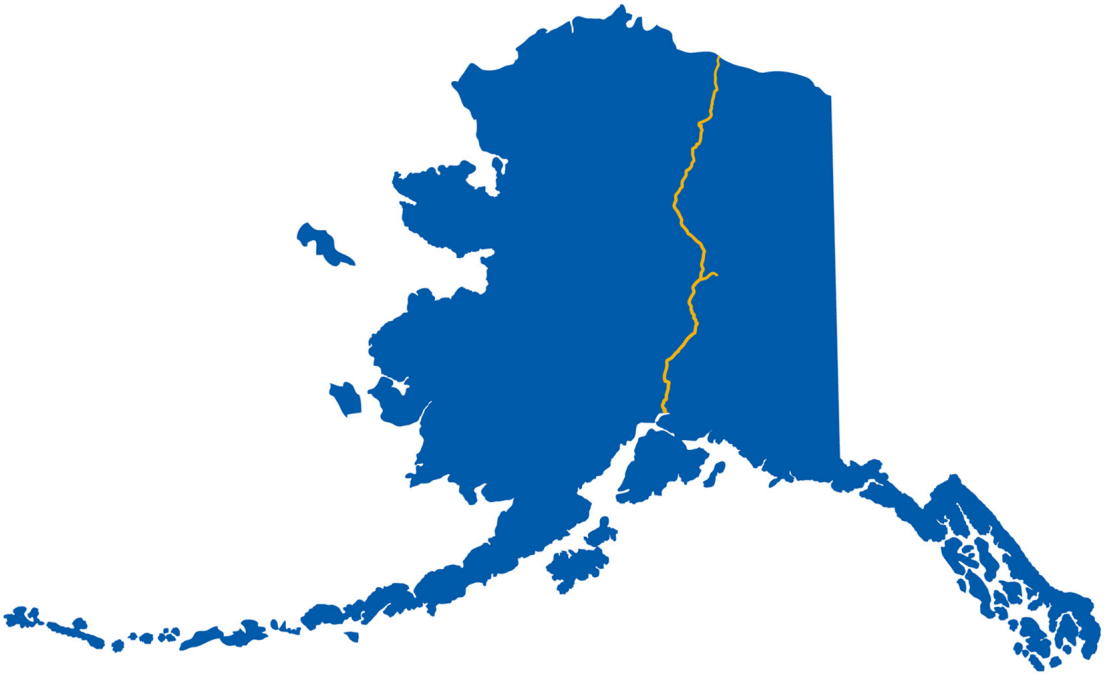
ASAP

Alaska's In-State Gas Pipeline

# ASAP Project Plan Update
# Year-End 2012



ALASKA GASLINE DEVELOPMENT CORP.

GAS FOR ALASKANS

Alaska's In-State Gas Pipeline

# ASAP Project Plan Update
# Year-End 2012

**January 11, 2013**

**Document No. 001-C-10-A-B-0003-0**

ALASKA GASLINE DEVELOPMENT CORP.
GAS FOR ALASKANS

# DISCLAIMER

This document was prepared as an account of work sponsored by an agency of the State of Alaska. Neither the State of Alaska nor any agency thereof, nor any of their employees, agents, or contractors, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights, that any pipeline will be constructed, or that any expenditure will be made. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the State of Alaska or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the State of Alaska or any agency thereof. Any action taken or not taken by any person based on the information herein is at his own risk and responsibility, and no liability shall arise against the State of Alaska or any agency thereof or any of their employees, agents, or contractors as a consequence.

© 2013 Alaska Gasline Development Corporation. All rights reserved.

Alaska Gasline Development Corporation
3301 C Street, Suite 100
Anchorage, AK 99503
www.agdc.us
907-330-6300

# TABLE OF CONTENTS

**1. Introduction and Summary ..... 1**

1.1 Recommended Legislative Actions ..... 3
1.2 Status of AGDC Findings ..... 4
1.3 Status of AGDC Recommendations ..... 5

**2. Project Update ..... 6**

2.1 Proposed Project Approach: The Stage-Gated Process ..... 6
2.2 The Proposed Project ..... 6
2.2.1 Selection of the Optimized Base Case for the Proposed Project ..... 6
2.2.2 Proposed Project Facilities ..... 8
2.3 Project Delivery ..... 12
2.3.1 Project Team ..... 12
2.3.2 FEL 2 Stage Activities and Deliverables ..... 12
2.3.3 ASAP Project Schedule ..... 14
2.3.4 Contracting and Procurement Strategies ..... 14

**3. Summary of Activities July 1, 2011 – December 31, 2012 ..... 16**

3.1 Commercial ..... 16
3.1.1 Capital Costs of the Project ..... 16
3.1.2 Tariff Estimates ..... 17
3.1.3 Tariff-Related Documents ..... 19
3.1.4 Other Agreements ..... 19
3.2 Financial ..... 19
3.3 Engineering ..... 19
3.3.1 Facilities Engineering ..... 19
3.3.2 Pipeline Engineering ..... 20
3.3.3 Boreholes in Special Design Areas ..... 21
3.3.4 Geotechnical and Hydrologic Reconnaissance ..... 22
3.3.5 Engineering Support of Environmental, Regulatory, and Lands Activities ..... 22
3.3.6 Tasks in Support of Pipe Integrity Verification ..... 22
3.3.7 Support for Commercial Activities ..... 24
3.4 Environmental, Regulatory, and Lands (ERL) ..... 24
3.4.1 ASAP Final Environmental Impact Statement ..... 24
3.4.2 ASAP Plan of Development ..... 25
3.4.3 Environmental Field Studies ..... 26
3.4.4 Right-of-Way Acquisition Activities ..... 26
3.5 Public Affairs / Stakeholder Engagement ..... 27

**4. Detailed Status of Project Plan ..... 29**

4.1 Commercial Plan ..... 29
4.2 Financing Plan ..... 34



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

4.3 Engineering Plan ..... 35
4.4 Environmental, Regulatory, and Lands (ERL) Plan ..... 37
4.5 Public Affairs / Stakeholder Engagment Plan ..... 40



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

# 1. INTRODUCTION AND SUMMARY

House Bill 369, passed by the 26th Alaska Legislature in April 2010, tasked the Alaska Housing Finance Corporation (AHFC) with developing a project plan to deliver North Slope natural gas via an in-state gas pipeline to Fairbanks, the Southcentral region, and other communities wherever practicable. AHFC established the Alaska Gasline Development Corporation (AGDC) as a subsidiary corporation to pursue the project. AGDC used previous work by the Alaska Department of Natural Resources authorized under House Bill 113 and completed in July 2010. The mandated project plan for the Alaska Stand Alone Pipeline/***ASAP*** Project was delivered to the Legislature on July 1, 2011.[1]

This ASAP Project Plan update is a 2012 year-end update to the July 1, 2011 Project Plan and provides AGDC's findings and recommendations for design, financing, construction, and operation of the ASAP Project. AGDC has optimized the Base Case used in the 2011 Project Plan and is now planning a 737-mile-long, 36-inch-diameter lean gas pipeline. AGDC had originally proposed a 24-inch enriched gas pipeline.

Over the last 18 months, AGDC continued work on the project, but limited funding kept AGDC from implementing many of the actions in the July 2011 Project Plan. The plan called for approximately $240 million in state funding for its execution. The plan also assumed that the funding would be available in mid-2011 so that open season could be completed by the end of 2013, allowing for delivery of first gas in 2018 and first firm gas transmission in 2019. However, lack of funds made it impossible to achieve these objectives – and created a delay of at least one year (assuming that adequate funding becomes available by mid-2013).

The July 2011 Project Plan also made a number of recommendations that could not be implemented without further action by the Alaska State Legislature. These included the following:

- Decide on public versus private ownership of the ASAP Project.
- Exempt AGDC from the Public Records Act (to allow AGDC to enter into confidentiality agreements).
- Limit the judicial review of a right-of-way (ROW) lease or the development or construction of a natural gas pipeline on state land.
- Allow AGDC to function as a contract carrier instead of a common carrier.
- Empower AGDC with ratemaking authority over its projects.

[1] *Alaska Stand Alone Gas Pipeline/ASAP Project, Project Plan, July 1, 2011*, Alaska Gasline Development Corporation, Anchorage, Alaska.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

- Stabilize property taxes – fix the methodology and assessed mill rates for the first 20 years of the project.
- Waive rental payments for the ASAP Project ROW on state land.

During the 2012 legislative session, House Bill 9 addressing these recommendations passed the House but was not acted on by the Senate. Without timely action on these key issues, AGDC remains unable to enter into commercial negotiations with potential shippers of natural gas. Without the ability to determine the requirements of the market, as well as the lack of funding for design and engineering, AGDC is also unable to undertake the FEL-2 engineering work required to support a successful open season. As a result, completion of open season has been delayed by at least one year (until late 2014 or early 2015). In addition, due to the lack of a decision on the ownership of the project, AGDC cannot move forward with the procurement of a builder/owner/operator. Instead, AGDC will be initiating the procurement of a Program Manager in early 2013. The Program Manager will furnish AGDC with additional management staff support as well as providing policies and procedures for many of the functional areas within AGDC.

Additional work and analysis conducted by AGDC during late 2011 and 2012 revealed a number of constraints associated with the plan's original commercial Base Case, which was identified in the 2011 Project Plan as Option 8 – 500 MMscfd (million standard cubic feet per day) capacity carrying conditioned natural gas and an enriched stream of natural gas liquids (NGLs). As a result, AGDC has determined that multiple optimizations are gained by shifting to a lean gas Base Case (identified in the 2011 Project Plan as Option 7 – 500 MMscfd capacity carrying utility-grade natural gas).

The optimized Base Case is predicated upon a 36-inch-diameter lean gas pipeline with a maximum allowable operating pressure of 1,480 pound per square inch (psi) – versus 24-inch-diameter and 2,500 psi under Option 8. This change eliminates most of the processing facilities required under Option 8 and uses an industry-standard pipe diameter with lower operating pressure. The change helps reduce project risk and cost, maximizes access to gas for Alaskans, and lowers the cost of the estimated gas tariff to Fairbanks.

During late 2011 and 2012, important worked continued on AGDC efforts to obtain a right-of-way grant for the 100 miles of federal lands crossed by the pipeline route. In July 2011, the Alaska Department of Natural Resources issued a state lease for the 604 miles of state land for the mainline route and Fairbanks Lateral. Issuance of the federal right-of-way grant – and several other major federal permits – is based on a federal environmental impact statement (EIS) process that began at the end of 2009. In 2012, AGDC worked to progress the EIS, and the U.S. Army Corps of Engineers published the final EIS (FEIS) in the Federal Register on October 26, 2012. The public comment period on the FEIS closed November 26, 2012. The Bureau of Land Management (BLM) ROW grant and record of decision (ROD) for the ASAP Project grant are pending.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

The Base Case change will require that the ASAP FEIS and ROD be amended. However, since the ASAP route remains static and the optimized Base Case eliminates most of the required facilities (straddle plant, NGL extraction plant, fractionation facility, and compressor stations), there should be minimal impact on the overall project schedule. It is also expected that the change will help streamline project permitting because fewer facilities are required, the project footprint is smaller, and fewer carbon emissions will occur.

## 1.1 RECOMMENDED LEGISLATIVE ACTIONS

Legislation addressing the recommendations below is necessary to advance the project (note that these recommendations have been revised since the July 2011 Project Plan):

- ***Decide on ownership model:*** AGDC recommends that AGDC be granted the power to determine the form of ownership for the ASAP Project.
- ***Provide confidentiality for AGDC negotiations:*** AGDC recommends that AGDC be exempted from the Public Records Act to allow AGDC to enter into confidentiality agreements so that negotiations can be held with producers, shippers, and buyers.
- ***Address the issue of contract vs. common carrier:*** Shippers will be reluctant to bid firm transportation as long as AGDC is required to operate as a common carrier for intrastate transport of gas. A common carrier operation by definition will not have 100% capacity covered through firm transportation agreements. AGDC has virtually no chance of attracting adequate shipping commitments or financing as a common carrier.
- ***Empower AGDC with ratemaking authority over its projects:*** For AGDC projects, AGDC needs to have the ability to set the ratemaking methodology and settle tariff disputes for intrastate gas shipments (including Gas Conditioning Facility tariffs) over the life of the initial firm transportation commitments or during the period of AGDC financing, whichever is longer.
- ***Stabilize property taxes:*** AGDC recommends that the State of Alaska fix the methodology and assessed mill rates for the first 30 years of the ASAP Project.
- ***Request waiver of rental on state land:*** The Alaska Legislature should consider whether to pass a law waiving rental from AGDC for rights-of-way on state land or state agency land unless and until the ASAP Project is transferred to a builder/owner/operator. Such legislation would preclude the Legislature from having to appropriate money to AGDC that is then transferred to another state entity.
- ***Provide funding:*** AGDC requires the funding proposed in this project plan to progress the project.

