RESOLUTION 2015-03

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ALASKA GASLINE DEVELOPMENT CORPORATION DIRECTING STAFF TO VOTE TO APPROVE THE WORK PROGRAM AND BUDGET FOR THE ALASKA LIQUEFIED NATURAL GAS PROJECT

WHEREAS, the Project Subcommittee of the AKLNG project has presented its recommended Work Program and Budget ("WPB") to the Project Management Committee of the AKLNG project for its review and decision; and

WHEREAS, TransCanada Alaska Midstream Holdings Inc., TransCanada Alaska GP Inc., TransCanada Alaska Midstream LP ("TAMLP") and the State of Alaska have entered into a Purchase and Sale Agreement dated as of November 20, 2015 (the "PSA"); and

WHEREAS, pursuant to the PSA, the Alaska Gasline Development Corporation ("AGDC") will receive both the general partner interest and the limited partner interest (together, the "Limited Partnership Interests") in TAMLP; and

WHEREAS, as the holder of the Limited Partnership Interests in TAMLP, AGDC will be entitled to vote for the WPB for the entirety of the State of Alaska's interest in the AKLNG project; and

WHEREAS, Chapter 1 TSSLA 15, appropriates $75,600,000 from the general fund to the Alaska liquefied natural gas project fund (AS 31.25.110) to fund AGDC's share of the WPB for 2016 and 2017;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE ALASKA GASLINE DEVELOPMENT CORPORATION THAT:

1. The President, the Vice President Commercial Operations, or such other employee of the Alaska Gasline Development Corporation as either of them may designate, is authorized and directed to (a) vote to approve the 2016 WPB on December 4, 2015, or such other date as mutually agreed upon by the parties to the AKLNG working group and (b) withdraw from the Alaska liquefied natural gas fund (AS 31.25.110) the amount necessary (approximately $59,870,700) to pay AGDC's share of the 2016 WPB.

2. This Resolution shall take effect immediately.

PASSED AND ADOPTED THIS 3rd DAY OF DECEMBER, 2015.

BOARD OF DIRECTORS OF THE ALASKA GASLINE DEVELOPMENT CORPORATION

By: ______________________

Acting Chair
Dave Cruz

ALASKA GASLINE DEVELOPMENT CORP.
GAS FOR ALASKANS

To: AGDC Board of Directors

From: Joe Dubler, VP Commercial Operations

Through: Dan Fauske, President

Subject: AKLNG budget for calendar year 2016

Date: November 12, 2015

Background

Since AGDC's first meeting on the Alaska Liquefied Natural Gas ("AKLNG") Project, BP, ConocoPhillips, and ExxonMobil ("CoVenturers") have asked the State of Alaska to clarify its representation in the Project. At that time, AGDC was designated to hold the State's interest in the LNG Facility and Marine terminal, and TransCanada ("TC") was to hold the State's interest in the Gas Treatment Plant ("GTP") and Pipeline. This split ownership presented structural governance issues that the State found difficult to resolve, including how the State's interest would be represented in integrated votes, i.e. issues related to the entire project as opposed to a single segment such as the LNG Terminal or Pipeline) votes.

The Alaska State Legislature, through CSSB 3001(FIN) (attached as Exhibit I, with AGDC presentation to the Legislature in support of that action attached as Exhibit II), rectified the split ownership issue by appropriating funds for the State to acquire the interest previously held by TransCanada and transfer it to AGDC. Upon completion of that transaction, which is anticipated to cost about $68 million, AGDC will hold the State's entire 25% interest in the AKLNG Project.

The AKLNG Project is an integrated LNG project designed to treat gas from the Prudhoe Bay Unit ("PBU") and Point Thomson Units ("PTU") in a GTP located near PBU, and transport that gas through a large diameter, high pressure pipeline to a site in Nikiski for liquefaction and export. Attached as Exhibit III is Project Manager Steve Butt's most recent presentation to the Legislature in Palmer. The Project will be regulated by the Federal Energy Regulatory Commission ("FERC") under Section 3, of the Natural Gas Act, and operate under an export license issued by the Department of Energy ("DOE").

