-contracting strategy and develop an RFP for the installation activities. The installation RFP will be sent to qualified construction companies that operate on the North Slope and include all labor, consumables, heavy equipment and fuel necessary to complete the installation of the liquefaction facility.

The Phoenix liquefaction facility will be located on the recently constructed gravel pad south of Flow Station 3 (FS3). A geotechnical study of the gravel pad will be performed to better define what site improvements are needed and an 8" diameter 1,100' transmission line will be constructed to connect the liquefaction facility to the natural gas source line.

Phoenix will capitalize the LNG trailers for the project as the costs for a transportation company to capitalize the number of trailers needed for the project is cost prohibitive. Based on the annual demand forecasts and seasonality included in the RFP, Phoenix has forecasted the number of trailers needed each year to support the project. The trailers will be procured as demand increases, and during off-peak seasons can be utilized as rolling storage for peak months.

In order to facilitate the startup of the plant and ensure the project has cash reserves on-hand, a working capital advance has been included in the initial funding requested. Additionally, a contingency of 20% was added to the total expected capital costs in order to account for any overruns or additional uncertainties during the constructing the Phoenix liquefaction facility.

The estimated total capital cost of the proposed Phoenix IEP project is approximately $115 MM for the 6.0 BCF/year liquefaction facility, and $52 MM for the 3.0 BCF/year expansion. The following table lists the capital costs (in thousands) by equipment group and activity.

6 BCF Liquefaction Facility and Trailers	
6 BCF Liquefaction Facility	$59,850
Project Management, Engineering, Installation Labor & Equipment	11,500
LNG Trailers	20,297
Working Capital Advance	4,000
Contingency	19,130
	$114,777
3 BCF Liquefaction Facility Expansion and Additional Trailers	
3 BCF Liquefaction Facility Expansion	$30,250
Installation Labor & Equipment	1,750
LNG Trailers	11,372
Contingency	8,524
	$51,896
Total Project Capital Costs	**$ 166,673**

Operating Costs

Qualified TDX/Norgasco operators will staff the plant with relevant experience in gas handling and processing.

Phoenix is proposing that natural gas will be purchased from GVEA (through an existing agreement with BP) for feedstock as well as utility power generation and will be metered through the newly constructed 8" transmission line from BP's FS3 to the liquefaction facility.

LNG will be transported to Fairbanks in Phoenix owned 10,500 gallon trailers, by Alaska Industrial. The estimated cost of transportation activities includes a tractor and operator as well as a fuel surcharge (FSC).

The Phoenix liquefaction facility will utilize natural gas driven reciprocating compressors for the liquefaction process and natural gas driven power generation (utility heat, lighting, control power). The costs for the liquefaction are variable and have been modeled as such in the economic model.

The estimated repair and replacement costs include preventative maintenance activities, major equipment overhauls, scheduled maintenance and inspections (including vessels), trailer maintenance, and DOT pipeline inspections.

Qualified management personnel will be required to support the project. The costs for operations management, commercial/contract management, plant accounting and financial reporting, legal, engineering consulting, and office related costs have been estimated and included.

Other costs include the pad site lease, insurances, property tax, waste disposal, chemicals, communication and IT costs. The pad site lease costs are based on the current lease costs with AIDEA and the State of Alaska, and insurance based on property value and recent experience with new facilities Scimation has installed on the North Slope.

A contingency of 15% was added to the total expected fixed operating capital costs in order to account for uncertainties in operating the Phoenix liquefaction facility at this early stage of the development.

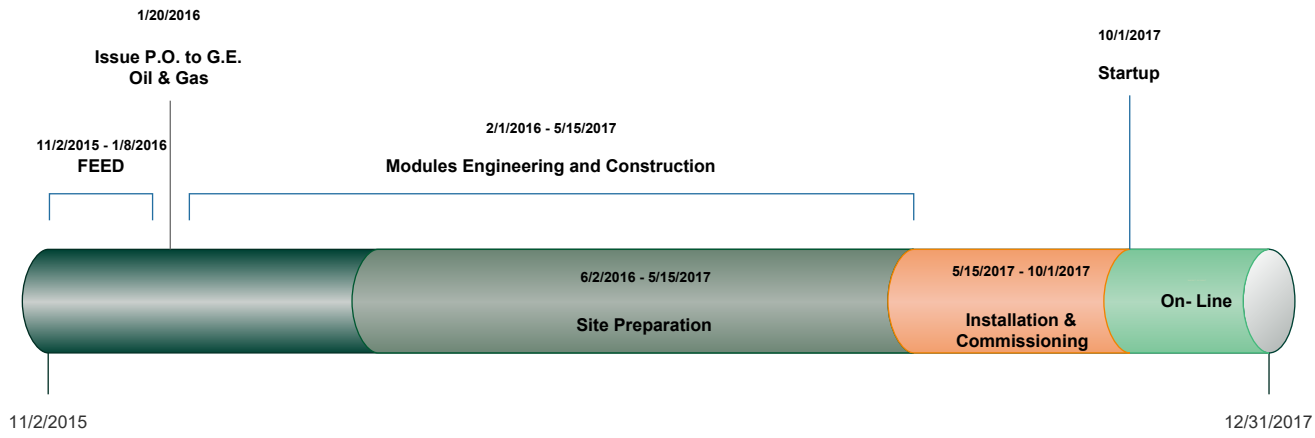
The following table provides operating cost estimates (in thousands) for the Phoenix liquefaction facility for year 2020, when demand is forecasted to be 6.0 BCF/year.

	2020
Operating Costs	
Labor	3,047
Purchased Natural Gas Feedstock (A)	16,500
LNG Transportation & Logistics (A)	23,153
Natural Gas for Power Generation and Compression (B)	1,009
Repair and Replacement	1,934
Overhead/General & Administration	1,844
Other	2,457
Contingency	1,027
Total Operating Costs	$50,971

(A) Variable Cost
(B) Variable and Fixed Cost Components

TIMELINE TO FIRST GAS

Assuming that the project kickoff and initial funding take place in January 2016, the start of normal operations is projected in Q4 2017. Below is a project timeline with important milestones.



MAJOR ASSUMPTIONS / FINANCING CONSIDERATIONS

The total cost to construct the plant and procure the necessary trailers is estimated to be $167 MM, including

contingency. In order to complete a project of this magnitude, outside financing is required and Phoenix is proposing to use the AIDEA financing tools presented in the RFP in the following manner:

AIDEA Financing	Amount	Interest Rate	Payback period	Assumed Payment Terms	Total Principle	Total Interest
Capital Budget Appropriation	$45,000	0.0%	N/A	Capital contribution to the project with a corresponding equity stake		
AIDEA SB23 SETS	72,200	3.0%	20 years	Principle repayments begin after year 5; Interest payments begin year 1	72,200	28,158
AIDEA SB23 Bonds	49,473	3.5%	15 years	Principle repayments begin after year 1; Interest payments begin year 1	49,473	13,853
	$166,673				$121,673	$42,011

The Phoenix economic model is based on the Fairbanks utilities committing to the natural gas demand volumes in the RFP. Until other LNG markets can be identified through business development efforts, Phoenix is asking for long term (20 year) take or pay agreements from the utilities to support the project investment.

ABILITY TO MEET IEP GOALS

The Phoenix liquefaction facility is projected to startup Q4 2017 with an initial capacity of 6.0 BCF/year (200,000 gal/day) of LNG. In order to satisfy the IEP demand numbers provided in the RFP a 3.0 BCF/year (100,000 gal/day) expansion is planned for construction in 2020, with peak production available in 2021. Additional expansions may be justified to address other demands discovered through Phoenix business development efforts.

Based on current economic models and the goals of the IEP, Phoenix will deliver LNG to Fairbanks beginning in Q4 2017 at $10/MMbtu. Over the next four years (2018- 2021) the price will escalate by 2% annually (to compensate for escalating operating costs) until reaching $11/MMbtu in 2022. The price will then be locked in at $11/MMbtu until 2036.