Sections 1.2 and 1.3 below contain summaries of the findings and recommendations from the July 2011 Project Plan compared with the findings and recommendations at year-end 2012.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 1.2 STATUS OF AGDC FINDINGS

| JULY 2011 FINDINGS | DECEMBER 2012 STATUS |
|---|---|
| Using a reasonable set of economic assumptions, the project is likely to be commercially feasible with an un-inflated consumer cost in Anchorage of about $9.63 per million Btu (MMBtu)[2]. This cost is less than the next most practical alternative, imported liquefied natural gas (LNG), which would cost about $16 to $21/MMBtu (about $14 to $19/MMBtu plus local distribution charges of $2/MMBtu). The current cost of gas to Anchorage consumers is $8.85/MMBtu.[3] | Using the new AGDC tariff model, the optimized lean gas case was analyzed. The estimated tariff per MMBtu to Big Lake is in the $5.00 to $7.25 range (2012$ without inflation). Assuming a gas supply cost of $2/MMBtu and a local distribution charge of $2/MMBtu, the uninflated consumer cost in Anchorage would be $9.00 to $11.25 per MMBtu (2012$) at the burner tip. |
| The un-inflated estimate of the cost of gas to Fairbanks consumers using the same set of reasonable assumptions as for Anchorage is $10.45/MMBtu. The current published natural gas cost for Fairbanks is $23.35/MMBtu. | Using the new AGDC tariff model, the optimized lean gas case was analyzed. The estimated tariff to Fairbanks is in the $4.25 to $6.00 range (2012$ dollars without inflation). Assuming a gas supply cost of $2/MMBtu and a local distribution charge of $2/MMBtu, the uninflated consumer cost in Fairbanks would be $8.25 to $10.00 per MMBtu (2012$) at the burner tip. |
| No other single project alternative is likely to address the same Cook Inlet energy-supply shortfall in a comparable timeframe; gas storage and hydroelectric projects are complementary to ASAP. | The status is unchanged. |
| The project, as described in the 2011 Project Plan, will cost $7.52 billion (in 2011 dollars) with an uncertainty range of ±30%. | The project will cost $7.7 billion (2012$) with an uncertainty range of ±30%. Inflation would add approximately $200 million for each year the project is delayed. |
| A public ownership model, because of the lower cost of debt and the zero equity requirement, provides the lowest tariff; however, this ownership model requires enabling legislation in the near term. | Legislation granting AGDC the decision on ownership has not passed. |
| There are builder/owner/operators prepared to assume execution of the project after a successful open season is concluded if the private ownership model is selected and the State of Alaska funds project development. (An open season, which is a solicitation of firm commitments from gas shippers to use the pipeline, is successful if it results in transport agreements that fill the pipeline). | Legislation granting AGDC the decision on ownership has not passed. As a result, AGDC is unable to pursue a builder/owner/operator or a builder/operator. |
| An LNG industrial anchor tenant that enables a maximum throughput capacity of 500 million standard cubic feet per day (MMscfd) provides one of the lowest tariffs and appears to be commercially feasible. (An anchor tenant is an industrial user that signs pipeline transport agreements or pipeline off-take agreements to use large quantities of gas.) | An industrial anchor tenant(s) is still necessary, but AGDC has been unable to negotiate commercial terms with a potential industrial anchor tenant(s) because AGDC lacks the confidentiality assurances necessary to enable such negotiations. |
| The principal business risks of the ASAP Project are a failed open season, increased construction costs, and project delay caused by regulatory or environmental permitting. | These continue to be the principal business risks. |
| Only the Parks Highway route as described, with a spur line to Fairbanks, meets the requirements of House Bill 369 and routing criteria for the environmental impact statement process. | The Parks Highway route is the proposed route and was the subject of the FEIS. |

[2] The Anchorage Bowl consumer cost of $9.63/MMBtu assumes a $2/MMBtu netback (cost of gas at North Slope) and a $2/MMBtu local distribution company (LDC) and local pipeline cost.

[3] Source: http://enstarnaturalgas.com/ratesregulatory.aspx. See graph entitled "Commodity Cost vs. ENSTAR Charge."



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 1.2 STATUS OF AGDC FINDINGS

| JULY 2011 FINDINGS | DECEMBER 2012 STATUS |
|---|---|
| Completion of the pipeline by 2015 as required by House Bill 369 is neither necessary because of the forecast Cook Inlet gas supply recently released by AGDC/DNR nor achievable in light of current design/permitting requirements to successfully execute an open season and procure financing. | A 2015 completion date is unachievable. Completion in 2019, as proposed in the 2011 Project Plan, is also in jeopardy because of lack of enabling legislation and timely state funding for the project. A delay of at least one year has resulted. |
| The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) intends to require a special permit for ASAP based on its design and operating environment. This could add significant costs and schedule implications to the ASAP Project. | AGDC continues to work closely with PHMSA to define the special permit requirements and answer their questions about the project. A PHMSA special permit may be required. |
| The State ROW Lease obtained by AGDC is the first non-conditional pipeline ROW granted by the State for the purpose of transporting natural gas from the North Slope to market, and will likely be perceived as a significant milestone and increase project interest and confidence among potential shippers and developers. | The federal ROW grant and ROD from BLM are pending, and AGDC will also continue work to acquire private ROWs. The acquisition of state and federal ROWs for the project will be a significant achievement that will increase project interest and confidence among potential shippers and developers. |

## 1.3 STATUS OF AGDC RECOMMENDATIONS

| JULY 2011 RECOMMENDATIONS | DECEMBER 2012 STATUS |
|---|---|
| The ASAP Project schedule should be adjusted for delivery of first gas in 2018 and first firm transmission in 2019. | Without funding from the Legislature or decisions on key AGDC recommendations, the proposed schedule will slip at least one year. The schedule proposed in July 2011 was based on the immediate start of FEL 2. This target is no longer achievable. |
| The State of Alaska should appropriate $210 million[4] to complete the next phase of project design development, recognizing that approximately $130 million more will be required either through capital funding or financing to complete the design before project approval (sanction). | These funds have not been appropriated, and as a result, AGDC has not been able to pursue the detailed engineering required to refine project cost estimates and hold an open season. |
| The Legislature, as soon as possible, should consider the recommended legislation including whether to enable the public ownership model. Non-action is de facto approval of the private ownership model. | Legislation granting AGDC the decision on ownership has not passed. AGDC is unable to pursue the private ownership model because of lack of confidentiality assurances. |
| AGDC should procure a builder/owner/operator in the case of private ownership or a builder/operator in the case of public ownership as soon as practical. | Legislation granting AGDC the decision on ownership has not passed. As a result, AGDC is unable to pursue a builder/owner/operator or a builder/operator. |
| AGDC should execute the commercial, finance, engineering, and permitting plans as detailed in this project plan. | AGDC is executing plans as aggressively as funding permits. |
| The route selected in this project plan should be adopted as the final route and that no more study or analysis of route selection be undertaken or supported by AGDC or any other state agency as specified in House Bill 215 in the 27th Alaska Legislature. | The route contained in the 2011 Project Plan is the same route used for the State Right-of-Way Lease, the ASAP Final EIS, and the BLM federal ROW Grant application. |

[4] Assumed approval of $29 million appropriation by 27th Alaska Legislature.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

# 2. PROJECT UPDATE

## 2.1 PROPOSED PROJECT APPROACH: THE STAGE-GATED PROCESS

The July 2011 ASAP Project Plan is based on the "stage-gated approach". Stage-gated project delivery emphasizes what is called "front-end loading" or "FEL", whereby the definition of a project progresses through three distinct phases, with decision points ("stage gates") to proceed or not to proceed following each phase. As the project passes through FEL 1, FEL 2, and FEL 3, the uncertainties of the cost and schedule are progressively reduced. The FEL phases are followed by Execution and then Operation. AGDC is still employing the stage-gated approach as described in Section 2.1 of the July 2011 Project Plan.

On July 1, 2011, AGDC recommended proceeding to FEL 2, and since the requested funding for that work has not been obtained, the project is delayed. The delay from the July 2011 Project Plan is shown as one year in Figure 2-1, which presents an updated version of the front-end loading phases for the ASAP Project. Note, however, that the schedule could slip further. The funding requests have not changed, only the time required to complete the phases.

## 2.2 THE PROPOSED PROJECT

### 2.2.1 Selection of the Optimized Base Case for the Proposed Project

When AGDC took over the project in July 2010, a total of 16 cases had been selected for study based on varying pipeline capacities and products[5] (see Section 3.1.1 of the July 2011 Project Plan for a detailed discussion of the cases). These cases involved flow capacities from 250 to 1,000 MMscfd and products including conditioned, unconditioned, and utility-grade gas with or without natural gas liquids (NGLs). AGDC eliminated the cases over 500 MMscfd to conform to the terms of the Alaska Gasline Inducement Act (AGIA), which limits other projects receiving state support to 500 MMscfd. The cases involving processing North Slope gas at Cook Inlet were eliminated because of the higher resulting tariffs, the inefficiency associated with carrying over 10% carbon dioxide in the pipeline, and the issues associated with levels of water vapor and hydrogen sulfide not conducive to safe and low-cost operation of a pipeline.

In the July 2011 Project Plan, the Base Case was a 500 MMscfd pipeline carrying conditioned natural gas and an enriched stream of NGLs. This Base Case was used for commercial, financial, engineering, and environmental/regulatory work done by AGDC to develop the July 2011 Project Plan.

[5] *Alaska Stand Alone Pipeline Project Update and FY 2010 Deliverables,* submitted to AGDC on July 15, 2010 by the Alaska In-State Gasline Coordinator.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

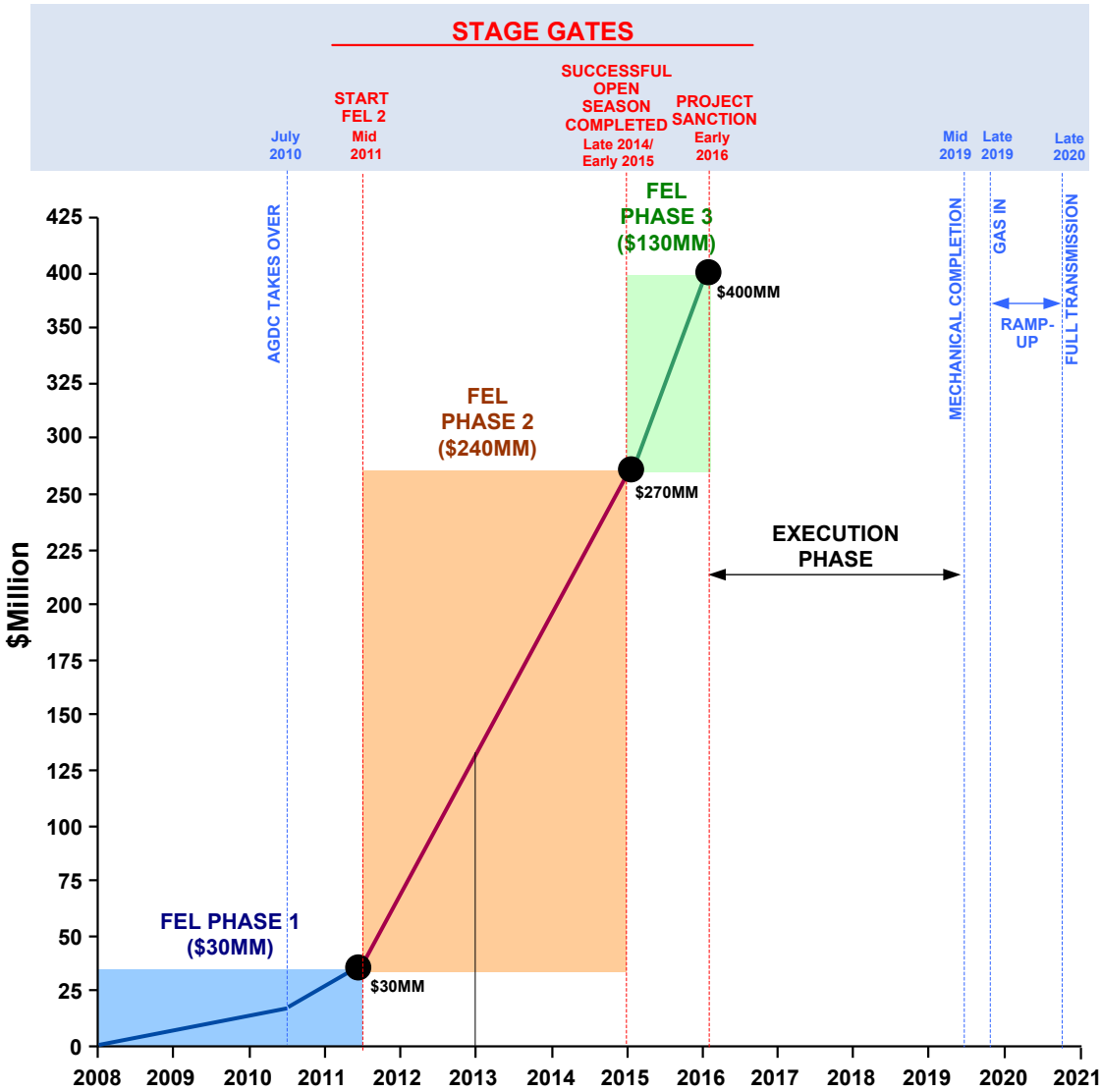



**Figure 2-1. Front-End Loading Financial Requirements for the ASAP Project**



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

Additional work and analysis conducted by AGDC during late 2011 and 2012 revealed a number of constraints associated with the plan's original commercial Base Case, which was identified in the 2011 Project Plan as Option 8. AGDC has determined that multiple optimizations are gained by shifting to a lean gas Base Case (identified in the 2011 Project Plan as Option 7 – 500 MMscfd capacity carrying utility-grade natural gas).

The optimized Base Case is predicated upon a 36-inch-diameter lean gas pipeline with a maximum allowable operating pressure of 1,480 pounds per square inch (psi) – versus 24-inch-diameter and 2,500 psi under Option 8. This change eliminates most of the processing facilities required under Option 8 and uses an industry-standard pipe diameter with lower operating pressure. The change helps reduce project risk and cost, maximizes access to gas for Alaskans, and lowers the cost of the estimated gas tariff to Fairbanks.