The CoVenturers ownership and equity shares of the Project are determined by their respective shares of the gas that will flow through the Project. The State is participating as an equity partner in the Project, with its equity to be determined by an election to take its royalty share (approximately 1/8, or 12.5%) as gas (called Royalty in Kind, or "RIK") instead of in Value, or RIV. In addition, when the State makes the RIK election, the Producers are anticipated to exercise their option to pay Production Tax on the gas in kind (i.e. in gas molecules) instead of in value (cash). This latter transaction is commonly referred to as Tax as Gas, or "TAG". The TAG is approximately 12.5% which, when added to the 12.5% royalty, makes the State's projected ownership approximately 25%.

The AKLNG Project is following a stage-gated approach to technical development that mirrors the approach AGDC used for its ASAP Project. Stage gating is a rigorous process that has several "gates", or decision points, each of which offer the Parties an opportunity to reassess the project economics and determine whether or not to continue. At each gate, the risk profile of the Project is narrowed by completing engineering and regulatory work, giving the Parties a more complete picture of final project design and economics. Those gates are:

- Concept Selection-in this early phase, very preliminary plans and a rough outline of the design parameters are agreed. This process has been completed for the AKLNG Project;
- Pre-Front End Engineering and Design ("Pre-FEED")-this is the phase the project is currently in and involves refining the rough estimates to conceptual designs, identifying required permits, and beginning to obtain the required permits for construction. Pre-FEED cost is estimated at just under $700 million with a decision to proceed estimated to be in early 2017;
- Front End Engineering and Design ("FEED") - detailed design work will be completed in FEED and major permits and commercial agreements finalized. The cost estimate for FEED is $1.5-2.0 billion;
- Final Investment Decision ("FID") - This is the final gate when the Parties make a go/no go decision on whether or not to commit to financing and building the Project. This decision is estimated to be made in 2019.
- Engineering, Procurement and Construction ("EPC")-In this stage, the final engineering is completed, assets are acquired (pipe, steel for facilities and equipment), and contracts are executed for the construction of the pipeline and facilities. The initial estimate for this phase is $45-65 billion. That number will continue to be refined through Pre-FEED and FEED. Assuming all decisions are yes and there are no significant delays, project startup could be in 2025.

Governance

AGDC, TC and the Coventurers, negotiated a confidential Joint Venture Agreement ("JVA") dated June 30, 2014 which governs the Pre-FEED stage of the Project. Other documents executed to date by the Parties include:

- Work Program and Budget ("WPB")-a confidential document that has detailed work scope to be performed and the budgeted amounts for each item included in that scope.

The WPB is approved annually during Pre-FEED. Staff will present the complete WPB in Executive Session at the November 12, 2015 Board Meeting with a non-confidential summary later in this memorandum. Note that, because it is confidential, Board Members that have not signed Confidentiality Agreements will not get the summary before the meeting. They will have a chance to review the complete WPB in executive session but not be permitted to keep any copies or notes of the confidential document;

- Confidentiality and Data Use Agreement ("CDUA")-this confidential document governs the myriad of data sources brought into the Project from prior efforts (AGIA, Denali, TAPS, ASAP), how that data can be used, and what the rights of the Parties are to that data;
- Venture Alignment Memorandum of Understanding ("VAMOU")-this confidential document outlines matters that are intentionally outside of the JVA including regulatory, commercial, land rights, public relations, and capacity utilization and expansion;
- AKLNG Confidentiality Agreement ("ACA")-a confidential agreement that governs all seven Parties' (BP, CP, EM, TC, AGDC, DNR, DOR) discussions and the confidentiality of those discussions;
- Staffing Principles-a confidential document that outlines how the Project will be staffed. The basic premise is that the Parties will be able to Second (pronounced "sa kond", a process for temporarily placing employees of each respective Party into the Project Team) employees in a percentage approximately equal to their ownership percentage in the Project on a "best player plays" basis;
- Cooperation Agreement-A confidential agreement that allows AGDC to perform work for the project and through supplements; each supplement outlines the work to be performed, the reimbursement to AGDC, and eventual data ownership of the work products resulting from the work performed under that supplement.