CONCLUSION

In summary, Phoenix has determined that a liquefaction facility in Prudhoe Bay is in the best interest of the State and consumers requiring a clean affordable energy source. Potential delays to the permitting activities and the uncertain (and high) cost of natural gas feedstock in the Cook Inlet is more likely be prohibitive to delivering affordable LNG and in the timeframe requested. In economic modeling exercises completed by the Phoenix team, delivered Cook Inlet sourced gas was $3-5/MMbtu more expensive than the proposed project on the North Slope due to feedstock costs.

The Phoenix team has engineered a project solution that entails experience, track record, technology and sustainability and is capable to meet the IEP goals and an accelerated project timeline.

Finalist Summary:
Salix, Inc. (Avista Corporation)

Salix, Inc. Summary Response to Alaska Industrial Development Export Authority "AIDEA" Request for Proposal #15142, September 3, 2015

Proposal Summary

Salix, Inc. (Salix) is responding to AIDEA's request for proposal (RFP) "primary option" for liquefied natural gas (LNG) capacity only and is excluding natural gas supply to the LNG plant and transportation of LNG from the plant to the Interior Alaska storage facility. Salix is proposing to construct an LNG liquefaction plant in the Cook Inlet region with an initial phase capacity of 200,000 gallons per day, with expansion capability up to 400,000 gallons per day. Salix has identified and selected a team of professionals with the necessary experience and qualifications with regard to LNG technology and the infrastructure in Alaska. Salix and its project team have the resources and capability needed to complete this project in a timely, efficient and cost-effective manner consistent with the goals of the Interior Energy Project (IEP).

The proposal includes a balance of equity investment, AIDEA SETS financing and AIDEA capital appropriation designed to meet the goals of the IEP and lower the costs of energy to the residents and businesses of Interior Alaska.

Salix has estimated a liquefaction cost of $2.87 per MCF for the initial phase. Combining liquefaction with estimates of the other elements of the natural gas supply chain presents the opportunity to meet the IEP's goal of $15 per MCF and provides substantial cost savings to Interior Alaska customers.

Background and Experience

Salix

Salix is an unregulated subsidiary of Avista Corporation (Avista), an electric and natural gas utility company that has been in business for more than 125 years. Salix was launched in 2014 to explore markets that could be served with LNG, primarily in western North America. This includes local distribution, power generation, marine bunkering and transportation fuels.

Salix will work with its team of experienced professionals to find the best options for bringing lower cost, safe and cleaner LNG to Fairbanks/Interior Alaska, replacing higher-cost fuels. Salix's emphasis is on building strong relationships to find the best solutions, logistics and costs that provide the optimal value proposition to serve Fairbanks' energy needs.

Salix's efforts are focused on bringing natural gas to Fairbanks and helping residents and businesses access the benefits of clean, safe, reliable natural gas. Salix has the experience (through its parent, Avista) and its team of experienced professionals to manage and complete a complex LNG infrastructure project.

Avista has been working with the communities and customers it serves to provide electric service since 1889 and natural gas service since 1958. Avista's corporate headquarters are in Spokane, the second-largest city in Washington. The city serves as the business, transportation, medical, industrial and cultural hub of the Inland Northwest region (eastern Washington and northern Idaho). Avista provides

energy services to 385,000 electric customers and 330,000 natural gas customers in eastern Washington, northern Idaho, parts of southern and eastern Oregon, and in Juneau, Alaska.

In 2014, Avista acquired Alaska Energy and Resources Company (AERC), whose primary subsidiary is Alaska Electric Light and Power Company (AEL&P). AEL&P has served Juneau for over 120 years and currently provides electric service to over 16,000 customers. With a presence in Southeast Alaska through AEL&P, Avista is exploring strategic opportunities to bring natural gas to the region.

Avista has extensive knowledge of the U.S. Pacific Northwest energy markets and broad expertise in energy infrastructure development.

Avista has long-standing relationships with local, state and federal governmental agencies, legislative bodies, Native American Tribes, Non-Governmental Organizations, customers and other stakeholders. Avista has a long history of developing durable stakeholder relationships, with an emphasis on collaboration, and forging innovative solutions in permitting complex energy projects. Avista has brought this approach to hydroelectric project relicensing efforts, siting and construction of natural gas-fired electric generation facilities and a multitude of major energy-related construction projects.

As a publicly traded energy company with market capitalization of approximately $2 billion and an investment-grade credit rating, Avista has existing financial resources and financial relationships that provide access to a mix of debt and equity transactions sufficient to meet funding requirements for the proposed project.

Over 125 years of energy experience has also taught Avista the value of strong relationships. It is customary for Avista to engage the best-fit consultant and contractor expertise to ensure the success of major projects. Following are introductions to Salix's team of experienced professionals.

Black & Veatch

EPC Contractor: Black & Veatch has developed a standard LNG plant for smaller scale operations providing an excellent fit for this project. Black & Veatch has combined its LNG technology expertise with its extensive EPC (Engineering, Procurement and Construction) contracting experience to develop a unique one-stop-shop LNG solution for the North American market: Small Scale PRICO® (SSP) 200.

As a technology platform, Black & Veatch's energy efficient PRICO® technology is proven in over 25 operating LNG production plants, which have so far produced over 160 million metric tons of LNG. Black & Veatch has developed and built these large and small scale LNG production plants all over the world in roles from engineering joint venture partner and consortium member to full EPC contractor. The SSP-200 builds on Black & Veatch's record of successful project delivery, and it has been designed specifically for small-scale North American applications.

Braemar Engineering

Owner's Engineer: Braemar Engineering is a global leader in LNG plant and marine consulting, design, design-build, operations and project management for clients worldwide. Braemar Engineering's U.S. LNG Group has 45 years of experience providing technical advisory services and engineering support to clients in the LNG industry including all existing LNG import facilities in the United States, over three quarters of the North American peak shaving facilities and over half of the proposed LNG export facilities in the United States. Braemar Engineering is a member of the Braemar Seascope Group.

HDR

Engineering Consultant: HDR is an independent multidisciplinary engineering company based in Omaha, Nebraska. HDR has worked on projects in all 50 states and in 60 countries. With over 35 years experience in Alaska, HDR provides a full range of permitting, engineering, infrastructure development and consulting services in support of resource development statewide. HDR has long met the needs and exceeded the expectations of clients operating in Alaska. Recently, HDR acquired the assets of MEI, LLC, a leading LNG consulting firm, bringing nearly 40 years of engineering and consulting experience in the oil and gas industry. HDR is currently working on multiple LNG projects across North America and in the Pacific, seamlessly providing conceptual design and FEED studies, siting and permitting, and detailed design solutions for clients in the transportation, maritime, rail and power sectors. HDR brings unique high-value insights regarding the local opportunities and challenges associated with Salix's development of its LNG project in Alaska.

Haskell Corporation

Industrial General Contractor: Haskell Corporation is a well-respected regional industrial general contractor and fabricator based in Bellingham, Washington. Having been in continuous operation since 1890, for the past 45 years Haskell has primarily served the energy sector, focusing on projects in the oil and gas, power generation and renewable energy industries. Haskell Corporation has specialized in remote area installations in Alaska since 1949. This work has included such diverse industries as power generation, natural gas, petroleum, pulp and paper, modular construction, pipeline, mining, public schools and military installations. This work has taken Haskell to virtually every corner of the state including the Aleutian Islands. Haskell is well known for its ability to perform on very short notice, to perform effectively in remote and difficult environments, and to efficiently manage projects that require a high level of logistical expertise.

PROJECT DESCRIPTION AND COSTS

Salix's current project development includes site selection, site plan design and layout, on-site technical fatal flaw analysis, preliminary environmental assessment, preliminary thermal and vapor assessment, technology vendor selection, project team selection (design, engineering, permitting, and construction), stakeholder engagement and financial modeling. Salix's liquefaction solution incorporates multiple favorable advantages of a Cook Inlet liquefaction facility including:

- Simple pretreatment of pipeline natural gas with amine and mol sieve technology
- Energy efficient PRICO® single mixed refrigerant (SMR) liquefaction technology
- EPC solution for the liquefaction and balance of plant, with one overall project construction contract supported by Black & Veatch
- Access to the skilled local labor market
- Favorable materials procurement and delivery logistics
- Proximity to the Mat-Su Borough and Anchorage for efficient and economical project support services

All of these factors contribute to a lower cost, lower risk and faster delivered liquefaction project.