The optimized Base Case was selected because, as required under House Bill 369, it delivers natural gas at the lowest cost to consumers. Other advantages include the following:

- Maximizes gas access for Alaskans – more access points to pipeline;
- Is a standalone system, not dependent upon any downstream facilities;
- Uses industry-standard pipe and equipment;
- Increases system reliability and safety;
- Lowers construction risk;
- Lowers costs for processing facilities and for operation and maintenance (O&M);
- Has a smaller footprint, which means fewer permits and less carbon impacts;
- Still allows sufficient supply for in-state propane use; and
- Provides for a lower tariff to Fairbanks while the Big Lake tariff remains essentially unchanged.

The pipeline route and facilities included in the Base Case are discussed below.

### 2.2.2 Proposed Project Facilities

The optimized Base Case differs from the Base Case in the 2011 Project Plan as follows:

- The product carried will be utility-grade (lean) natural gas rather than enriched natural gas with NGLs. The natural gas would be received from the Prudhoe Bay Central Gas Facility and would be conditioned at the ASAP Gas Conditioning Facility (GCF) at Prudhoe Bay to remove such contaminants as carbon dioxide ($CO_2$), water vapor, and hydrogen sulfide ($H_2S$).
- The mainline pipe will be 36 inches in diameter and will operate at a maximum pressure of 1,480 psi, rather than 24 inches in diameter and operating at 2,500 psi (the higher pressure was required because of the NGLs).
- The following facilities are no longer needed:
    - Standalone compressor stations (the optimized project requires no intermediate compressor stations; sufficient compression is provided at the GCF),



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

- The Straddle and Off-Take Facility to remove NGLs for the Fairbanks Lateral, and
- The Cook Inlet NGL Extraction Facility.

Table 2-1 provides a description of project facilities under the optimized Base Case. An updated map of the proposed ASAP system is shown in Figure 2-2, and the system is depicted schematically in Figure 2-3.

**Table 2-1. Summary of Proposed ASAP Project Facilities**

| FACILITY | DESCRIPTION |
|---|---|
| Mainline Pipeline | • Prudhoe Bay to milepost (MP) 39 of the Beluga Pipeline near Big Lake (ENSTAR Beluga Distribution System).<br>• 737 miles long.<br>• 36-inch-diameter.<br>• 1,480 psi maximum operating pressure. |
| Fairbanks Lateral | • 35 miles long.<br>• 12-inch-diameter.<br>• 1,400 psi maximum operating pressure.<br>• Tie-in with mainline at MP 458. |
| Gas Conditioning Facility | • A 70-acre facility at Prudhoe Bay to provide conditioning necessary to remove carbon dioxide, hydrogen sulfide, and other impurities from the source gas stream.<br>• Natural gas will be obtained from the existing Central Gas Facility located approximately 1,000 feet north of the planned Gas Conditioning Facility.<br>• Compression will be provided. |
| Custody-Transfer Gas-Metering Stations | • At Dunbar and at Big Lake terminus.<br>• At any other offtake points for facilities along the route. |
| Other Permanent Facilities | • Mainline block valves at a maximum of every 20 miles, with two valves required along the Fairbanks Lateral.<br>• A pig launcher will be located at the Gas Conditioning Facility. Pig launcher/receiver assemblies will be located at the tie-in for the Fairbanks Lateral, and a pig receiver will be located at the pipeline terminus. A pig launcher will be located at the tie-in for the Fairbanks Lateral and a receiver at the end of the Fairbanks alignment.<br>• Operation and maintenance facilities will be located in Prudhoe Bay, Fairbanks, and Wasilla. |
| Material and Water Sources | • Material sites (gravel pits) will be distributed along the route minimizing hauling distances. Existing material sites will be used whenever possible.<br>• Water for construction needs will be collected from permitted surface water sources such as lakes and streams. |
| Construction Support Facilities | • Project offices, personnel housing and support, and logistics support sites.<br>• Port facilities.<br>• Access roads.<br>• Construction workpads (gravel, ice or snow, and grade).<br>• Laydown yards and storage facilities.<br>• Airports and airstrips. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

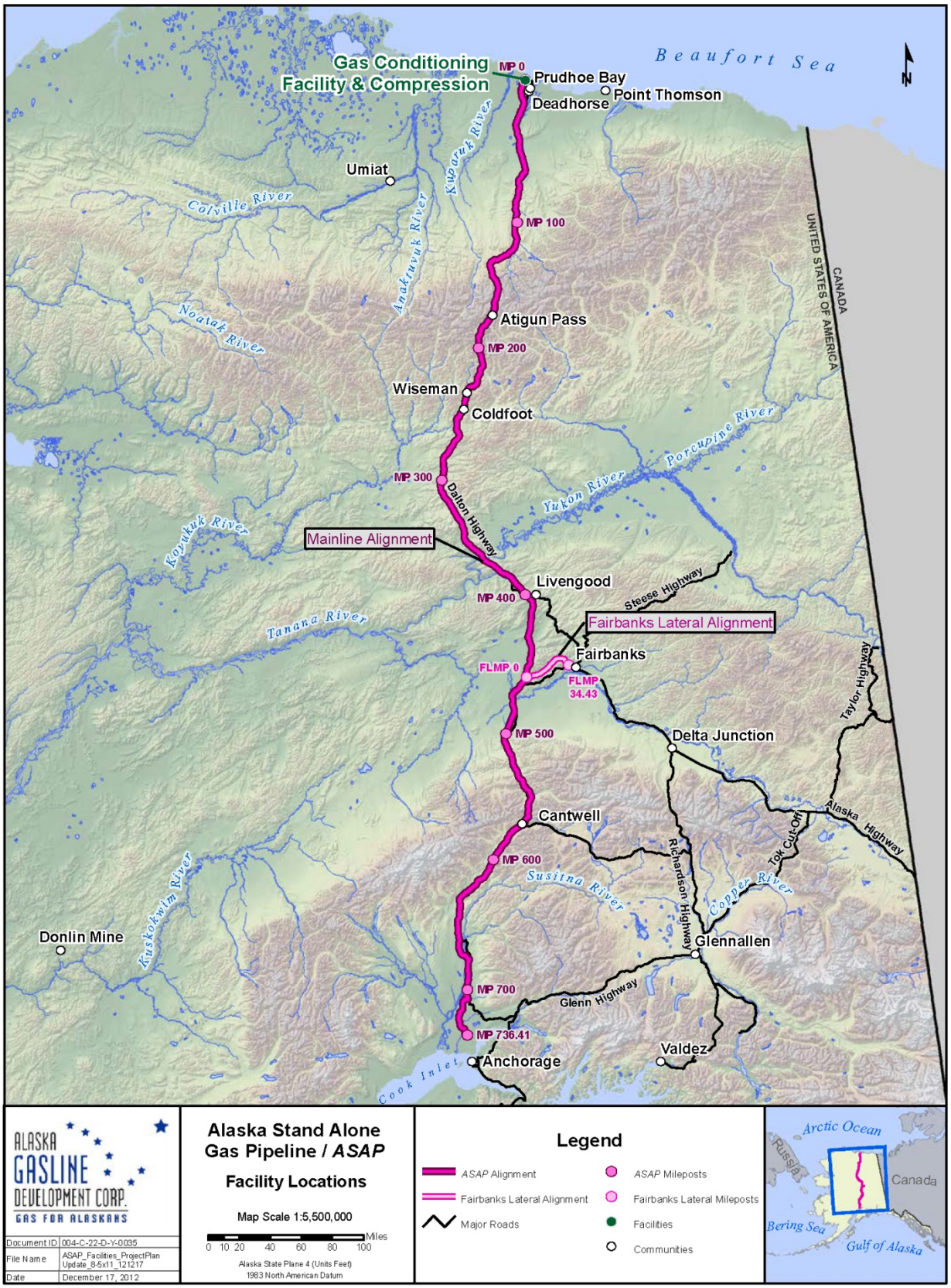



**Figure 2-2. ASAP Route Map and Major Facilities**



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

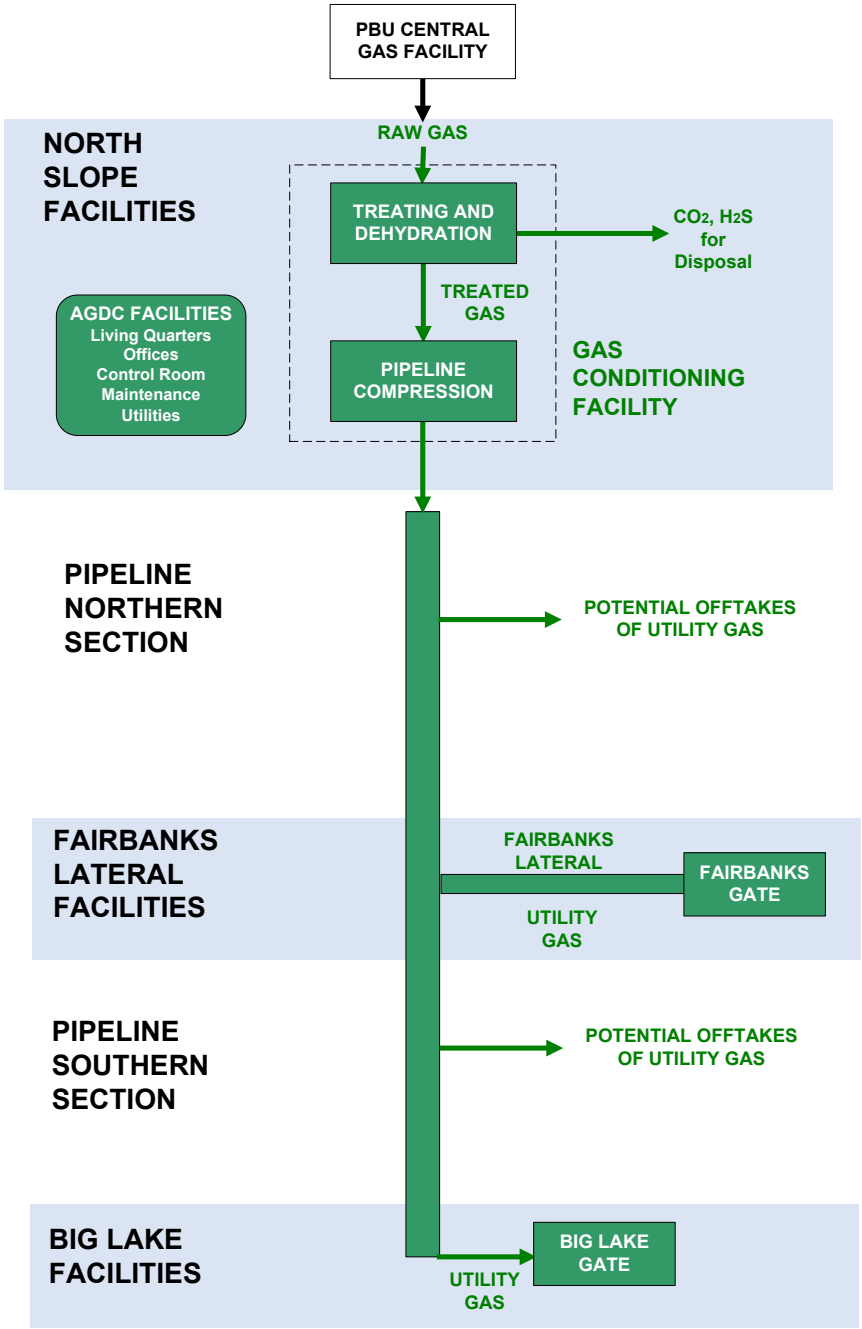



**Figure 2-3. Flow Schematic of ASAP Facilities**



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 2.3 PROJECT DELIVERY

### 2.3.1 Project Team

As the ASAP Project progresses in the FEL 2 stage and beyond, AGDC will continue to develop an integrated project team comprised of people with a wide range of capabilities who can perform key oversight functional roles in the organization. Project skill sets that will be required to move the project forward include business, process design, pipeline design, operations, maintenance, project controls, construction management, commercial, procurement and contracting, quality assurance, health and safety, and permitting. Figure 2-4 illustrates the early stages of the FEL 2 organization as currently envisioned by AGDC.

AGDC, as the owner organization, does not have sufficient resources to staff all the project management positions to conduct a mega-project development. Therefore, as the project moves forward, AGDC will be pursuing a contract with a program management company to fill the function of program manager. Program management companies are often used during the engineering and construction stages by owners of mega-projects, whether governments or corporations, when faced with undertaking the management of projects where the owner organization does not have the full range of skill sets necessary for successful development. During the first half of 2013, AGDC will be going through the procurement process to select a company to be the program manager for this project during the capital development stage. Selection of a program manager will be dependent upon a number of factors including a proven record as a major provider of program management services to mega-projects along with the in-house expertise to manage the major pipeline/facilities engineering and construction contractors.

### 2.3.2 FEL 2 Stage Activities and Deliverables

FEL 2 activities focus on the open season, including preparing all the necessary information needed for conducting the open season, holding the open-season solicitation, and finalizing the open-season agreements/commitments. This step will eliminate alternatives and provide the business model to move the project forward towards FEL 3.

Based on the open-season agreements, adjustments will be made to the design basis and then integrated into the engineering design, cost estimates, and schedules for the AACE Class 3 level estimates. (AACE is the Association for the Advancement of Cost Engineering. The lower the class number, the higher the confidence in the accuracy of the estimate.) The estimates will provide the basis for evaluating the overall status of the project to determine if the project is ready to move to the next project funding and development stage – FEL 3.