During Pre-FEED, the governance and other project related documents are being negotiated. There are currently none in a format suitable to present to the Board of Directors as key terms are still being negotiated. Staff anticipates bringing drafts to the Commercial and/or Governance Committees in the future for review and comment before finalizing those documents. They include:

- In negotiation now:
  - Project Withdrawal Agreement
  - Members Agreement (Alaska LNG LLC)
  - Gas Balancing Agreements within and between the Units
  - Expansion terms and conditions (currently separate negotiations to be merged into Members Agreement)
  - Unused Long-Term Capacity Release terms and conditions
  - Contract Operator Services Agreement (Agreement between Alaska LNG LLC and ExxonMobil)
  - Member Administrator Services Agreement (contract between Alaska LNG LLC and ConocoPhillips)
  - Domestic Gas Agreement(s) with DNR/Producers and AGDC as In-State Aggregator

- To be negotiated in FEED:
  - Firm Transportation Services Agreement(s) with DNR
  - Alaska LNG System Use Agreement
  - Gas supply agreements with utilities
  - Fully termed exhibits or resolutions associated with Members Agreement once Alaska LNG LLC is formed (e.g. Personnel Policy, Accounting Procedures, Common Infrastructure T&C, etc.)

Work Program and Budget

The AKLNG Project has an annual Pre-FEED budget process whereby each year a budget is proposed by the Project Management Team ("PMT"). That budget is reviewed by the Project Sub Committee ("PSC") and recommended to the Management Committee ("ManCom") for approval. The initial budget was approved by the ManCom on July 1, 2014, and governed the Pre-FEED work performed in 2014.

There was an updated budget approved by the ManCom in December, 2014 that covers the 2015 Pre-FEED work effort.

The AKLNG PMT has updated the WPB and made a proposal to the PSC for CY 2016. The PSC reviewed the changes and recommended the updated WPB be presented to the ManCom for approval. The approval needs to be made by ManCom representatives by December 4, 2015. That proposed budget for 2016 will be reviewed with the Board of Directors in Executive Session, and includes scope changes that increase the overall Pre-FEED budget by $182.344 million.

According to the JVA, once Parties approve an annual budget for the Project, the cash calls made by the Lead Party for that budget become obligations of each respective Party. In addition to the budgeted amount, the lead party is authorized to spend up to 10% over the line item of a budget without any further approval, provided that the total of such over-expenditures does not exceed 5% of the total WPB.

Note that, upon making a positive FEED decision, the budget will be a one-time unanimous vote, not an annual approval.

The annual budget of the AKLNG Project applicable to AGDC's participation (now the entire Project) is shown in the green columns on Exhibit III, and for 2016 is equal to $59.871 million. Since that amount exceeds any AGDC staff approval authority, the Board of Directors is being asked to review and approve the budget with the understanding that given the 5% allowance discussed above, the total expenditure for the year could be as high as $62,865 million.

The documents attached are described in detail below.

Exhibit III

- The chart shows the latest proposed budget for the entire AKLNG Pre-FEED work effort shown in red spanning calendar years 2014-2017 with AGDC's 25% participation amount shown in green for each year and in total.
- The "Direct Costs" are those costs that can be attributed to only one project segment. The "Indirect Costs" are those costs that are common to multiple project segments.
- Note that, while the "AGDC @25%" column shown in green is for the entire project in 2014 and 2015, TC was responsible for the majority of the expenditure for the mid-stream portion (midstream is PTU, PBU, GTP, and Pipe) of the Project for those years. AGDC will assume the responsibility for those costs upon transfer of TC's ownership interest in December, 2015.