Salix has identified site alternatives of sufficient size for both the initial construction phase and for future expansion, good transportation access, and accessibility to natural gas supply and other nearby utilities.

Salix estimates the total preliminary capital cost for the liquefaction facility to be $115 million with estimated operating costs, including power costs, of the first phase LNG plant expected to be $8.6 million annually (real dollars 2015).

TIMELINE TO FIRST GAS

Deliveries of first gas from the LNG plant will need to be coordinated with the start of commercial operation of the Interior utilities' LNG storage and re-gasification facilities. Salix has developed a permit plan and preliminary schedule for development of the LNG plant and anticipates a project schedule from date of contract award to date of plant commissioning of approximately 24 months. This includes a contract award date of January 1, 2016, and front-end engineering and design completed by June 30, 2016. Major equipment procurement would begin on March 1, 2016, and be completed by April 30, 2017. Permitting would begin on January 1, 2016, and is estimated to be completed by April 30, 2017, with site construction commencing on May 1, 2017, and project commercial operation certification planned in early 2018.

MAJOR ASSUMPTIONS/FINANCING CONSIDERATIONS

In order to meet the goals of the IEP, Salix believes that AIDEA SETS financing and the AIDEA capital appropriation are necessary to lower the costs of energy to the residents and businesses of Interior Alaska. Salix's baseline proposed financing plan anticipates a $20 million equity investment by Salix, $45 million of capital appropriation by AIDEA and $50 million of AIDEA SB 23 SETS financing, which together total $115 million of anticipated project financing needed for the initial 200,000 gallons per day liquefaction plant. Salix's baseline financing plan maximizes low-cost AIDEA financing to meet the financial objectives of the IEP and does not include higher cost third-party lender financing. However, if the overall supply chain economics and adequate liquefaction sales agreements support third-party financing, Salix will consider substituting third-party financing for AIDEA funding.

Salix would expect to enter into long-term Tolling Service Agreements (TSAs) with the Interior utilities with terms of 20 years. The agreements would be designed to compensate Salix for its fixed costs, variable costs and a negotiated rate of return. The agreements would be structured like a utility cost-of-service model. Under the proposed cost-of-service commercial structure, the Interior utilities would be responsible for the majority of the demand, for which Salix assumed the utility demand profile indicated in the RFP.

Salix is committed to a collaborative commercial structure that balances project risks and rewards among the project stakeholders, including the project owner (Salix), project financier (AIDEA), project preferred customers (Interior utilities), state and local government agencies and regulators. Salix's proposal identifies commercial tools that facilitate good faith negotiations to achieve an agreement satisfactory to all parties.

HOW THE PROPOSED PROJECT WILL MEET/FIT INTO IEP GOALS

Salix's financial model indicates a 20-year average liquefaction price of $2.87 per MCF (real dollars 2015). This price is based on the assumptions outlined in the preceding sections with respect to capital costs, operating costs, AIDEA financing tools and our investment based on production and demand at approximately 200,000 gallons per day (the proposed initial plant capacity).

Combining liquefaction with natural gas supply, transportation (from the LNG plant to the storage facility in Fairbanks) and distribution costs provides the opportunity to meet the IEP's goal of $15 per MCF and provide substantial savings to Interior Alaska customers.

Energy costs for communities in Alaska's interior are among the highest in the country. Petroleum products (fuel oil, diesel, gasoline, naphtha) dominate heating and transportation energy supplies and have been the primary fuel source for power generation especially in remote interior communities. Wood-burning appliances are also major energy sources for residential heating. Consequently, air quality in the Fairbanks North Star Borough does not meet regulatory standards, posing health risks and potential penalties for non-attainment. The goals of the IEP are to provide energy cost relief and improve air quality. AIDEA, in support of the IEP goals, seeks to finance and facilitate a project that supplies a clean energy alternative at the lowest possible cost to as many people as quickly as possible. Salix believes its LNG solution will best meet these objectives by providing a safe, reliable, clean and economical energy alternative for Alaska's Interior communities.

CONCLUSION

Salix has assembled a solid team of experienced professionals with extensive LNG expertise, LNG technology leadership and knowledge, complex energy project experience and established relationships with local, regional and state communities. Salix believes it can permit, construct and commission the LNG plant on a schedule to meet the IEP's goal of delivering LNG as quickly as possible.

Salix, Inc.'s Response to Alaska Industrial Development Export Authority "AIDEA" Request for Proposal #15142 does not constitute a legal offer or otherwise create a binding agreement or obligation to consummate any proposed or contemplated transaction. Any binding obligation or agreement will be created only by the full execution and delivery of definitive agreements, the provisions of which will be subject to obtaining all necessary approvals, including regulatory approvals, and such definitive agreements will supersede this response in its entirety. This response is based on Salix Inc.'s understanding and information available to Salix Inc. as of the date of this response and this response may be modified by Salix Inc. to the extent necessary to reflect any new or changed understanding or information.

Finalist Summary:
Spectrum LNG, LLC

SPECTRUM LNG

September 3, 2015

ALASKA INDUSTRIAL DEVELOPMENT & EXPORT AUTHORITY
Attention: Tom Erickson
813 W. Northern Lights Blvd.
Anchorage, AK 99503

Re: Interior Energy Project (IEP) RFP Number: 15142
Spectrum LNG, LLC 5 Page IEP Summary

Dear Mr. Erickson,

Attached is the response from Spectrum LNG, LLC to your August 27, 2015 request for a 5 page summary of the Spectrum project. As we understand this is the only required deliverable prior to the Spectrum RFP Feedback Meeting scheduled for Thursday September 10, 2015 at noon in the AIDEA offices.

Please respond and confirm that AIDEA has received this electronic submittal from Spectrum LNG, LLC.

Thank you and we are looking forward to the RFP Feedback Meeting.

Respectively Submitted,

Keith Hand
CFO

Spectrum LNG, LLC

Proposal Summary

Spectrum LNG, LLC (Spectrum) proposed two separate development locations at sites where we have already performed preliminary permitting and design work. The location for a Cook Inlet supplied project is on property we own and is adjacent to the LNG plant we developed in the '90's now known as the Titan LNG plant. The Prudhoe Bay location is the site we leased and subsequently transferred to AIDEA in 2014.

Our analysis indicates that the Prudhoe Bay site will deliver cheaper gas to Fairbanks by a significant margin. Since the stated goal of the Interior Energy Project (IEP) is to serve the most at the least cost, we presume AIDEA has requested a summary of the Prudhoe Bay project, which was the focus of our response to AIDEA's RFP 15142.

Spectrum's proposal is largely along the lines of its original development plans for the Prudhoe Bay site. The significant difference is the financing of the capital cost of the project. What remains unchanged is our belief that the project will only succeed in serving the most for the least if GVEA participates by using LNG for fueling its North Pole power plant. Absent this desirable base load to average down the seasonal demand swing, the IEP will be forced to either over build LNG storage in Fairbanks or plant capacity in Prudhoe Bay. Either way, the cost of service to the end user is increased. Therefor Spectrum has continued to negotiate with GVEA for an offtake agreement.

Recently GVEA requested a specific proposal from Spectrum. In their request, GVEA specified their preference for how the plant should be financed and the capacity of the plant. Specifically they requested that the plant size match what was specified in AIDEA's RFP and that the grant funding be used preferentially to the SETS funding and no private equity capital be used. This capital stack would insure the cheapest possible liquefaction costs.

Spectrum selected a plant design that provides the ability to take full advantage of the ambient temperature swing in Prudhoe so during the winter period the plant will produce significantly more than summer, matching the demand curve for the heating load in Fairbanks. This design reduces the amount of storage needed in Fairbanks and reduces the increased plant capacity required to meet the peak winter demand. This is the same design we built and operate daily at Spectrum's Ehrenberg Arizona Plant so there is no design risk associated with it.