The deliverables for each of the FEL 2 activities represent the progression of project definition, narrowing of the scope, and the development/refinement of the work products. The key for FEL 2 is tightening the project definition, locking down the scope, and increasing the project level of maturity in line with the commercial agreements made during the FEL 2 phase.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

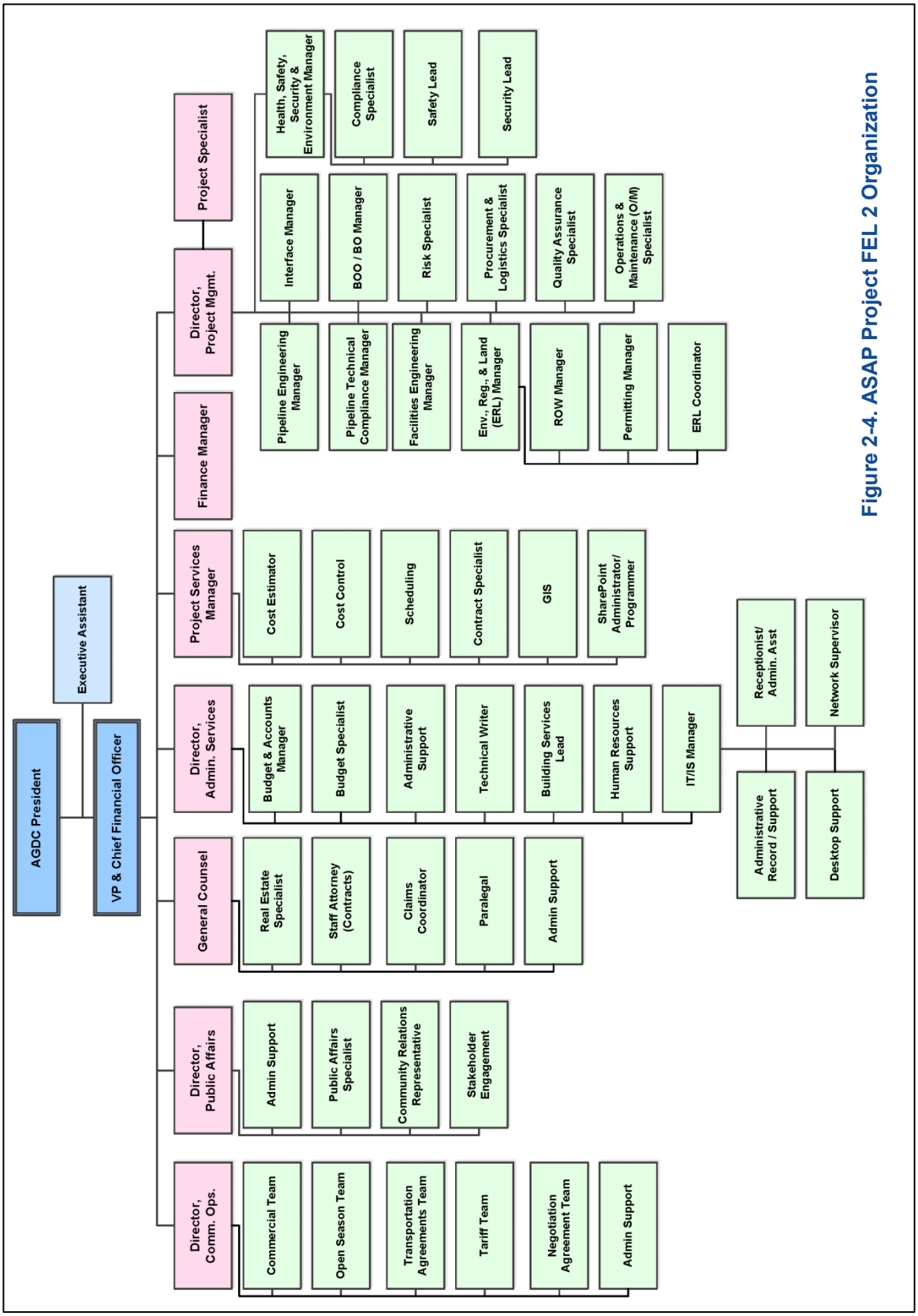



Figure 2-4. ASAP Project FEL 2 Organization



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

### 2.3.3 ASAP Project Schedule

The project execution schedule spans several years. Figure 2-5 provides a high-level schedule of milestones commencing with FEL 2 and progressing through project startup. This schedule reflects a delay of at least one year from the schedule presented in the July 2011 Project Plan. Any effort to shorten the project schedule and rush the execution poses a significant risk to project success. Not thoroughly completing the project definition work before starting detailed engineering often results in significantly longer project schedules and much higher costs.

### 2.3.4 Contracting and Procurement Strategies

Several primary groups will need to be brought onto the project during FEL 2 – pipeline and facilities engineering, environmental, and numerous minor contracts. Personnel with O&M expertise and experience will be brought in as consultants to provide input to the design. AGDC will develop the project requirements and deliverables for each contract along with the commercial requirements. Potential contractors will be solicited for level of interest. Before sending out a request for proposals (RFP), AGDC will prepare a selection evaluation process of technical and commercial issues for use in making the final selection.

The project is expected to generate thousands of jobs as it progresses through design, construction, and operations. AGDC is committed to maximizing local hire. All contracts and agreements will include language requiring each contractor to support our commitment to local hire.

During FEL 2, the level of procurement will be relatively minor. There will be some discussions with potential suppliers of major engineered equipment and construction services, but these discussions will be to support development of engineering data and cost estimates. No commitments for major equipment will be solicited until later project phases.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

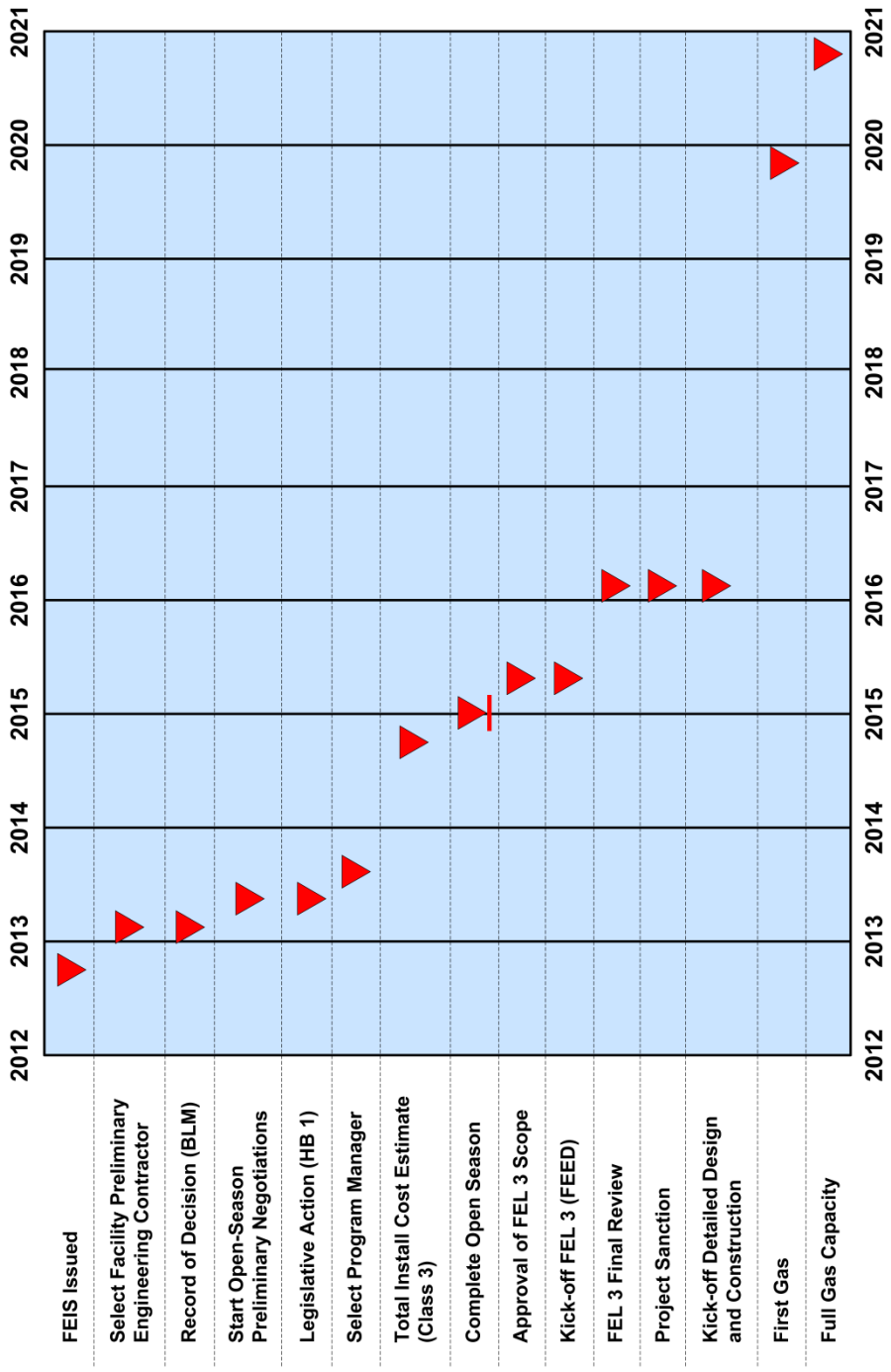



Figure 2-5. ASAP Project Milestones, December 2012



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

# 3. SUMMARY OF ACTIVITIES JULY 1, 2011 – DECEMBER 31, 2012

This section contains summaries of work performed in the last 18 months by the following AGDC teams:

- Commercial
- Financial
- Engineering
- Environmental, Regulatory, and Lands
- Public Affairs / Stakeholder Engagement

## 3.1 COMMERCIAL

The shift in the project Base Case (Option 8 to Option 7), combined with new work done over the last 18 months on the tariff model and the preparation of tariff-related agreements (i.e., precedent agreement and firm transportation service agreement), necessitate that portions of Section 3 in the July 2011 Project Plan now be revised and supplemented. In particular, all references to NGLs in the original project plan (i.e., NGL facilities, trading centers, value-added, etc.) have been eliminated.

### 3.1.1 Capital Costs of the Project

The optimized ASAP Base Case is estimated to cost $7.7 billion (in 2012$). This estimate includes capital for engineering, pipeline owner costs, the 12-inch Fairbanks Lateral, Gas Conditioning Facility (GCF), other North Slope infrastructure, and initial rolling stock for emergency response. The optimized Base Case cost estimate also includes an inflation adjustment (2.5%, which adds about $200 million for every year the project is delayed), interest on financing and return on equity (ROE) during construction, and financing fees. It does not include the State of Alaska contributions: the initial linefill value[6], the project development costs (~$400 million), and ad valorem taxes during construction.

The July 2011 Base Case involved building a new North Slope facility to take gas from the Prudhoe Bay Central Gas Facility, dehydrating the gas, and removing the carbon dioxide and hydrogen sulfide. The conditioned gas was compressed and chilled, and then enriched with NGLs (which were primarily propane and some heavy components) and shipped in a high-pressure pipeline. The new, optimized Base Case is similar except that it eliminates the enriching step. This modification permits removal of a significant number of facilities (de-ethanizer, NGL

[6] i.e., the cost of the 5.2 billion standard cubic feet of gas required to initially fill the pipeline.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

pumps, straddle plant, NGL extraction facility) and allows for further optimization of the pipeline diameter and operating pressure, thus eliminating additional facilities such as compressor stations.

The optimized Base Case was recognized in the July 2011 Project Plan and was one of the three commercial cases considered, but it was eliminated because at that time, the NGL enriched case appeared to offer the lowest cost to consumers.

**Table 3-1. Summary Capital Costs for ASAP Optimized Base Case (2012$)**

| FACILITY | CAPITAL COST (2012$ BILLION) |
|---|---|
| Gas Conditioning Facility (GCF) | $2.8 |
| Pipeline: GCF to Dunbar | 3.03 |
| Dunbar Off-Take and Fairbanks Lateral | 0.07 |
| Pipeline: Dunbar to Big Lake Interconnect | 1.8 |
| **Total Estimated ASAP Capital** | **$7.7 billion** |

### 3.1.2 Tariff Estimates

Since July 2011, AGDC has built a proprietary in-house tariff model with the assistance of the firm of Concentric Energy Advisors. This model, which has been tested and benchmarked against the July 2011 Project Plan tariffs, is capable of integrating all project variables and was used to model the tariff structure for the optimized Base Case.

Some of the tariff-related assumptions included in the original project plan (Section 3.1.3) have also been updated, as follows:

- The tariff will be levelized over 30 years.
- Facilities and pipeline will be depreciated over the initial 30-year contract term.
- Debt-to-equity ratio will be 75/25%.
- Return on equity (ROE) will be 11%.
- The total capital investment in the project will be $7.7 billion (2012$).
- Capital and operating costs will escalate at 2.5% from 2012.
- ASAP will have an operating efficiency of 98% of design capacity on an annual average basis.
- The State of Alaska will contribute $400 million to project development costs (which is not reflected in the tariff). This is a tariff modeling assumption, and the actual amount may be higher or lower, depending upon the results of open season.