Exhibit IV

This chart shows:

- Proposed budget for Direct, Indirect, Contingency and Overhead line items for AKLNG Pre-FEED Project Budget by calendar year compared to the approved initial budget ("July 1, 2014") and the current budget ("December, 2014"). The total AKLNG Project Budget for Pre-FEED is labeled "December, 2015" and is colored red. The totals are the same numbers shown in red in Exhibit III.
- The column of blue letters and numbers is the total current approved AKLNG Project Budget for Pre-FEED.
- The final column on the right is the variance between the total proposed AKLNG Pre-FEED Project Budget and the AKLNG Pre-FEED Project Budget approved by the AGDC Board of Directors in November, 2014 and ManCom in December, 2014. When comparing the AKLNG Pre-FEED Project Budget approved by the AGDC Board of Directors and the proposed AKLNG Pre-FEED Project Budget dated December, 2015 a negative number (in parenthesis) represents a higher budget or negative variance, and a positive number represents a lower budget or positive variance.
- The individual costs had variances due to factors explained in the footnotes.

Exhibit V

This chart shows actual (through November, 2015 with December, 2015 estimated) 2015 expenditures compared to budgeted 2016 expenditures. The related variances are included for comparative purposes.

Exhibit VI

This is an explanation (approved by the Parties to be released publicly) of the changes in the proposed 2016 WPB. Fritz Krusen will be available at the Board Meeting to address questions about it and the entire WPB in Executive Session.

LAWS OF ALASKA

2015

THIRD SPECIAL SESSION

Source
CSSB 3001(FIN)

Chapter No.
______

AN ACT

Making supplemental appropriations; making appropriations to capitalize funds; and providing for an effective date.

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

THE ACT FOLLOWS ON PAGE 1

AN ACT

Making supplemental appropriations; making appropriations to capitalize funds; and providing for an effective date.

*** Section 1. LEGISLATIVE INTENT. (a) It is the intent of the legislature that the appropriations made in secs. 2 - 4 of this Act be accounted for separately from the unrestricted general fund.**

(b) It is the intent of the legislature that the appropriation made in sec. 5(a) of this Act be paid in an expedited manner, resulting in a successful state acquisition of the interest in the Alaska liquefied natural gas project currently held by TransCanada Alaska Midstream Limited Partnership by December 1, 2015.

*** Sec. 2. DEPARTMENT OF LAW. The sum of $10,100,000 is appropriated from the general fund to the Department of Law, civil division, oil, gas, and mining, for contractual services with law firms to assist the Department of Natural Resources in drafting and reviewing contracts related to the Alaska liquefied natural gas project and to provide legal and**

regulatory support for state participation in the Alaska liquefied natural gas project for the fiscal year ending June 30, 2016. Money may be expended from the appropriation made in this section only for work completed during the fiscal year ending June 30, 2016.

* Sec. 3. DEPARTMENT OF NATURAL RESOURCES. The sum of $1,849,500 is appropriated from the general fund to the Department of Natural Resources, administration and support services, North Slope gas commercialization, for a marketing lead position, a marketing analyst position, work related to Federal Energy Regulatory Commission resource reporting reviews and drafting, facilities review for commercial aspects, commercial analysis and support, and audits associated with the termination of the agreement with TransCanada Alaska Midstream Limited Partnership for the fiscal year ending June 30, 2016. Money may be expended from the appropriation made in this section only for work completed during the fiscal year ending June 30, 2016.

* Sec. 4. DEPARTMENT OF REVENUE. The sum of $1,045,500 is appropriated from the general fund to the Department of Revenue, administration and support, natural gas commercialization, for personal services for work on financial analysis, project financing, governance, and the revenue aspects of marketing and taxes; for travel; for contractual review of project financing; and for other costs related to performing work for the Alaska liquefied natural gas project for the fiscal year ending June 30, 2016. Money may be expended from the appropriation made in this section only for work completed during the fiscal year ending June 30, 2016.

* Sec. 5. FUND CAPITALIZATION. (a) The amount necessary, estimated to be $68,455,000, is appropriated from the general fund to the Alaska liquefied natural gas project fund (AS 31.25.110) to acquire the interest currently held by TransCanada Alaska Midstream Limited Partnership in the Alaska liquefied natural gas project.