Our engineering modeling to date on this project shows that each of the two trains will produce an annualized average of 121,000 gallons per day for a total of close to 7 Bcf/year of liquefaction capacity. While this volume is slightly more that AIDEA requested in the RFP, it is built around Cat 3612 model engines for compression power.

In summary Spectrum designed its proposal to reduce CAPEX both in the plant construction and other areas such as LNG storage in Fairbanks for the IEP and tailored the capital stack according to the wishes of the largest potential customer. This approach is the **most consistent approach possible with the goals of the IEP of serving the most for the least.**

Background and Experience of Proposer's Firm

Spectrum is the largest contract LNG producer in the US. We conceived, designed, built, own and operate our 65,000 gallon per day LNG plant in Ehrenberg, Arizona. This plant is in its 6th year of operation under a 10 year contract with Clean Energy Fuels Corp., the largest distributor of LNG in the US. We are expanding this plant and expect it to produce 100,000 gallons per day by mid 2016.

The principals of Spectrum have significant experience with LNG and natural gas plant design, construction and operation in Alaska including Prudhoe Bay. Spectrum's principals were the originator of the entire Fairbanks Natural Gas, Co. and Pt. MacKenzie LNG plant development and supply chain. This included the pioneering repurposing of a natural gas liquids plant into an LNG plant and all aspects of the development and startup of the project.

Spectrum was shortlisted by AIDEA in its original IEP RFP to provide LNG. Later AIDEA purchased Spectrum's subsidiary Spectrum Alaska, LLC to take advantage of its advanced stage of development and optimum plant location in Prudhoe Bay. Spectrum selected this site and began developing it into a usable location for an LNG Plant in 2012, a year before SB23 was passed in 2013.

Last year we produced and shipped over 20,000,000 gallons of LNG. This year we are on track to produce 23,000,000.

Spectrum is likely the most seasoned LNG developer/operator responding to AIDEA's RFP and its principals have a long history of successful natural gas and liquid fuel projects in Alaska. In addition to Spectrum's broad experience we use superior contractors such as Conam Construction Company for field construction and project management as well as numerous specialty vendors such as SME Associates (SST in our proposal) for key process components. Spectrum's relationships with these vendors/suppliers span decades.

Project Description and Costs

Spectrum uses a cost model similar to a regulated utility model with the exception that the revenue requirement is negotiated and agreed to for 15 years. This model guarantees that as more customers convert to natural gas, the less expensive the service becomes for everyone. Any additional profit is essentially paid back directly to the customer in a form of lower gas prices the following year. Because no high cost equity requiring a 10-13% return is included in our preferred proposal, the **cost of gas delivered to the Fairbanks city gate is estimated to be below $8/MMBtu** once the plant reaches full capacity (year 3 according to AIDEA's projections).

An open cycle turbo expander process has been selected for this application. This is the same process we use at our Arizona plant and used at the original Pt. MacKenzie LNG plant. Utilizing the gravel pad that AIDEA installed in Prudhoe Bay, the cost of our two train LNG plant is estimated at $67.2 million to complete. Adding a $6.7 million contingency and a $6.1 million construction completion reserve, the total CAPEX budget is $80 million.

Annual operating expenses for the Prudhoe Bay plant are $4 million. This does not include property taxes, maintenance reserves, owner's risks and management fee which total $3 million per year. The annual revenue requirement for the plant is $7 million.

Spectrum has proposed a Capital structure that uses $45 million in grant funding (capital appropriation) and $35 million in SETS funding per GVEA's request. Spectrum believes the ultimate capital stack will be negotiated between AIDEA and GVEA. Ultimately the SETS debt service will be added to the annual revenue requirement. The SETS loan funds were assumed to have a zero interest rate as this would be most consistent with the stated goal of the IEP, serving the most for the least cost.

Timeline to First Gas

AIDEA has issued a schedule indicating they should complete negotiations with the recommended partner by November 30, 2015. We note that the AIDEA board has a scheduled meeting on December 3rd where we assume the board will act on the matter. So a start date of early December 2015 is assumed.

The major components required for the plant are very similar if not the same as those used for gas processing around the world. As a result of the major down turn in the oil and gas sector and based on recent quotes from major equipment vendors, lead times have shortened considerably. Conam Construction, our preferred construction contractor, has indicated that the most cost effective approach is to have a single mobilization that would begin in March 2016 with the installation of the gas pipeline to the pad site which requires a short ice road. The balance of the work can be scheduled so a steady, moderately sized work force can continue on site preparing for the arrival of major components in June through October. Interconnects will be completed in October/November with functional check out and start up in December of 2016. Sustained production will be established in December 2016/January 2017. At this point the critical path items are the two cold boxes. This schedule is only possible due to the reduced vendor lead times and an early December 2015 notice to proceed.

Currently Spectrum is only pursuing the liquefaction service component of the IEP. However we are experienced in all aspects of the overall project and fully understand and appreciate the necessity of coordination between production and consumption of the product. It will be of little benefit to the Interior to have production capacity available in Prudhoe Bay in January of 2017 if the LNG satellite facilities in Fairbanks are not ready to go into service. Therefor we suggest closely coordinating the ordering of the LNG storage equipment (tanks, etc.) for the Prudhoe Bay plant with the ordering of the tanks and vaporizers for the Fairbanks satellite plant. We envision this satellite to be constructed on GVEA's property adjacent to their North Pole power plant. Spectrum is also willing to coordinate the truck transportation and LNG trailers should we be selected to develop the LNG supply.

While GVEA has yet to agree to the Spectrum July 14th proposal, it is consistent with their request and just as importantly it follows GVEA's actions to date. GVEA purchased the land adjacent to the North Pole plant in anticipation of installing an LNG storage and vaporization satellite. GVEA negotiated a 15 year gas supply agreement for Prudhoe Bay gas. GVEA did participate with Flint

Hills, their long time fuel provider, and hired Chicago Bridge and Iron (CB&I) to perform a study about producing LNG in Prudhoe Bay. During this process CB&I selected the exact same plant location that Spectrum did, however Spectrum acted first and procured the lease at this desired location.

The satellite that GVEA needs to provide service to its power plant can use tanks similar to those that Spectrum will install at the Prudhoe Bay plant. This satellite will be able to provide additional service to meet the needs of both Interior Gas Utility and Fairbanks Natural Gas.

Major Assumptions / Financing Considerations

To minimize cost of gas to the consumers, 100% AIDEA funds were assumed. Equity is available from Spectrum, but would require a significantly higher return than AIDEA funds and would add directly to the price of gas with no additional benefit. Due to Spectrum's overall low project cost, the significant remaining AIDEA funds can be utilized for conversions and/or distribution pipe installation. It was assumed that $45M of the grant funds were utilized with the balance in SETS loans at zero interest rates. Lower grant utilization of only $25M is also possible, but the higher cost will be passed directly onto the consumers.

Spectrum has been adamant and vocal about the price of gas in Prudhoe Bay. GVEA negotiated a 15 year gas supply agreement with BP in 2012 to supply this project. The exact pricing is confidential but reported to be in the $2.50 to $3.75 range depending on the price of crude oil. Spectrum's principals have been party to many gas contracts beginning in 1986 with ARCO Alaska and Sohio Petroleum Co. On more than one occasion we purchased gas for $1.00/MMBtu and believe this provides more than fair value to the producer considering the poor quality of the gas and the fact that it is stranded. However, the fewer remaining producers at the time of the BP/GVEA negotiations did not feel inclined to compete for the sale and thus the price reflects close to current Henry Hub pricing even though it is stranded and does not meet pipeline quality without expensive treating/purification.

A significant change has occurred since the execution of the BP/GVEA gas sales agreement. Hilcorp purchased certain producing assets from BP and has current gas production available for sale now. The market is beginning to behave as expected. We have been told that Hilcorp has agreed to sell gas on the North Slope for $1.00/MMBtu. We attribute this to two factors. First, Hilcorp is a more nimble and competitive/profit driven company than the larger producers and second, the market may be increasing its belief that the IEP will actually become a reality and there is a more viable opportunity of actually making a sale. The point is, whether it is Hilcorp, BP, ConocoPhillips or EXXON as the IEP moves toward reality, the producers will give more serious consideration to pursuing the sale of gas, as this is how they make their money. The only lever that the producers have to differentiate themselves from each other is price.