Using today's uninflated dollars (2012$), the tariff to Fairbanks would be $4.25 to $6.00/MMBtu, while the tariff to Big Lake would be $5.00 to $7.25/MMBtu. These tariff estimates represent the



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

cost of delivering gas on a dollar-per-MMBtu basis to the Fairbanks city gate and the Big Lake meters, *excluding* any costs associated with local distribution companies (LDCs) or North Slope gas purchase. Table 3-2 presents levelized tariffs without any cost escalation from 2012 dollars. In Table 3-3, the optimized Base Case tariffs are presented as levelized nominal tariffs (taking into account assumed inflation of costs over time). The Base Case has been optimized for throughput and capital with NGLs being removed from the tariff estimate.

The tariff model is compartmentalized so that separate tariff estimates were prepared for:

- Gas Conditioning Facility (GCF),
- Pipeline: GCF to Dunbar,
- Pipeline: Dunbar to Big Lake, and
- Fairbanks Lateral (Dunbar Off-Take and Fairbanks Lateral Pipeline).

The reduction of the ROE assumption from 12% to 11% is primarily a reflection of lower returns that regulators are approving for utilities in the Lower 48. Additionally, the rates of return for bonds are currently at record lows and are projected to continue at these low levels for many years.

**Table 3-2. Estimated Tariff Build-Up to Base Case in Uninflated (2012$) Dollars**

| FACILITY | TARIFF BUILD-UP ($/MMBTU) |
|---|---|
| Gas Conditioning Facility (GCF) | $1.75 - $2.50 |
| Pipeline: GCF to Dunbar | $2.00 - $2.75 |
| Pipeline: Dunbar to Big Lake Interconnect | $1.25 - $2.00 |
| **Total Tariff at Big Lake** | **$5.00- $7.25** |
| Dunbar Off-Take and Fairbanks Lateral | $0.50 - $0.75 |
| **Total Tariff at Fairbanks City Gate** | **$4.25 - $6.00** |

**Table 3-3. Estimated Tariff Build-Up to Base Case in Inflated (Nominal) Dollars**

| FACILITY | TARIFF BUILD-UP ($/MMBTU) |
|---|---|
| Gas Conditioning Facility (GCF) | $2.00 - $2.75 |
| Pipeline: GCF to Dunbar | $2.25 - $3.00 |
| Pipeline: Dunbar to Big Lake Interconnect | $1.50 - $2.25 |
| **Total Tariff at Big Lake** | **$5.75 - $8.00** |
| Dunbar Off-Take and Fairbanks Lateral | $0.50 - $0.75 |
| **Total Tariff at Fairbanks City Gate** | **$4.75 - $6.50** |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

### 3.1.3 Tariff-Related Documents

In order to prepare for reengagement and future negotiations with prospective shippers, AGDC has worked to prepare all the necessary draft documents including a draft precedent agreement (PA) and a draft firm transportation service agreement (FTSA). These documents will be a significant part of the negotiation process with potential shippers and for any executed pre-subscription agreements for price and capacity before the open season occurs at the end of FEL 2.

The precedent agreement specifies the general quantity, quality, price, delivery points, and type of service the shipper can request. It also specifies the requirements for determining the credit worthiness of any potential shipper and may also specify conditions precedent (CP) which need to be satisfied prior to service being provided.

### 3.1.4 Other Agreements

AGDC will need to draft, negotiate, and execute many other related commercial agreements during FEL 2. These include the following:

- Standard connection agreements for the GCF, Fairbanks LDC, and utility connections;
- Facility sharing and shared service agreements with the Prudhoe Bay Unit (PBU);
- Shared services agreement with Alyeska Pipeline Service Company;
- Disposal agreement with PBU for carbon dioxide and hydrogen sulfide;
- Cogeneration agreements;
- Pipeline operating agreement; and
- General partnership agreement or LLC (if needed).

## 3.2 FINANCIAL

As described in Sections 2.5 and 4 of the July 2011 Project Plan, the financing of the ASAP Project will be dependent upon the ultimate ownership structure. AGDC has recommended the state ownership model; however, if a private ownership model is the preferred structure, the financing function will be limited as the builder/owner/operator will obtain its own financing.

A decision on the ownership structure for the ASAP Project is required before any more work on financing can occur.

## 3.3 ENGINEERING

### 3.3.1 Facilities Engineering

Facilities design will be a major portion of the overall ASAP Project design. AGDC has not had adequate funding to date to start a detailed facilities design effort. Work to date has been minimal and has focused on developing a preliminary cost estimate.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

Recent efforts have included studies and design to evaluate the feasibility, cost, and changes necessary for the optimized lean gas Base Case. The largest change is the elimination of the facilities that are not required for transmission of lean gas. For consistency, the same methodologies and assumptions were used in the cost estimating for the optimized Base Case and the previous enriched gas case.

The optimized Base Case design effort was initiated during spring 2012 with available funding with the objective to achieve as much progress as possible and minimize the impact to the project schedule. The plan is comprised of three parts:

- Solicitation of a contractor to do facilities design;
- Team mobilization, kickoff, and conceptual engineering; and
- Proceeding with preliminary engineering to support open season as soon as adequate funding is available.

Contractor solicitation proceeded in accordance with state guidelines and involved three distinct steps:

- An industry search was conducted to identify contractors with the capabilities to do the work;
- A request for qualifications (RFQ) was sent to qualified companies that have designed large processing facilities in the Arctic to see if they have the experience, personnel, and interest in doing facilities design for this project; and
- A request for proposals (RFP) was sent to the companies who successfully met the RFQ process.

The proposals have been evaluated and a notice of intent has been sent to the contractor selected. AGDC and the facilities engineering contractor will negotiate a contract and begin work in January 2013. Technology selection and conceptual design will be the main focus for the first half of the year. More detailed work will begin once sufficient funding is appropriated. The initial objective will be to advance the design and a cost estimate adequate to support open season efforts.

### 3.3.2 Pipeline Engineering

Lack of funding has prevented pipeline engineering from progressing significantly since the July 2011 Project Plan, which called for funding to proceed with FEL 2 engineering. Without that funding, pipeline engineering activities have focused on the following five areas:

- Boreholes in Special Design Areas (SDAs).
- Geotechnical and hydrologic reconnaissance.
- Support of environmental, regulatory, and lands (ERL) activities.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

- Tasks in support of pipe integrity verification – specifically, frost-heave design methodology and modeling to address issues raised by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).
- Support for commercial activities.

### 3.3.3 Boreholes in Special Design Areas

Starting in the summer of 2011, geotechnical information has been obtained in the Special Design Areas (SDAs) of the pipeline corridor. Additional geotechnical test holes were drilled at the proposed horizontal directional drilling (HDD) of the Tanana River at Nenana and for the potential HDD at the start of the Denali Park bypass route just north of the Nenana River at Glitter Gulch. Both areas represent challenges in the design and construction of the pipeline and therefore add uncertainty and risk to the overall project cost estimate.

At the Tanana River crossing at Nenana, four boreholes were drilled in October 2011 to supplement the initial four boreholes drilled from the river ice in February 2011. HDD feasibility is being evaluated as the current design concept because the existing highway and railroad bridges cannot be used to support ASAP and a new pipe bridge does not fit well with other Nenana development. Two geotechnical borings were drilled at the Looney Farm site in October 2011, and subsequently instrumented cables and data loggers were installed to record ground temperatures. This site was chosen because it was the location of the ASAP4S Meteorological/Air Contaminant Monitoring Station approximately 5 road miles north of Nenana. This station provided high-quality weather data and presented the opportunity to measure the ground response to well-known surface conditions. (The station has since been removed.)

A finite difference mathematical thermal model using the soil properties from the geotechnical borings and Nenana airport climate data was developed. The ground temperatures, air temperatures, and other meteorological data are actively monitored to correlate the ground temperatures to actual observed weather conditions from the Met/Ambient Station. The thermal model soil properties will be adjusted as necessary such that the computed thermal results match the actual ground temperature profile recorded in the field. The refined soil properties and thermal model will be used to evaluate the potential thermal impact of ASAP on the ground surrounding the pipeline for prediction of frost heave.

The Denali National Park SDA is a 22-mile long segment of ASAP between MP 534 and MP 555. A current design concept is to use HDD methods to construct a portion of this segment. HDD feasibility is being evaluated to avoid visual impacts from pipeline trenching within the viewshed of Denali National Park & Preserve. Ten boreholes were drilled between September 20 and September 30, 2011, using helicopter support. Supplemental boreholes are needed on the revised alignment to confirm that conditions are consistent.

Exploration results also indicated that Lynx Creek may correspond with a fault identified by Carver & Bemis in 2008. Fault crossing studies currently underway by the Alaska Division of



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

Geological & Geophysical Surveys are needed to define the fault zone and seismic displacement parameters for design of the transition from HDD to pipe-in-trench south of Lynx Creek.

### 3.3.4 Geotechnical and Hydrologic Reconnaissance

Geotechnical reconnaissance was performed for five sections of the ASAP pipeline alignment in 2011 and 2012:

- Nenana River crossing at Moody (ASAP_v5 MP 533.8 to 534.7)
- Willow area to near the pipeline terminus (ASAP_v5 MP 712.5 to 734.3)
- Lynx Creek (MP 540.3) to end of Denali bypass at Parks Highway (MP 554.7)
- Yukon River crossing (ASAP_v5 MP 360.2 to 362.0)
- Minto Flats between Livengood and Dunbar (ASAP_v5 MP 405.1 to 457.7)

Geotechnical reconnaissance is typically performed in advance of a geotechnical boring program to verify expected field conditions, plan routing, and determine access points and equipment needed (truck-mounted, track-mounted, or helicopter-portable). A hydrologic reconnaissance was also performed in order to gather physical data and observations to be used in support of the project EIS, right-of-way applications, and constructability assessment. The hydrologic reconnaissance also included the Fairbanks Lateral.

### 3.3.5 Engineering Support of Environmental, Regulatory, and Lands Activities

The Engineering team supported development of the final EIS and other Environmental, Regulatory, and Lands (ERL) activities, including several rounds of requests for information, including an analysis of alternatives for the Fairbanks Lateral, an extensive desktop analysis of material sites, and various other project tasks based on agency comments.

### 3.3.6 Tasks in Support of Pipe Integrity Verification

This work involved verification of pipeline integrity for route hazards that may be encountered during the pipeline's operational life – especially those hazards related to pipeline operations in the Arctic. For the Trans-Alaska Pipeline (TAPS), a hot crude oil pipeline, the particular hazard of interest was thaw settlement caused by heat input to a frozen subsurface. Although there may be some areas where the ASAP pipeline could run warm causing minor settlement concerns, the main concern for the normally chilled gas pipeline is frost heave caused by heat extraction from an unfrozen subsurface. For some soils, freezing the subsurface will cause migration of water to the cold front, where the water freezes and causes an upward displacement of the chilled pipe.

PHMSA has expressed concern that the resulting increased displacement of the pipeline could cause levels of stress in the pipeline beyond that normally encountered by operating gas pipelines. Consequently, the agency is monitoring development of the project approach to this phenomenon. AGDC has met with PHMSA several times to brief the oversight team on project progress.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

The work has developed into five study areas:

- **Geothermal/Geotechnical Methodology**
  - Identify required input for frost-heave design and analysis methodology.
  - Develop geotechnical design criteria.
  - Develop laboratory procedure for frost-heave testing.
  - Complete frost-heave testing for route soils.
  - Perform geothermal analysis for potential frost-heave prediction.
  - Provide geotechnical/geothermal values for use in pipe-soil structural modeling.
- **Field Program Development**
  - Review available route data and complete scope for route data acquisition using route gap analysis.
  - Develop route evaluation approach and criteria.
  - Develop field program for geothermal and geotechnical data acquisition.
  - Scope and implement associated field program.
  - Provide laboratory testing program with appropriate samples.
- **Geo-database Development**
  - Define the use of geographic information system (GIS) data in geotechnical support.
  - Develop and implement project template for frost-heave route analysis.
  - Perform data gap analysis.
  - Acquire available data for GIS with documentation.
  - Provide values for evaluation of potential pipe displacement along route.
- **Analytical Methodology**
  - Prepare description of analysis methodology.
  - Prepare and document project analytical tools.
  - Complete analyses for operational temperature and pressure envelope along the route.
  - Complete analyses for prediction of frost heave given operational pipe parameters and route soil data.
  - Complete analyses for verification of pipe integrity when subjected to frost heave given pipe material properties.
  - Document completed analyses.
- **Line Pipe Materials Research**
  - Research material specifications for arctic applications.
  - Develop line-pipe material development approach.
  - Identify and review potential suppliers with material questionnaire.
  - Complete small-scale material tests to develop required input to project approach methodology.
  - As required, complete full-scale testing for project approach validation.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

Work in all areas has progressed during the last year. Deliverables include:

- **Geothermal/Geotechnical Methodology**
  - Frost-Heave Potential: Geotechnical Data Acquisition Requirements
- **Field Program Development**
  - The field program for sample acquisition was completed in November, 2012, and samples are being tested.
- **Geo-database Development**
  - ASAP GIS Geotechnical Geodatabase Report
- **Analytical Methodology**
  - Design Methodology to Address Frost-Heave Potential
  - Frost-Heave Potential: Strain Demand Proof-of-Concept Analysis
- **Line Pipe Materials Research**
  - Strain Capacity Validation Rationale for the Alaska Stand Alone Gas Pipeline
  - Fracture Control Rationale for the Alaska Stand Alone Gas Pipeline
  - Line Pipe Specification for the Alaska Stand Alone Gas Pipeline

### 3.3.7 Support for Commercial Activities

With the revision to the optimized Base Case with lean gas, pipeline size and pressure optimization were re-examined. The initial Base Case with enriched gas required an ANSI Class 1500 (2,500 psi) pipeline as high pressure is needed to keep the NGLs in a gaseous state for pipeline operation. With lean gas, lower pressures and therefore thinner-wall pipe and less-costly valves and fittings can be used. Several diameters and two pressure classes (ANSI Class 900 and 600 – 2,180 psi and 1,480 psi, respectively) were analyzed. The cost differentials were examined to develop "J" curves, which identify cost versus throughput. Based on this initial analysis, a 36-inch-diameter ANSI Class 600 pipeline was selected. The overall pipeline cost estimate was then revised for use in the tariff model.