(b) The sum of $75,600,000 is appropriated from the general fund to the Alaska liquefied natural gas project fund (AS 31.25.110) to fund the state's share of preliminary front-end engineering and design work for the Alaska liquefied natural gas project.

(c) The statutory designated program receipts received as reimbursement for costs of field work paid from the Alaska liquefied natural gas project fund (AS 31.25.110) during the fiscal year ending June 30, 2016, estimated to be $2,900,000, are appropriated to the Alaska liquefied natural gas project fund (AS 31.25.110).

(d) The statutory designated program receipts received as reimbursement for costs of field work paid from the in-state natural gas pipeline fund (AS 31.25.100) during the fiscal year ending June 30, 2016, estimated to be $1,300,000, are appropriated to the in-state natural gas pipeline fund (AS 31.25.100).

* Sec. 6. LAPSE OF APPROPRIATIONS. The appropriations made in sec. 5 of this Act are for the capitalization of funds and do not lapse.

* Sec. 7. RETROACTIVITY. If secs. 2 - 5 of this Act take effect after November 15, 2015, secs. 2 - 5 of this Act are retroactive to November 15, 2015.

* Sec. 8. CONTINGENCY. The appropriations made in secs. 2 - 4 and 5(b) of this Act are contingent on adoption of a work program and budget for the Alaska liquefied natural gas project for calendar year 2016 by the Alaska Gasline Development Corporation, ExxonMobil Alaska LNG LLC, ConocoPhillips Alaska LNG Company, and BP Alaska LNG LLC by December 31, 2015.

* Sec. 9. This Act takes effect immediately under AS 01.10.070(c).

ALASKA GASLINE DEVELOPMENT CORP.
GAS FOR ALASKANS

Alaska LNG Project Participation

House Resources Committee

October 29, 2015

State's Objectives

- Secure a stable, affordable, long-term energy supply for Alaskans
- Commercialize Alaska's enormous North Slope gas resource
- Maximize the value of state's royalty and tax gas
- Generate revenue, jobs and economic growth
- Facilitate further oil and gas development

AGDC Origins

- Initially, AGDC created as a public response to concerns over declining Cook Inlet gas supplies
- Brown out drills; Long-term contracts with utilities uncertain
- High energy costs persist in the Interior
- Fairbanks air quality crisis due to wood and coal combustion – health and environmental concern
- Collectively, this created new sense of urgency to get North Slope natural gas to Alaskans

Estimated North Slope Gas Resource – 33+ Trillion Cubic Feet

Alaska LNG Project Development

2011: Governor calls for a **Joint Effort** by North Slope producers to explore LNG export as alternative to previous concepts for commercializing Alaska's gas

2013: **Concept Selection** completed, Nikiski announced as lead site for siting the **Liquefaction Plant** siting, **Heads of Agreement** negotiated

2014: State participation in **Alaska LNG** project authorized (*SB 138*), **Joint Venture Agreement** executed and Pre-Front End Engineering and Design (**Pre-FEED**) begins

2015: North Slope producers, AGDC and TransCanada begin advancing the Alaska LNG project