Other factors are involved in the gas price. The Governor recently mentioned the potential for a reserves tax. Typically reserves taxes are not applied to those reserves that are under production. So the producers may have new motivation for making the sale. Also, given the political likelihood of another attempt to repeal SB21 to address the State's budget gap, the producers may be willing to help the IEP by providing a cheaper gas supply to the project in order to

generate badly needed goodwill. Finally, it is very unlikely that a producer such as Hilcorp would provide a cheaper gas supply exclusively to one aspiring LNG producer, rather the gas would be made available to any successful developer, i.e. AIDEA should not show preference between proposals based on price of gas when dealing with Prudhoe Bay liquefaction options. Ultimately the lowest priced producer will sell to the proposer AIDEA selects.

How the Proposed Project will meet / fit into the IEP Goals

The Spectrum proposal meets the goals of the IEP and betters the Governor's promise of $10/MMBtu gas at the city gate valve. By utilizing only a portion of the SB23 capital appropriation and SETS loan funds, the LNG produced will be the most efficiently financed and therefore affordable to the most interior residents as quickly as possible.

Conclusion

Largely because we have done this project before, we best understand what is involved. As the entrepreneurs that founded the enterprise that made the first delivery and distribution of natural gas to Fairbanks we recall vividly the economic pain associated with slow market adoption/conversions. Given the current low oil price, this concern is just as real today as it was when we brought the first tanker of LNG to Fairbanks in 1997. No matter how many experts are hired to study the matter, the rate at which potential customers convert to becoming real customers is only known after the fact.

Spectrum wants to be involved with a successful Interior Energy Project. Building the most cost effective LNG plant in Prudhoe Bay without the rest of the chain also being successful is not something in which we wish to participate. This explains why we have consistently pursued GVEA as the needed base load customer. The IEP might succeed without the GVEA load, but it will not be nearly as successful as it could be with the base load from the GVEA power plant. Without this load, the IEP will have to overbuild either plant capacity or storage capacity, or both. This will increase the cost of service to the customer and lessen the motivation to convert. Having fewer customers to spread the cost only compounds the problem.

There is absolutely no substitute for experience. Spectrum has the most experience when it comes to making the IEP a reality. We have dealt with most every potential problem that can arise from this Alaskan LNG effort. From gas negotiations, pipeline connections, the nuts and bolts of liquefaction plants, trucking obstacles and logistics, storage and vaporization issues, RCA/APUC utility certifications, the installation of distribution piping and ultimately the conversion of customer equipment from oil to natural gas are all in our resume.

Our experience creating FNG was a technical success but an economic disappointment. Had we had any large base load customer such as GVEA, the IEP would not be needed today. We applied this lesson to our subsequent LNG project in Arizona by negotiating a ten year sales agreement with Clean Energy Fuels. We believe this is a very valuable lesson that should be applied to the present situation, especially in light of current oil prices.

Finalist Summary:
WesPac Midstream, LLC

WESPAC MIDSTREAM

2355 Main Street, Suite 210 • Irvine, CA 92614
Telephone: (949) 222-2852 • Fax: (949) 222-0992

bbarnds@wespac.com

September 3, 2015

Alaska Industrial Development & Export Authority
Attn: Procurement Department
Tom Erickson
813 W. Northern Lights
Anchorage, AK 99503

RE RFP Number: 15142
Project Site: Interior Alaska
Project Title: Interior Energy Project

Dear Tom:

WesPac Midstream LLC ("WesPac") greatly appreciates being selected as a finalist to meet the goals of the Interior Energy Project and the opportunity to advance to Phase Two of the IEP selection process. WesPac respectfully submits its 5-page summary of our proposal pursuant to your Letter of Negotiations, dated August 27, 2015. The 5-page summary follows the outline provided and offers what we believe to be a concise summary of the Primary Option, Alternate 1 and Alternate 2. We intentionally omitted reference to Alternate 3 as submitted in our original response dated August 3, 2015 based on feedback from your office. It is our understanding that Alternate 3 as submitted is outside the scope for the RFP. Please advise if we need to further clarify the omission of Alternate 3.

We look forward to our RFP Feedback Meeting with you and the rest of the AIDEA team on September 11th at 10 AM. In the meantime WesPac is available to answer any questions you may have regarding the 5-page summary or other LNG and gas development activities currently underway by WesPac in Alaska. Please direct any questions to myself at 713 502 1482 or Michael Cox at 949 222 9908.

Sincerely,

Brad A. Barnds
Senior Vice President

Five-Page Summary
WesPac Midstream LLC
Response to RFP #15142
Non Confidential Information

I. Proposal Summary

WesPac offers its responses to AIDEA's RFP #15142 for the sole purpose of meeting AIDEA's primary goal "to facilitate and develop a low cost natural gas supply chain to provide energy relief for Interior Alaska and improve air quality in the Fairbanks North Star Borough." WesPac's proposal meets AIDEA's primary goal by combining WesPac's market knowledge, experience, and access to capital, with the benefits of AIDEA financing options to lower the delivered cost of gas to the residents of Fairbanks, the Interior and all of Alaska. WesPac's proposal also offers opportunities to share infrastructure and lower overall costs by delivering LNG to coastal and interior markets.

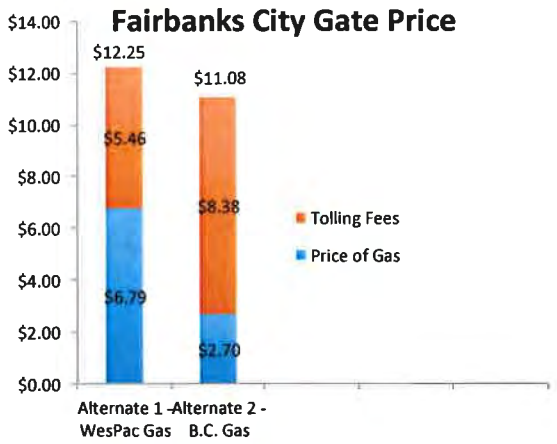
WesPac's proposal includes a primary option and two alternate solutions:

- The Primary Option is a standalone LNG facility at Port MacKenzie developed by WesPac in two separate phases (Primary Option). In Phase 1, the facility would be capable of producing 200,000 gallons per day (GPD) by 1st Qtr. 2018. In Phase 2, assuming market demand, the facility would be expanded by 100,000 GPD as early as 1st Qtr. 2022. WesPac has an exclusivity agreement with the Matanuska Susitna Borough to develop the LNG facility on 44 acres within the Port. WesPac has performed appropriate siting, permitting and pre FEED engineering work and has found no fatal flaws in its Primary Option. The Primary Option does not include feedstock gas or the transport of LNG to Fairbanks. WesPac proposes a tolling fee of $3.46 per MMBtu to provide liquefaction and storage services.

- Alternate 1 is a bundled energy solution that combines the Primary Option with long-term gas supply from WesPac's proprietary gas production in the Cook Inlet and the transport of LNG to Fairbanks. WesPac has partnered with BlueCrest Energy, Inc. to acquire 100% working interest in the shallow gas zones in the Cosmopolitan field near Anchor Point, AK. The Cosmopolitan field is the largest undeveloped oil and gas field in the Cook Inlet with substantial proven and probable reserves. These reserves have been evaluated and substantiated by three different reservoir consultants including the preeminent reservoir engineering firm Ryder Scott. Up to 70 MMcfd of gas will be produced from two offshore platforms commencing as early as October 2017. The Cosmopolitan gas reserves have an anticipated reserve life in excess of 20 years. WesPac anticipates the cost of gas feedstock will be $1.20 per MMBtu lower than the expected prevailing market price of gas in 2018. The estimated total delivered price of LNG, which includes the LNG tolling fee, the cost of delivery, and the cost of gas feedstock, is $12.25 per MMBtu.