## 3.4 ENVIRONMENTAL, REGULATORY, AND LANDS (ERL)

ERL work since publication of the July 2011 Project Plan has centered on completing the environmental impact statement (EIS) for the ASAP Project, refining the ASAP Plan of Development (POD), continuing field studies, and performing right-of-way acquisition activities.

### 3.4.1 ASAP Final Environmental Impact Statement

The Alaska District of the U.S. Army Corps of Engineers (USACE) and six cooperating agencies — the Bureau of Land Management (BLM), U.S. Environmental Protection Agency (EPA), National Park Service (NPS), Alaska Department of Natural Resources (ADNR), State Pipeline Coordinator's Office (SPCO), U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA), and the U.S. Coast Guard (USCG) — initiated the National Environmental Policy Act (NEPA) process for the ASAP Project on December 4, 2009 by issuing a Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS). A draft



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

EIS was issued on January 20, 2012, and the final EIS (FEIS) based on the 24-inch-diameter, 737-mile-long, high-pressure natural gas pipeline with NGLs was published in the Federal Register on October 26, 2012. The public comment period on the FEIS closed November 26, 2012.

AGDC responded to numerous requests for information from the USACE during preparation of the FEIS, and the responses involved considerable effort for both Engineering and ERL personnel. The final EIS examines the potential impacts of construction and operation of the proposed pipeline, and evaluates a range of alternatives, consistent with applicable law, by which to accomplish the purpose and need of the proposed action while avoiding or minimizing adverse impacts. The USACE and cooperating agencies have joined in this effort in order to allow this EIS to provide the basis for respective agency decisions relative to permitting and other federal actions on the proposed project.

The BLM ROW grant and record of decision (ROD) for the ASAP Project grant are pending. The optimized Base Case change will require that the ASAP FEIS and ROD be amended. However, since the ASAP route remains static and the optimized Base Case eliminates many of the required facilities (straddle plants, NGL extraction plant, fractionation facility and compressor stations), there should be minimal impact on the overall project schedule. It is also expected that the change will help streamline project permitting because fewer facilities are required, the project footprint is smaller, and fewer carbon emissions will occur.

### 3.4.2 ASAP Plan of Development

AGDC prepared a revised Plan of Development (POD) to support the planning and development of the project. The POD provides detailed information to support regulatory processes, permit applications, and preparation of required NEPA documents. The POD includes information on the following:

(1) Purpose and Need
(2) Project Description
(3) Right-of-Way Location
(4) Facility Design Factors
(5) Additional Components of the Right-of-Way
(6) Government Agency Involvement
(7) Project Construction
(8) Resource Values and Environmental Concerns
(9) Stabilization and Rehabilitation
(10) Operation and Maintenance
(11) Termination and Restoration

Revision 1 of the POD was published in March 2011. Revision 2, which was published on October 26, 2012, updates Revision 1 based on information AGDC developed while the USACE prepared the EIS for the project. These revisions are reflected in responses AGDC provided to



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

requests for information from the USACE during the EIS process. As the ASAP Project evolves, this POD will be updated as necessary to incorporate new information. The POD will be updated again before AGDC files a completed application with the USACE for a Clean Water Act 404 (1)(b) wetland permit for the ASAP Project.

### 3.4.3 Environmental Field Studies

Environmental field studies during 2011 and 2012 involved wetland surveys, stream surveys, cultural resource surveys, and air quality monitoring. These data are needed for numerous state and federal permits that will be required for the ASAP Project.

The summer 2011 wetland survey covered 614 miles of ASAP Project alignment and resulted in 70 wetland determinations and the evaluation of 33 streams. During the summer of 2012, wetland field work was conducted to fill in data gaps required to complete the Final ASAP Wetland Summary Report (2012). This report will be submitted to USACE with a letter requesting a Jurisdictional Determination (JD) for all wetlands identified. Once approved, a JD is valid for 5 years and will support the USACE's evaluation of a Clean Water Act 404 (1)(b) wetland permit application.

In 2011, a total of 393 streams were surveyed, and cultural resource survey crews conducted surveys for 170 miles of the ASAP alignment. During the fall of 2011 and winter of 2012, ASAP air quality monitoring stations were installed at the following three locations:

- ASAP4N at Dunbar near MP 458 and near the junction of the ASAP mainline pipeline and the Fairbanks Lateral location (meteorological);
- ASAP4S on leased land approximately 11 miles south of Dunbar (meteorological and ambient);
- ASAP5 at the ASAP terminus on Matanuska-Susitna Borough land near MP 39 of the Beluga pipeline (meteorological and ambient).

Data at these three sites were collected for 1 to 3 months before the monitoring program was discontinued in May of 2012. Air quality monitoring operations will be restarted when sufficient funding is available and after additional engineering and design work has been completed.

### 3.4.4 Right-of-Way Acquisition Activities

Before construction of ASAP can begin, agreements must be obtained from public and private landowners, leaseholders, Native allottees, and other parties that hold interests in the land that ASAP crosses. The state and federal governments are also major landowners along the route, encompassing 90% of the property interests needed for ASAP.

- **ASAP Line List:** The Land Ownership GIS Database was updated, and quality control measures were established.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

- **Centerline Legal Description of ASAP**: Legal descriptions of the centerline alignments for the ASAP mainline and the Fairbanks Lateral were completed in support of the federal ROW Grant and other ASAP land and right-of-way activities.
- **ASAP Appraisal of State Leasehold**: The appraisal process for ASAP was initiated in July 2012 as a requirement of the lease for ASAP on state lands: ADL 418797, Right-of-Way Lease for the Alaska Stand Alone Gas Pipeline/ASAP. The appraisal will be for all lands within the 604 miles of state ROW for the mainline route and Fairbanks Lateral.
- **BLM Federal ROW Grant**: Work continued throughout 2012 on the BLM ROW Grant. BLM has indicated that it will issue a Record of Decision on the ASAP Final EIS in the near term; however, a decision on the Grant of ROW will be deferred until AGDC submits a completed Clean Water Act Section 404 wetland permit application to the USACE and the application is approved. That timing of the 404 application will be dependent on project funding and the completion of additional engineering.

## 3.5 PUBLIC AFFAIRS / STAKEHOLDER ENGAGEMENT

Since July 2011, AGDC continued work on developing and executing the public outreach effort consistent with project funding. In December 2011, AGDC divided the External Affairs department into two separate functional areas: the Public Affairs department and the Government Affairs department. Public Affairs was established with minimal funding for the remainder of the fiscal year.

In 2012, the Public Affairs team scheduled and met with members from all of the identified affected communities along the ASAP alignment. Community support along the alignment has strengthened as Alaskan stakeholders become more educated and more interested in the ASAP Project.

In July 2012, the Public Affairs department was formally funded and staffed as a means of positioning the ASAP Project for continued success through expanding public awareness, improving outreach effectiveness, and developing and delivering project education to stakeholder audiences. Strategic planning for continuation and expansion of project communication is at the root of the communication plan. ASAP Public Affairs funding was increased and the outreach effort was expanded mid-year 2012 to provide information to numerous industry groups, trade associations, annual conferences, and local community forums in Anchorage, Fairbanks, Kenai, and the Matanuska-Susitna Valley.

The ASAP Public Affairs team prepared and presented project updates to local borough and municipal planning commissions and local government assembly bodies as requests from the governing bodies were received. In 2012, members of the ASAP project team attended over 80 public meetings to facilitate project updates. Alaskan stakeholder audiences are continuously digesting a myriad of articles and opinion pieces on proposed energy projects in Alaska. Therefore, to engage the public and develop open and transparent communication, it is paramount that the ASAP project team continue to seek and accept invitations to share project updates with the public.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

The baseline for communication efforts in all phases of the project is included in the comprehensive communication plan developed in 2012. The plan includes an outline for corporate communication responsibilities, a media plan, standards for branding and imaging the project, and development of a powerful stakeholder database. The media plan contains strategy for increasing education on the ASAP Project; it also includes research as a method of monitoring the impact and reach of the media efforts.

In 2012, communication was limited to in-person presentations by staff, and print material was limited to two printed project flyers. Moving forward into FEL 2, the need for updated project materials will escalate. Updated project information will be produced to meet the schedule of engagements. Communication efforts will include monthly legislative reports, public presentations, quarterly project flyers, more comprehensive website content, use of media outlets, and preparation of other project materials as necessary. As materials are developed, various methods of maintaining public education will be employed. Expanded channels of communication in 2013 will include strategic use of multimedia, including social media. Communication for the project is a critical aspect of the project mission with emphasis on providing the public, the staff, and all stakeholders with open, transparent, and relevant project information through continuous messaging.



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

# 4. DETAILED STATUS OF PROJECT PLAN

The following tables provide details on the current status and work to be done for the individual commercial, financing, engineering, ERL, and public affairs parts of the July 2011 Project Plan. These tables reflect how the elements of those plans have changed in the past 18 months.

## 4.1 COMMERCIAL PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Support the legislative effort to address carrier operation status (common vs. contract), confidentiality, and in the case of state ownership, grant AGDC certain regulatory powers. The legislative actions should be complete by May 2012. | Although enabling legislation passed the House during 2012, it did not progress in the Senate. New enabling legislation has been drafted for the 2013 legislative session. If enacted, the bill will achieve these objectives. | New AGDC enabling legislation has been drafted. |
| Develop the process and select a builder/owner/operator or builder/operator as early as possible in 2012. | Process being developed and potential builder/owner/operators identified. Put on hold until legislative authority obtained. | Complete the builder/owner/operator process and selection, and assuming a successful legislative outcome, implement beginning in 4Q2013. |
| Negotiate with anchor/foundation shippers for tariff and capacity before the open season occurs at the end of FEL 2. | Discussions were held during 2011 with potential foundation shippers and producers to better understand their requirements and issues. Unable to progress in 2012 due to confidentiality issues. | Continue informal conversations with potential foundation shippers. Make clear completion of open season has been delayed at least one year to late 2014 or early 2015. Get feedback on draft tariff terms and conditions, and precedent agreements. Engage in substantive negotiations with potential shippers beginning in 3Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Establish and maintain an ongoing dialogue with shippers on changes in cost or design. | Discussions were held in 2011 with potential shippers and producers to better understand their requirements and issues. Unable to progress due to confidentiality issues. | Continue informal conversations with potential shippers and producers. Make clear completion of open season has been delayed at least one year. Engage in substantive negotiations beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Define the pipeline specifications for NGLs entering the pipeline through the miscible injectant (MI) pumps above the pipeline inlet manifold for the purposes of the tariff specification as part of the open-season package. | Met with producers and the Prudhoe Bay Unit (PBU) operator on the NGL and miscible injectant (MI) specifications/volumes. The information has been included in the engineering design and project plan. | The change to optimized Base Case with lean gas makes this recommendation unnecessary. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.1 COMMERCIAL PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Define the pipeline specifications for natural gas entering the ASAP Gas Conditioning Facility for the purposes of the tariff ($H_2S$ and rare metals) and as part of the open-season package. | AGDC met with the PBU operator to help define the inlet gas specifications and volume. This information will be included in the new engineering design. | Maintain contacts with producers and the PBU operator and provide feedback on inlet gas assumptions and changes. Provide project status updates and make clear completion of open season has been delayed at least one year. |
| Define the pipeline specifications for natural gas entering the pipeline inlet manifold from the Gas Conditioning Facility (GCF) or any other connection delivering gas to the pipeline compressors as part of the open-season package. | Since AGDC met with the PBU operator, the outlet gas specifications and volume have been defined. The information has been included in the engineering design. | Maintain contacts with producers and potential shippers. Provide feedback on outlet gas assumptions and changes. Provide project status updates and make clear completion of open season has been delayed at least one year. |
| Formalize the GCF tariff methodology. | The draft GCF tariff methodology has been defined using the new AGDC tariff model. | Continue informal conversations with potential foundation shippers. Make clear completion of open season has been delayed at least one year. Get feedback on draft GCF tariff methodology and work towards an agreed-upon document. Engage in substantive negotiations beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Determine the variety of pipeline tariffs to be offered and the methodology used for computing each in preparation for the open season. | Draft tariff terms and conditions document prepared with types of tariffs. A draft tariff model has been developed which incorporates these terms and methodology. | Continue informal conversations with potential foundation shippers. Make clear completion of open season has been delayed at least one year. Get feedback on draft tariff terms and conditions, and work toward an agreed-upon document. Engage in substantive negotiations with potential shippers beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| After the open season, negotiate final precedent agreements. | Draft precedent agreement has been prepared for presubscription conversations prior to open season. Completion of open season is delayed at least one year due to lack of enabling legislation and full funding of project. | Continue informal conversations with potential foundation shippers. Make clear completion of open season has been delayed at least one year. Get feedback on draft precedent agreement and work toward an agreed-upon document. Engage in substantive negotiations with potential shippers beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Draft standard connection agreements for the GCF, Fairbanks LDC, and ENSTAR connections. | Draft standard connection agreement in progress and not complete. | Finalize the draft connection agreements. Engage in substantive negotiations with potential shippers beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.1 COMMERCIAL PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Draft $CO_2$/ethane disposal and connection agreement. | Open season delayed at least one year HB 9 did not pass and the project did not receive full funding. This work on this item has been deferred. | Begin work on this in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Draft the shared services agreements between ASAP and PBU. | Potential shared services identified and draft agreement being worked. AGDC has met with PBU operator to identify authorizations and the process required for PBU facility sharing. | Continue meetings with PBU operator and engage in substantive negotiations beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Draft the shared services agreement between ASAP and TAPS owners. | Potential shared services identified and preliminary discussions held with TAPS officials. | Continue meetings with TAPS and engage in substantive negotiations to finalize agreements beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding. |
| Plan open season. | AGDC open season plan being developed to reflect probable oversight by the Regulatory Commission of Alaska (RCA). | Completion of open season has been delayed at least one year. |
| Hold open season. | Completion of open season has been delayed at least one year because enabling legislation did not pass and the project did not receive full funding. | Completion of open season has been delayed at least one year. |
| Monitor Cook Inlet supply developments. | Ongoing monitoring of Cook Inlet gas supplies via state and federal agencies, the press, professional publications, and through the Mayor's Energy Task Force. | Continue monitoring of Cook Inlet gas supplies via state and federal agencies, the press, professional publications, and through the Mayor's Energy Task Force. |
| Maintain a current commercial risk register with mitigation plans throughout FEL 2 and FEL 3. | Initial, high-level risk management process developed. Detailed risk management deferred until full FEL funding is received. | Initiate detailed risk management process in 2Q2014, assuming new AGDC enabling legislation is passed and project fully funded. |
| Execute cogeneration agreements, if practical, with North Slope Borough, Livengood, Golden Valley Electric Association, or other parties ready and willing to receive power from ASAP facilities. | Cogeneration agreements not on critical path and budget-constrained, so these agreements have lower priority and have been deferred. | Re-evaluate priority and timing of cogeneration agreements. Develop a preliminary plan for delivery of agreements. |
| Supplemental Tasks Required in Public Ownership Case: | Process being developed and potential builder/owner/operators identified. Put on hold until legislative authority obtained. | AGDC is unable to pursue a builder/owner/operator or a builder/operator case until enabling legislation is signed into law and funding is appropriated. |
| Establish a gas marketing affiliate. | HB 9 included provisions to make the Alaska Natural Gas Development Authority (ANGDA) the gas marketing affiliate under the Alaska Housing Finance Corporation (AHFC), but the legislation did not pass. | Work to establish a gas marketing affiliate – to be addressed in the new AGDC enabling legislation. |
| Negotiate supply contracts with gas producers (through gas marketing affiliate). | No action because enabling legislation did not pass. | Begin discussions with gas producers after enabling legislation is passed. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.1 COMMERCIAL PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Negotiate off-take agreements (through gas marketing affiliate). | No action because enabling legislation did not pass. | Begin discussions with possible off-take entities after enabling legislation is passed. |
| AGDC will support the efforts by the State of Alaska to:<br>• Evaluate the merits of the recommended legislation and take appropriate actions.<br>• Establish the option to bid firm transportation of royalty-in-kind (RIK) gas.<br>• Continue to support the FEL 2 and FEL 3 funding of AGDC. | Supported the initial drafting of HB 9 and the various amended versions as it moved through the House and Senate committees. HB 9 included language to make ANGDA the gas marketing affiliate for State of Alaska royalty gas and also set up the fund to support AGDC. HB 9 passed the House but did not pass the Senate. Legislation was part of the special session, but no legislative action was taken. | Issues are still unresolved and planning is underway to provide the support that will be required once the new AGDC enabling legislation is introduced in the 2013 legislative session. Ensure confidentiality, regulatory framework, gas marketing affiliate, funding, and all other necessary provisions are included in final bill. |
| AGDC will work with the PBU owners and other potential suppliers to help expedite the following commercial actions:<br>• Link the producers with potential off-takers to negotiate supply or off-take agreements.<br>• Request amendments to the unit operating agreements that address gas balancing in a manner that enables individual unit owners to ship freely without undue gas balancing requirements (in public ownership case).<br>• Negotiate gas-supply agreements (through AGDC gas marketing affiliate) in the public ownership case. | Met with producers and have taken initial steps to link with potential shippers and end users. Unable to progress further due to confidentiality issues and uncertainty over new direction for the Alaska Pipeline Project (APP) (e.g., LNG export at tidewater in Alaska), and because AGDC has no gas marketing affiliate. | Continue discussions with PBU operator and producers. Continue to facilitate producer and shipper conversations. Make clear completion of open season has been delayed at least one year. Engage in substantive conversations on the need for a PBU gas balancing agreement. |
| AGDC will enlist potential shippers to do the following:<br>• Negotiate foundation shipper agreements prior to open season.<br>• Attend open season.<br>• Keep abreast of project developments.<br>• Negotiate precedent agreements.<br>• Negotiate gas-supply and off-take agreements (through AGDC gas marketing affiliate in the public ownership case). | Draft precedent agreement has been prepared for presubscription agreements prior to open season. Meetings were held with potential shippers to understand their requirements and issues. Completion of open season delayed at least one year because enabling legislation did not pass and the project did not receive full funding. HB 9 included provisions to make ANGDA the gas marketing affiliate under AHFC, but the legislation did not pass. | Continue informal conversations with potential foundation shippers. Make clear completion of open season has been delayed at least one year. Engage in substantive negotiations with potential shippers beginning in 4Q2013, assuming new AGDC enabling legislation is passed with the necessary confidentiality and funding approved and marketing affiliate established. |
| The Fairbanks community should develop the natural gas infrastructure necessary to position Fairbanks to take their forecast capacity as soon as possible after startup. | The Fairbanks Economic Development Corporation has a draft study on local demand and the cost for the local distribution system build-out. AGDC is monitoring this activity. | Continue conversations with the Fairbanks Economic Development Corporation. Make clear completion of open season has been delayed at least one year. Maintain community outreach and stakeholder meetings to provide project updates. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.1 COMMERCIAL PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Mining entities should undertake the following:<br>• Negotiate agreements with gas suppliers subject to project completion.<br>• Fund and build interconnects. | AGDC has had initial meetings with some potential Interior shippers, including mining entities. Unable to progress due to confidentiality issues, uncertainty over new direction for APP (e.g., LNG export at tidewater in Alaska), and lack of funding. | Continue conversations with mining entities who could be potential shippers. Make clear completion of open season has been delayed at least one year. Identify new mining projects and hold preliminary meetings on project. Engage in substantive conversations when new AGDC enabling legislation is passed with the necessary confidentiality and funding approved and marketing affiliate established. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.2 FINANCING PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Financing using debt issued by the Alaska Railroad:<br>• Determine, through a Private Letter Ruling (PLR) request to the Internal Revenue Service, the ability of the Alaska Railroad to finance ASAP with the issuance of tax-exempt debt.<br>• Negotiate agreements with the Alaska Railroad for the issuance of debt.<br>• Issue an RFP for a financial advisor, bond counsel, and special tax counsel for the debt issuance; review the responses received for each; and negotiate contracts with the winning respondents.<br>• Create and distribute an RFP for bond underwriters to leading investment banks. Review and evaluate the responses; appoint a team of underwriters.<br>• Create a plan for investment options by individual Alaskans, with options to include possible mutual fund or preferred stock issuance.<br>• Construct a bond issuance calendar based upon expected cash draws to fund construction, including letters of credit or other facilities to finance the project during the construction period.<br>• Issue debt in multiple series to minimize negative arbitrage. | Financing was not pursued because no decision was made on the ownership model. | Start financing tasks once ownership model is chosen. |
| Assuming the PLR is unsuccessful, debt would need to be issued by the State or AGDC. There would be additional steps involved with this scenario.<br>• Negotiate with State Department of Revenue to determine the optimal credit structure for the debt, including drafting and supporting necessary legislation. | Financing was not pursued because no decision was made on the ownership model. | Start financing tasks once ownership model is chosen. |
| If a private ownership model is the preferred structure, the financing function will be limited as the builder/owner/operator will obtain its own financing. | Financing was not pursued because no decision was made on the ownership model. | Start financing tasks once ownership model is chosen. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.3 ENGINEERING PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Affirm design requirements. | Pipeline design basis has changed from rich gas to a lean gas case – 1,480 psi, 36-inch-diameter pipeline. Issued request for proposals (RFP) for facilities engineering contractor. | Enter into contract with facilities contractor. Design requirements will be developed and then confirmed once commercial discussions are initiated. |
| Finalize site selection. | Preliminary GCF site identified. Issued RFP for facilities engineering contractor. | Once a contract with facilities contractor is underway, study alternative sites for GCF and select final site. |
| Perform preliminary engineering (as compared to FEL 1 conceptual work). | Continued pipeline and engineering work to support environmental impact statement and future permitting activities, and to refine pipe properties to address potential impacts of frost heave. | Assuming adequate funding and engagement of a facilities engineering contractor, initiate detailed facility design and engineering efforts in the special design areas, conduct field studies to address geohazards and delineate terrain units, refine the project alignment with latest field data, and finalize frost-heave design methodology. |
| Perform process hazard reviews. | Issued RFP for facilities engineering contractor. | Assuming adequate funding and engagement with a facilities engineering contractor, initiate process hazard reviews. |
| Refine capital cost estimates to AACE Class 3 level. | Basis of 2011 cost estimates remains the same. Lack of funding to refine preliminary engineering prevents refining cost estimate to Class 3 level. | Continue pipeline and facilities engineering through preliminary engineering to allow for Class 3 estimate. |
| Perform pipeline stress design capacity/demand testing for a special permit from the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA). | Proof-of-concept work continues on frost-heave design methodology. No material testing completed on geotechnical or small-scale pipe samples. Limited geotechnical investigations conducted in the fall of 2012. | Perform geotechnical investigations and conduct laboratory testing to verify design concepts for strain demand. Conduct test on small-scale samples to verify steel properties. Continue work with PHMSA on determining need for special permit. |
| Acquire field data for regulatory and design requirements. | Field work continued on terrain unit mapping and geohazards. Geotechnical data gap analysis complete. | Develop and implement geotechnical field program to capture necessary data to refine pipeline and associated facilities design. |
| Develop an engineering plan for FEL 3. | Work progressing towards FEL 2 engineering. FEL 3 engineering delayed due to lack of funding. | Progress through FEL 2 engineering, assuming adequate funding is appropriated in 2013. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## Table 4-1. Maturity Matrix for Engineering Deliverables: Present vs. End of FEL 2