- Alternate 2 proposes to deliver LNG sourced from the expansion of the Tilbury LNG plant located near Vancouver B.C. which is owned and operated by FortisBC, the largest gas utility in B.C. The Tilbury expansion is in construction today and is proceeding on schedule. Subsequent expansions are planned in the near future. LNG would be delivered to Fairbanks from Tilbury LNG in two phases as early as January 2017. In the first phase LNG is delivered in ISO containers by barge from Tilbury LNG to Seward AK for trans-loading onto railcars or trucks for final delivery to Fairbanks. In the second phase LNG is delivered in WesPac proprietary designed bulk vessels configured to transfer bulk LNG to ISO containers on land through a system developed by WesPac and its shipping partners (Break Bulk system). The refilled ISO containers are trans loaded (if necessary) onto railcars or trucks for final delivery to Fairbanks. The estimated total delivered price of LNG, which includes the Tilbury LNG tolling fee, the cost of delivery, and the cost of gas feedstock, is $11.08 per MMBtu.

The following chart illustrates the delivered price of LNG to the Fairbanks City Gate.



II. Background and Experience of Proposer's firm

WesPac has been directly involved in LNG development, delivery, distribution, marine use, port infrastructure and LNG conversion applications throughout Alaska since 2012. WesPac is a leader in developing LNG alternatives for rural Alaska, and has done so without State subsidy or funding. As a result, WesPac is uniquely qualified to supply LNG to AIDEA and the Interior markets from supply sources currently under development or contract in Alaska and Canada.

WesPac is majority owned by Highstar Capital, a significant investor in energy infrastructure with over $8 billion under management. Highstar Capital is part of Oaktree Capital Management, a global asset management firm with over $93 billion under management including major investments in upstream, midstream, and downstream sectors such as power, E & P, shipping, and utilities. CME, a minority owner of WesPac, provides vessel financing and LNG solutions for vessel owners and shipping companies across North America.

Examples of WesPac's experience include:

1. **In construction of JAX LNG** project in Jacksonville, Florida dedicated to serve marine customers;
2. **Exclusive provider** of marine jetty and loading services for the Tilbury LNG expansion project, owned and operated by FortisBC in Vancouver, BC;
3. **Building the first of its kind** 2,200 m3 LNG barge to serve TOTE and other marine operators in Florida and the Pacific Northwest;
4. **Contracted to supply LNG as a bunker fuel** for TOTE's new LNG fueled vessels operating between Jacksonville/Puerto Rico and Tacoma/Anchorage (Tacoma on an interim basis until other sources are available).

III. Project Description and Costs

In the Primary Option and in Alternate 1, WesPac proposes to build, own and operate a nominal 200,000 GPD LNG production facility with an associated 2,500,000 gallons of cryogenic storage. The facility will be located on 44 acres of land owned by the Matanuska Susitna Borough at Port MacKenzie. The plant will be pre-engineered for a 100,000 GPD expansion to accommodate future LNG requirements as early as 2022. The LNG facility also includes 12 miles of pipeline, on site gas fired generation, marine, rail and road access.

The Primary Option and Alternate 1 will produce and store LNG at Port MacKenzie and fill ISO containers at a truck loading rack onsite. ISO containers will be transported from the facility by truck and/or rail to the Fairbanks City Gate. ISO containers may also be delivered by marine vessel to other Alaska communities. WesPac's Primary Option and Alternate 1 includes the use of up to 160 ISO containers in circulation to deliver LNG to Fairbanks.

In Alternate 2, LNG will be supplied by FortisBC pursuant to a long-term off take contract. Gas feedstock is currently delivered by pipeline from some of the largest gas reserves in North America to Tilbury LNG for liquefaction and storage. Canadian gas prices are currently approximately one third the price of gas produced in the Cook Inlet, giving Canadian LNG a significant competitive advantage. FortisBC is currently constructing 1 BCF (12 million gallons) of LNG storage and will have as much as 3 BCF (36 million gallons) of new LNG storage in the future. As noted above, LNG will be delivered initially in ISO containers from Tilbury LNG by barge to Seward for trans loading onto railcars or trucks. In the second phase, LNG will be delivered in specially designed 5,000 m^3 vessels that will deliver bulk LNG to Seward and other Alaska communities. Bulk LNG is then transferred onshore to ISO containers and final delivery to Fairbanks by rail or truck. Bulk to break bulk requires 50% fewer ISO containers.

The capital costs, projected rates and delivered cost of gas under WesPac's proposal are illustrated below.

	Primary	Alternate 1	Alternate 2
LNG Alternatives	(LNG Plant Only)	(Plant + Supply + Logistics)	(Tilbury LNG + Logistics)
Total capex ($millions)	$184.9	$211.3	$171.2
State Funds contributed ($millions)	$117.2	$147.9	$117.2
Volume - Gallons per Day	200,000 - 300,000	200,000 - 300,000	200,000 - 300,000
Delivery destination	Plant Gate	FOB Fairbanks	FOB Fairbanks
Gas Supply ($/MMBtu)	n/a	$6.79	$2.70
WesPac Tolling Fee ($/MMBtu)	$3.46	$5.46	$5.33
Fortis Liquefaction Fee ($/MMBtu)	n/a	n/a	$2.23
Dock Fees ($/MMBtu)	n/a	n/a	$0.82
Annual Market Storage	n/a	n/a	n/a
Total Rate ($/MMBtu)	***$3.46***	***$12.25***	***$11.08***
Fixed portion of rate ($/MMBtu)	$2.46	$2.64	$3.69
Variable portion of rate ($/MMBtu)	$1.00	$9.61	$7.40

Primary Option does not include gas or delivery to Fairbanks; plant costs only

IV. Timeline to First Gas

In the Primary Option and Alternate 1, first gas could be available within 24 months of execution of firm off take agreements. Assuming final definitive agreements are concluded by January 2016, first gas could be available by January 2018.

In Alternate 2, first gas would be available in January 2017 from Tilbury LNG. The Tilbury expansion project is currently in full construction and will be in service by December 2016. January 2017 deliveries are subject to procurement of ISO containers and marine transport and the execution of off take contracts. Assuming final definitive agreements are concluded by January 2016, WesPac and its partners would be positioned to order ISO containers and contract with shipyards, ship builders and owners to design, build and/or retrofit the vessels to accommodate Alaska's requirements.

The projected in-service dates are based on permit and equipment delivery time frames and do not include unforeseen delays imposed by the State, AIDEA or regulatory agencies. If the project is

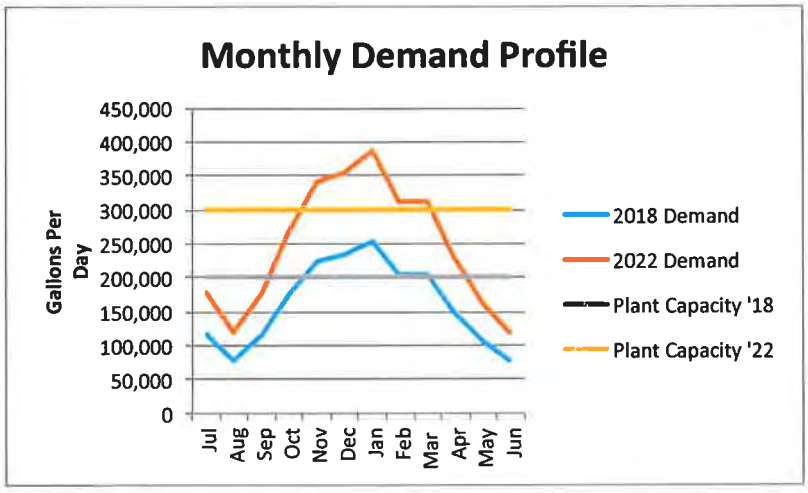
significantly delayed, WesPac has the ability procure needed volume from other LNG sources and pricing will be adjusted accordingly.

V. Major Assumptions/Financing Considerations

There are four major assumptions built into WesPac's proposal: forecast demand, access to utility off take, acceptable credit, and security of supply.

Our first major assumption is AIDEA's monthly and annualized demand forecast. In evaluating AIDEA's demand profile, WesPac concluded that the Interior utilities must build, own or contract for sufficient market area storage to allow the utilities to meet their expected peak day send out requirements. The LNG capacity designed by WesPac, the selection of the equipment, the projected rates of production and the forecasted rates take into account higher utilization attributable to storage injection during off peak months.

The following chart shows forecast demand and WesPac's planned capacity at the Port Mackenzie plant to meet the forecasted demand. Excess summer time capacity is used to fill market area storage to meet winter time requirements which exceeds plant capacity at least 5 months of the year. To lower overall costs for Fairbanks, WesPac is actively engaged in discussions with additional off takers throughout Alaska.



The second major assumption is that Fairbanks utilities will enter into off take contracts for terms of not less than 10 years. WesPac provides that the off take contracts may be extended for two additional 5 year terms upon 2 years advance notice.

The third major assumption is that utility customers will meet normal industry credit requirements for similarly situated projects given the nature of the investment, commercial terms and regulatory environment. WesPac has not made provision for alternative credit solutions other than to assume State financial assurances would apply.

The fourth major assumption is that security of supply is a key component for the Interior utilities. WesPac believes it offers the most secure supply options for Alaska. WesPac offers access to proven LNG technology, two robust supply basins, proven gas reserves, multiple storage options, access to capital, an experienced development team and logistic solutions which all translate into higher security of supply.

Financing is a key element of WesPac's proposal. WesPac has proposed a low cost pricing structure by assuming access to AIDEA financing ranging from 63% to 70% of the total capital requirement. Balancing WesPac's desire to invest in Alaska's infrastructure and earn an acceptable return with AIDEA's need to find the lowest cost solution has been one of WesPac's primary objectives. WesPac believes it has

developed a balanced approach. Depending on the scenario, WesPac has assumed that AIDEA contributes up to $45 million in equity, $72.2 million in SETS funding and $30.72 million through AIDEA bonds at market rates. The following table depicts the capital allocations:

Alaska Project Contributions	Primary	Alt 1	Alt 2
	Primary (Plant only)	Alternate 1 (Plant + CG)	Alternate 2 (Tilbury CG)
Total capex $MM*	$184.94	$211.31	$171.20
WesPac Contribution	$67.74	$63.39	$54.00
State Equity	$45.00	$45.00	$45.00
AIDEA SETS	$72.20	$72.20	$72.20
AIDEA Bonds	$0.00	$30.72	$0.00
WesPac % of Total	37%	30%	32%
AIDEA % of Total	63%	70%	68%
Debt to Equity	64%	95%	73%

VI. How the Proposed Project will meet/fit into IEP goals

WesPac is offering 3 unique alternatives for meeting the IEP's goals. All three options provide energy relief and will improve air quality for the greater Fairbanks area. WesPac's proposal introduces new lower cost pricing alternatives, different modes of transporting energy, substantially improved reliability and paves the way to incrementally add new customers throughout the State by encouraging the use of natural gas. Along the way WesPac's proposal creates jobs, new tax revenue opportunities for State and local government, economic development, and a cleaner environment.

VII. Conclusion

WesPac offers AIDEA, IEP and the State access to robust supply options, proven reserves, an experienced team of professionals with Alaska experience, proven state of the art technology, access to lower cost pricing alternatives, bulk logistic solutions, firm commitments to deliver, and access to capital. Furthermore, WesPac can serve Fairbanks and Interior markets and other rural and coastal Alaska markets by delivering LNG by marine, rail and truck. WesPac has demonstrated it has the experience, the technical and financial resources, and the vision to meet the needs of Alaska.

Attachment D
RFP Transportation Mode Summary

TRANSPORTATION OPTIONS – INTERIOR ENERGY PROJECT FINALISTS

(Information from the publically available five-page summary provided by each finalist)

Harvest/Hilcorp

Two alternatives do not include transport, leaving the decision up to the utilities to either truck or rail from Cook Inlet. One alternative provides for LNG transportation from Cook Inlet to Interior Alaska, but does not identify transportation mode.

Phoenix Clean Fuels

The Phoenix proposal includes trucking LNG from the North Slope to the Interior.

Salix, Inc.

The Salix proposal does not include transport but can accommodate either rail or truck transport from Cook Inlet.

Spectrum LNG

Spectrum provided two alternatives, North Slope and Cook Inlet, but does not provide for transportation, leaving it to the utilities. Trucking is possible from both locations and rail is possible from Cook Inlet.

WesPac Midstream

The WesPac proposal includes two alternatives for LNG either produced or imported into Southcentral Alaska, both of which would include either truck or rail transport if available. The third alternative leaves transport to the utilities.

Attachment E
Alaska Railroad Transport Approval Request

November 14, 2014

Mr. Robert C. Lauby
Associate Administrator for Safety
U.S. Department of Transportation
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Mr. Lauby,

1. Request for Limited Exemption from Hazardous Materials by Rail Regulations

By this letter, the Alaska Railroad Corporation (ARRC) requests a limited exemption from the requirements of **49 C.F.R. § 174.63(a)**. The ARRC seeks approval to transport, in commerce, portable tanks containing a hazardous material in container-on-flatcar (COFC) service, which is not currently authorized by the above listed section.

Specifically, the ARRC would like to transport Liquefied Natural Gas (LNG) in portable tanks. LNG would be shipped according to 49 C.F.R. § 172.101 as **Methane, refrigerated liquid, 2.1 UN1972.** The LNG would be packaged according to the special provisions, column seven of the hazardous materials table, found in 49 C.F.R § 172.102. The special provisions listed are T75 and TP5.

Instruction TP75 authorizes the applicable refrigerated liquids to be transported in portable tanks in accordance with the requirements of 49 CFR 178.277; Requirements for the design, construction, inspection and testing of portable tanks intended for the transportation of refrigerated liquefied gases. These tanks are commonly referred to as T75 or IMO7 tanks and are usually used to transport refrigerated or cryogenic liquids.

Instruction TP5 references safety relief devices, fill rates and outage location, which will all be taken into account with a T75 tank.

2. The Problem

The Alaska Railroad serves the State of Alaska with approximately 611 miles of track and siding that extend from the southern port town of Seward, Alaska, to the northern terminus at Fairbanks, Alaska. Unlike most Lower 48 railroads, the Alaska Railroad is state-owned and operates under a

327 W. Ship Creek Avenue
Anchorage, Alaska 99501 | MAILING ADDRESS P.O. Box 107500 Anchorage, Alaska, 99510-7500 | TEL 907.265.2300 FAX 907.265.2416 AlaskaRailroad.com

statutory mandate to "provide safe, efficient, and economical transportation to meet the overall needs of the state" and its citizens. Alaska Statutes 42.40.100.

Also unlike most locations in the Lower 48, the road system in Alaska is, at best, limited. In the 663,267 square-mile area of the state, there are only 4 limited roads on the interstate highway system, for a total of only 1081 miles. In addition to being limited in mileage, the road system presents the further challenges of icy conditions and limited to no daylight for safe driving. Thus, the Alaska Railroad serves as a major transportation link among the more populated areas of the state, the *only* transportation provider for some remote areas, and a critical source of freight and other goods for areas that are not served by roads at all.

The City of Fairbanks, the state's second largest city, is the most populated area in a geographic area known as "the Interior." This area is bordered to the north and west by Eskimo settlements, to the east by Canada, and to the south by the Alaska Mountain Range. This Interior communities depend largely on fuel oil #1 (more expensive than fuel oil #2, which can be used in warmer areas like the Lower 48) for space heating and power generation. In recent years, the cost of fuel oil #1 has risen to such a degree that residents of the area are paying as much for fuel oil as they are for their mortgages. The situation is even worse in small villages, where fuel must be brought in by barge or by air. A university study of the fuel oil problem revealed that rural families are spending nearly half of their disposable income on energy.