| ELEMENT | STATUS DEC. 31, 2012 | STATUS PLANNED FOR END OF FEL 2 |
|---|---|---|
| GENERAL PROJECT DATA | | |
| Scope | Preliminary | Advanced |
| Plant Production | Preliminary | Defined |
| Location | Approximate | Specific |
| Soils | Approximate | Preliminary |
| Integrated Project Plan | Preliminary | Defined |
| Master Schedule | Preliminary | Advanced |
| Escalation | None | Advanced |
| Work Breakdown | Preliminary | Advanced |
| Project Code | None | Defined |
| Contracting Strategy | Assumed | Advanced |
| ENGINEERING DELIVERABLES - FACILITIES | | |
| Block Flow | Preliminary | Complete |
| Plot Plans | Preliminary | Advanced |
| Process Flow Diagrams (PFDs) | Preliminary | Complete |
| Utility Flow Diagrams (UFDs) | Preliminary | Preliminary |
| Piping & Instrumentation Diagrams (P&IDs) | None | Preliminary |
| Heat & Material Balances (H&MB) | Started | Preliminary |
| Process Equipment List | Started | Complete |
| Utility Equipment List | Started | Preliminary |
| Electrical One-Line Drawings | Started | Preliminary |
| Specification and Datasheets | Started | Preliminary |
| General Equipment Arrangement Drawings | Started | Preliminary |
| Spare Parts Lists | None | Started/Preliminary |
| Mechanical Discipline Drawings | None | Started |
| Electrical Discipline Drawings | None | Started |
| Instrumentation/Control System Drawings | None | Started |
| Civil/Structural/Site Discipline Drawings | None | Started |
| ENGINEERING DELIVERABLES - PIPELINE | | |
| Alignment Sheets | Started | Preliminary |
| Special Design Areas | Preliminary | Preliminary |
| Logistics Plan | Preliminary | Preliminary |
| Material Specifications | Started | Preliminary |
| Terminus Configurations | Started | Preliminary |
| Trench Details | Started | Preliminary |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.4 ENVIRONMENTAL, REGULATORY, AND LANDS (ERL) PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Ongoing EIS process for the Federal ROW | The U.S. Army Corps of Engineers (USACE) published the FEIS in the Federal Register on October 26, 2012, and the public comment period on the FEIS closed November 26, 2012. The BLM ROW Grant and Record of Decision (ROD) for the ASAP ROW crossing 100 miles of federal land are pending. | Once adequate ASAP engineering and design data for the lean gas Base Case are available, AGDC will submit a completed wetland permit under Section 404 of the Clean Water Act. At that time, the USACE will determine what additional NEPA analysis such as a supplemental EIS may be required. |
| Obtaining agreements from public and private landowners, leaseholders, Native allottees, and other parties is required before construction. | A complete ASAP line list has been developed identifying land ownership along the pipeline route. | Actual ROW acquisition from private landowners, leaseholders, Native allottees, and other parties should begin approximately 2 years prior to start of construction.<br>Continue to update ASAP line list as landownership changes are identified. |
| A survey and complete title verification will be needed to identify the number of parcels and land ownership. | Complete title verification will be required prior to ROW certification to identify the most up-to-date land ownership records.<br>Title verification discussions with the Alaska Department of Natural Resource (DNR) have been conducted for the purpose of meeting DNR requirements for the State Lease and to agree on data formats and delivery methods for AGDC submittals to DNR. | Assuming adequate funding, title verification will occur at the appropriate phase of the project.<br>Survey and monument work to establish a horizontal and vertical survey control network will be conducted as an engineering task beginning in FY2013. |
| Undertake field surveys to support data development for regulatory and permitting requirements. | Selected field data-collection surveys were completed in 2010, 2011, and 2012 to support ASAP design and regulatory requirement. Data were collected on wetlands, streams, lakes, and cultural resources, although more work remains to be completed. Additional data are being delivered to AGDC from the Prudhoe Bay Unit air monitoring site at Prudhoe Bay. | During a scaled back 2012/FY13 field season, all wetland delineation required for the Section 404 wetland permit application was completed.<br>Cultural work in 2013 will be conducted for the engineering borehole program. |
| Develop an ERL plan for FEL 3. | The current ERL Permitting, ROW, Field Season Planning, and Air Permitting strategy plans will feed the FEL 2 ERL plan. | An ERL FEL 3 plan will be developed once the FEL 2 schedule is established. |
| Update permit acquisition plan for FEL 2 activities | The Permit Acquisition Plan is an AGDC document that is updated as needed. | Continue to update plan as permitting tasks are completed and/or new information is available. |
| The following environmental fieldwork will be conducted during FEL 2 to support Tier 1 and 2 permits: | | |
| • Cultural resources survey and sensitivity model. | This model has the potential to reduce field work; however, work on the model has not progressed. | Review the value to be gained with the use of a predictive model. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.4 ENVIRONMENTAL, REGULATORY, AND LANDS (ERL) PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| • Wetlands survey and evaluation. | Additional wetland delineation and reporting were completed in 2012 both north and south of Livengood to support the Jurisdictional Determination request and wetland Section 404 permit application. | Complete the wetland work needed to support a USACE Jurisdictional Determination. |
| • Stream crossing surveys for fish and fish habitat. | Stream work is required both north and south of Livengood during the 2013 field season to support engineering tasks and the wetland 404 permit application. | The 2013 Stream Survey Work plan is complete. Review and implementation for the plan should begin in January 2013 for a June or July start date. |
| • Water resources availability studies. | Fish, water chemistry, and bathymetry data collected for 30 lakes north of Livengood. | Additional lake studies will be deferred until 2014. |
| • Air quality baseline data collection. | Air monitoring was initiated at three locations in the winter of 2011/2012. Data collection at these sites was terminated due to lack of funding.<br>Additional data are being delivered to AGDC from the PBU air monitoring site at Prudhoe Bay. | Air quality data collection will resume when adequate funding is available and there is more certainty about facility locations. |
| Proactive coordination with federal, state, and local regulatory agencies and quick response to agency requests for information. | This is the ongoing process of maintaining agency relationships and managing permit scope and schedule to acquire the required permits on schedule and with reasonable stipulations or conditions. | Continue long-term permit planning and timely execution of all permitting and regulatory tasks in conjunction with the project schedule. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.4 ENVIRONMENTAL, REGULATORY, AND LANDS (ERL) PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Title work is needed on a regular schedule to maintain the land database with applicable lands sales, exchanges, and third-party encumbrances. The most significant future land work includes:<br>• Title examination as a follow-up to preliminary title work.<br>• Mining claims (federal and state).<br>• Identification of third-party interest (leases, occupational interests, trapping).<br>• Right of entry and access agreement acquisition for studies.<br>• Survey control (property surveys, platting, right-of-way mapping).<br>• Agency land-use permits (utility, letter of non-objection).<br>• Preconstruction private property inventory, also known as encroachment inventory.<br>• Appraise and acquire.<br>• Right-of-way lease appraisal.<br>• Utility encroachment coordination and relocation.<br>• Eminent domain. | The ASAP State ROW Lease appraisal under the terms of the State lease (ADL 498197) was initiated in July 2012. Currently, contracts for the appraisal are being completed by AGDC, and ASAP land ownership data are being prepared to support the appraisal work.<br>Current ROW/Land work is focused on meeting the immediate project needs such as DNR State Lease requirements, the ASAP line list, land ownership data management, and GIS work.<br>Title work to support the ASAP State ROW lease appraisal will include acquisition of the last conveyed document for each land parcel.<br>Currently, contracts for the title documents to support the ASAP State ROW lease appraisal are being completed by AGDC.<br>Right-of-entry and access agreement acquisition for field studies is completed prior to each field season. | As the project progresses, land ownership data acquisition will continue in order to maintain the land database with applicable lands sales, exchanges, and third-party encumbrances.<br>Future ASAP ROW tasks will be conducted as dictated by the ASAP Project schedule. The most significant future land work includes:<br>• Title examination as a follow-up to preliminary title work. The title documents will comprise one element of the complete land ownership information package compiled for each land parcel and submitted to the appraisal contractor.<br>• Mining claims (federal and state).<br>• Identification of third-party interest (leases, occupational interests, trapping).<br>• Right-of-entry and access agreement acquisition for studies as needed.<br>• Survey control (property surveys, platting, right-of-way mapping).<br>• Agency land-use permits (utility, letter of non-objection).<br>• Preconstruction private property inventory, also known as encroachment inventory.<br>• Appraise and acquire.<br>• Right-of-way lease appraisal. The appraisal for ASAP State ROW lease lands will be conducted between January and June of 2013.<br>• Utility encroachment coordination and relocation. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.5 PUBLIC AFFAIRS / STAKEHOLDER ENGAGMENT PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Create a project message to educate the public and stakeholders on the importance and purpose of the ASAP Project. | Developed educational project message and delivered to all communities along the alignment. Met with leadership in each community and rolled out project message in community forums to explain the importance of a long-term energy solution for Alaskans.<br>AGDC Public Affairs initiated work plan and task orders to develop a comprehensive corporate communication plan:<br>• Development of both corporate and project image identification is complete.<br>• Regional media plan was developed to educate statewide stakeholders.<br>• Engagement calendar was developed and maintained on the project website.<br>• Public information flyers were created for distribution.<br>• Project information was updated and posted on corporate website for public review.<br>• Social media strategy was developed to expand outreach efforts to new audiences. | Continuous updating of the ASAP Project message is required. Public Affairs will continue to engage each affected community and refine the project messages consistent with the unique issues discovered in each community. ASAP project team will refine and develop ASAP messaging to maintain relevant information and project education consistent with funding received and project activity.<br>Planned work includes the following:<br>• Develop initial media plan for period January through June 2013.<br>• Depending on funding, create and execute yearly media plans.<br>• Post project activity on Facebook and Twitter to engage social media audiences.<br>• Maintain website as valuable project communication channel.<br>• Continue engagement in public forums to maintain project education for all public audiences.<br>• Continue engagement evaluation to maximize reach and ensure effectiveness of project messaging. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.5 PUBLIC AFFAIRS / STAKEHOLDER ENGAGMENT PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Continue presenting project information in a variety of forums and to a wide array of audiences, such as Chamber of Commerce forum presentations in Kenai and Fairbanks, Alaska Oil and Gas Congress, Industry Trade Alliance meeting, radio appearances in Kenai and Anchorage, Anchorage Mayor's Energy Task Force meeting, Joint In-State Gasline Development Team meeting, board of directors meetings, and public education at community council meetings and community planning meetings. | ASAP Public Affairs continued to address groups and forums in an effort to expand public education and engagement in the ASAP Project. ASAP Public Affairs and members of the project team addressed 82 public audiences in 2012. The following groups were among those addressed:<br>• Legislative audiences and legislative caucus forums<br>• State and federal congressional delegations<br>• Local chamber forums in Anchorage, Fairbanks, Kenai, Wasilla, Palmer, and Willow<br>• Community meetings in Anaktuvuk Pass, Nuiqsut, Barrow, Manley Hot Springs, Minto, Fairbanks, Nenana, Anderson, Cantwell, Trapper Creek/Talkeetna, Willow, Anchorage, and Kenai<br>• Native conferences (AFN, TCC)<br>• Commonwealth North<br>• JBER and Clear Air Force Station<br>• Anchorage Mayor's Energy Task Force<br>• Alaska Municipal League<br>• Industry trade shows and conferences<br>• Radio engagements in Anchorage and Fairbanks<br>• Local government planning and zoning meetings<br>• Local government assembly meetings | ASAP Public Affairs will continue to increase project engagements and public education as resources and funding are made available. Project materials will be created and distributed to maintain a relevant stream of project information to stakeholders. To expand reach and education, ASAP Public Affairs will reach out to the following groups:<br>• All groups previously engaged<br>• Community councils<br>• Native corporations and Tribal organizations along the alignment which have not received project updates<br>• Educational and training groups |
| AGDC will meet with specific communities on a heightened schedule to maintain a balance of communication within population areas along the route. The communities of Barrow, Kenai, Nuiqsut, Minto, Fairbanks, Nenana, and Willow will be visited quarterly during FEL 2 to keep the project progress in front of these stakeholders and to answer questions and concerns in a timely manner. | ASAP project team met with all affected communities along the alignment and re-evaluated the community visitation schedule to reflect an appropriate schedule based on community requests for information and collaboration. | Continue engagement strategy of evaluating and deploying project messages to affected community stakeholders. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.5 PUBLIC AFFAIRS / STAKEHOLDER ENGAGMENT PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Other communities will be visited for the first time, and subsequent visits will be planned based on the issues discovered during the community diligence. These communities include but are not limited to Anderson, Anaktuvuk Pass, Livengood, Talkeetna, and Trapper Creek. | ASAP Public Affairs worked with communities along the ASAP alignment as they came together and formed a community advisory council. The ASAP Community Advisory Council (CAC) was formed by interested and engaged members of communities in an effort to remain engaged in project activity. The CAC has evolved into a group of advocates and observers of the ASAP Project.<br>ASAP Public Affairs will continue to serve as the liaison between the CAC and the project office and will continue to attend and support the Council meetings. | Continue involvement with ASAP Community Advisory Council in the capacity of liaison between the Council and the project office. |
| Throughout the project, AGDC will work with Native corporations, non-governmental organizations, and tribal organizations including Ahtna, Cook Inlet Region, Inc., Toghotthele Corporation, Minto Development Corporation, Nenana Native Association, Seth-De-Ya-Ah Corporation, Tanana Chiefs Council, Doyon Regional Corporation, Kenaitze Indian Tribe, Arctic Slope Regional Corporation, and other organizations identified in the 2011 stakeholder engagement process. AGDC plans to continue dialogue with these entities and incorporate meetings into the stakeholder calendar. | AGDC held meetings with representatives from each of the Native corporations with land and shareholders along the alignment. Communication with the Native organizations and Tribal entities has been positive. AGDC has worked with the Tribal entities and the Native corporations to address issues in a timely manner and bring parties together to keep dialogue open and transparent. | AGDC will continue to meet with stakeholders to ensure the communication from the project office is delivered to interested parties in a reasonable and consistent manner. Each Native corporation and Tribal entity is working with AGDC to establish a representative from their organization to be the conduit for sharing information and following up on the project. |
| AGDC will progress the stakeholder communication database and maintain a record of all engagements and requests for information. | AGDC plans to retain a professional firm to develop a comprehensive stakeholder database for the purpose of recording and tracking all communication between the project office and stakeholders. The database will include issues tracking, requests for information (RFIs), and responses to RFIs. | Award contract in 2013 to develop comprehensive stakeholder database. All current stakeholder contacts maintained by Public Affairs and all RFIs received by Public Affairs will be imported into the database. The stakeholder database will serve as a project tool to manage risk assessment and mitigation; provide a project administrative record of communication with stakeholder audiences; and maintain stakeholder records.<br>Maintain all project RFIs and project contacts through life of project. |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

## 4.5 PUBLIC AFFAIRS / STAKEHOLDER ENGAGMENT PLAN

| 7/1/11 PROJECT PLAN | STATUS | TASK FORWARD |
|---|---|---|
| Methods of communication will include:<br>• Meetings and consultations.<br>• Reports and updates to legislators and local government officials.<br>• Community presentations.<br>• Public appearances.<br>• Industry forums.<br>• Electronic communication via the project website and contributions to other websites such as those of state and federal regulatory agencies.<br>• Newsletters and direct mail to stakeholders. | ASAP Public Affairs maintained communication and project education by developing project messages for delivery through the communication channels previously identified. | ASAP Public Affairs will expand the communication channels to include:<br>• Electronic communication via Facebook, and Twitter<br>• Newsletters<br>• Quarterly project flyers<br>• Direct mail<br>• Multimedia including: radio, print, television |



AGDC MAKES NO REPRESENTATION OR WARRANTY REGARDING THE TRUTH OR ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT EXCEPT AS MAY BE EXPRESSLY STATED WITHIN THIS DOCUMENT. ANY PERSON USING OR RELYING ON THIS INFORMATION DOES SO AT SUCH PERSON'S OWN RISK AND BASED UPON SUCH PERSON'S OWN INVESTIGATION AND NO LIABILITY SHALL ARISE AGAINST AGDC AS A CONSEQUENCE THEREOF.

ALASKA GASLINE DEVELOPMENT CORP.

GAS FOR ALASKANS

**Alaska Gasline Development Corporation**
**3301 C Street, Suite 100**
**Anchorage, AK 99503**

**www.agdc.com**
**907.330.6300**