The fuel oil crisis is not the only problem facing the Interior. A portion of the area, including the City of Fairbanks and the City of North Pole, has been designated by the Alaska Department of Environmental Conservation as a PM2.5 non-attainment area. One of the leading contributors to the pollution problem is the residents' use of wood-burning stoves to heat their homes in lieu of using the more expensive fuel oil.

3. <u>The Solution</u>

LNG has been identified as part of the solution for all of Interior Alaska, and the Alaska Railroad is in the position, with the exemption being requested herein, to facilitate that solution. The railroad provides service from three ports that all receive freight and are all capable of handling Intermodal containers. It is anticipated that initially the intermodal containers would come into one of these ports and then be loaded onto flatcars (COFC service) and delivered to Fairbanks. In Fairbanks, the portable containers will be delivered to the end user either by rail or loaded onto trailers for truck delivery.

It is also expected that within the next year or so, a liquefaction plant will be built near the port of Anchorage for the natural gas coming out of Cook Inlet (the waterway extending from the Gulf of Alaska to Anchorage). It is anticipated that by late 2016, there will be a need for two trains a week, each train consisting of 60 to 70 portable tanks of LNG. The portable tanks will have an 11,000 gallon capacity and will be carried one per 53' flatcar or two per 89' flatcar. There will be no double stacking of LNG containers.

In short, the logistics of moving a lot of gas, without pipelines and with an ill-equipped road system, is daunting. The safety record of all railroads, including the Alaska Railroad, clearly shows that shipping LNG by rail is both safe and reliable. The Alaska Railroad therefore respectfully request that it

be granted an exemption from 49 C.F.R. § 174.63 so that it may address the energy and pollution problems of the state and transport LNG in portable tanks.

Thank you for your consideration.

Sincerely,

Doug Engebretson
Chief Operating Officer
Alaska Railroad Corporation

Attachment F
FNG Distribution Build-out Report

Attachment F
FNG Buildout Report

Fairbanks Natural Gas, LLC
Schedule of Gas Pipe Installed
As of 9/25/2015

	Footage	Mileage	Footage Remainin	Remainin g Mileage
8 " Pipe	28,752	5.45	1,800	0.34
6 " Pipe	3,839	0.73	-	-
4 " Pipe	41,417	7.84	-	-
2 " Pipe	81,363	15.41	200	0.04
3/4 " Pipe	180	0.03	-	-
Totals	155,551	29.46	2,000	0.38

NATURAL GAS
EXISTING DISTRIBUTION SYSTEM

LEGEND

- PRE-EXISTING GAS PIPE
- NEW 2" GAS PIPE
- NEW 4" GAS PIPE
- NEW 6" GAS PIPE
- NEW 8" GAS PIPE

THIS DRAWING IS FOR FNG USE ONLY. UNDER NO CIRCUMSTANCES IS THE DRAWING TO BE USED IN PLACE OF PROPER LOCATES.

FAIRBANKS NATURAL GAS, LLC
3408 INTERNATIONAL WAY
FAIRBANKS, ALASKA 99701
PHONE: (907) 452-7111
FAX: (907) 457-8111
www.fngas.com

DATE:
SEPTEMBER 21, 2015
Drawn by: BRK

SCALE: 1"= 880 FEET OR 6"= 1 MILE
0 880 1760 2640 5280
SCALE: 1" = 880 FEET

SHEET
1 OF 1

Attachment G
IGU Distribution Build-out Report

Attachment G
IGU Buildout Report

Pipe Installation

Feeders (4” and 8”):	12 miles
Mains (2”):	61 miles
Service Lines:	21 miles

Potential Customers

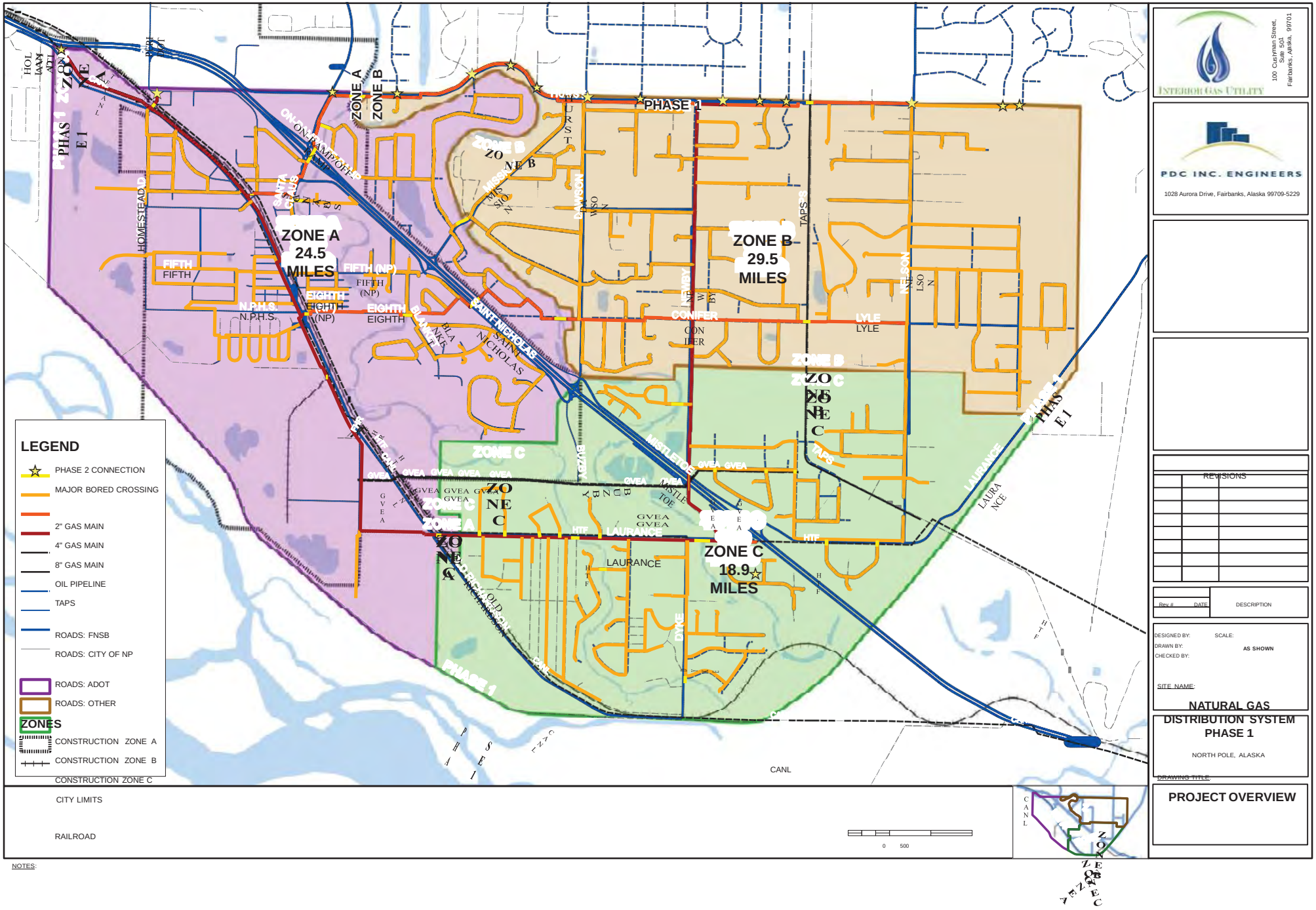
Residential:	2033
Multi-Family:	41
Small Commercial:	27
Medium Commercial:	29
Large Commercial:	2

Potential Demand:

Initial:	.175 BCF
Final:	.421 BCF

MAP on next page

ATTACHMENT G – IGU Buildout Report (page 2)



NOTES:

INTERIOR GAS UTILITY
100 Cushman Street, Suite 501
Fairbanks, Alaska, 99701

PDC INC. ENGINEERS
1028 Aurora Drive, Fairbanks, Alaska 99709-5229

REVISIONS

Rev #	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE: AS SHOWN

SITE NAME:
NATURAL GAS DISTRIBUTION SYSTEM PHASE 1
NORTH POLE, ALASKA

DRAWING TITLE:
PROJECT OVERVIEW