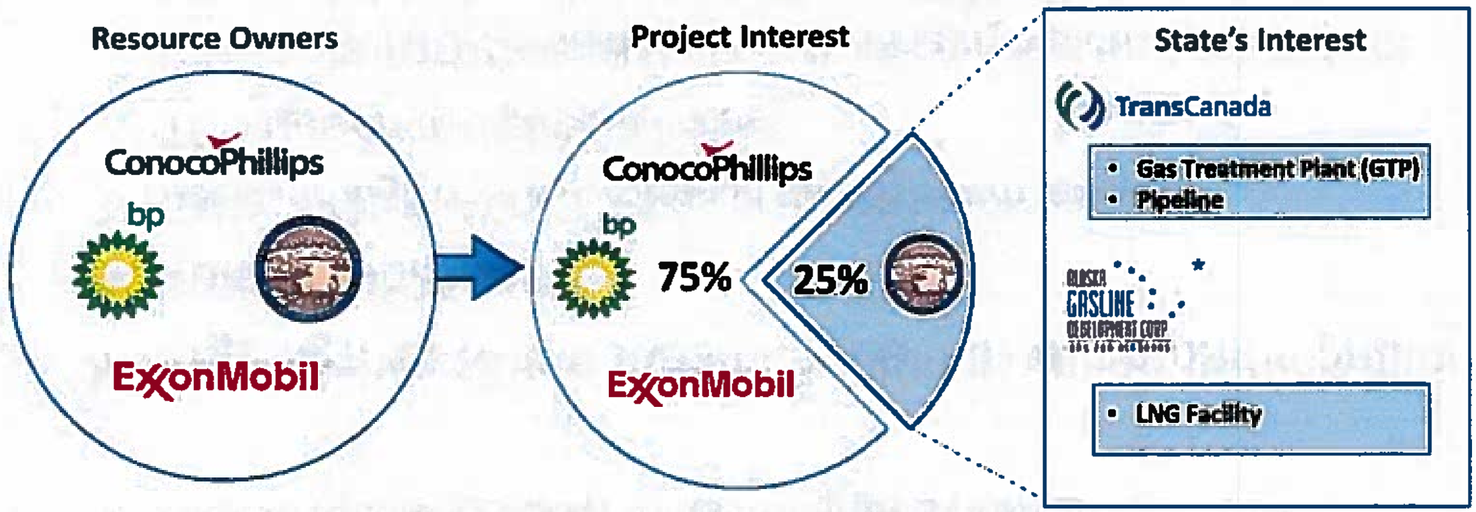
Authority Granted in SB 138

- AGDC has primary responsibility for developing an Alaska LNG project on the state's behalf *[AS 31.25.005 (1)]*
- AGDC may acquire a direct ownership interest in any component of an Alaska LNG project *[AS 31.25.080 (a)(23)]*
- AGDC may enter into contracts related to treating, transporting, liquefying or marketing gas - *in consultation with DNR & DOR* *[AS 31.25.080 (a)(24)]*
- AGDC shall assist DNR & DOR to *[AS 31.24.005 (2) & (3)]*:
  - Maximize the value of the state's gas resources
  - Provide economic benefits in the state
  - Provide revenue to the state

AGDC's Role in Alaska LNG

- Signatory to the Joint Venture Agreement governing the Alaska LNG project
- Hold the state's 25% equity interest in the LNG facility (downstream component) of the integrated project
- Member of the Sponsor Group, Management Committee (ManCom) and the Project Steering Committee (PSC)
- Participate in integrated project decisions
- Participate in commercial negotiations related to marketing, expansion, third-party access and domestic gas supply
- Plan and develop off-takes for in-state gas deliveries

Alaska LNG Project Participation



- AGDC holds State's interest in downstream: LNG Facility
- TransCanada holds State's interest in mid-stream: Pipeline & GTP

Governance Related Issues

- **Equity Alignment:** State's share of gas in the project (25%) is not equal to its current equity in the integrated project:
  - State, through AGDC, holds 25% in the downstream (LNG plant)
  - TC holds 25% in the midstream (pipeline & GTP)
  - State's resulting equity in the integrated project is ~ 12.5%

- **Voting Rights:** State doesn't have full voting participation in all project decisions:
  - State, through AGDC, votes on downstream issues
  - TC votes on mid-stream issues
  - If TC exits, AGDC would have full voting rights on each project component and in all integrated project decisions

Project Governance

Sponsors Group

bp
ConocoPhillips
ExxonMobil
TransCanada
Alaska Gasline Development Corp
DOR

- Seven project sponsors
- High level project review
- Advance project enabling agreements, fiscal and commercial issues
- DNR & DOR Included

Management Committee *(ManCom)*

bp
ConocoPhillips
ExxonMobil
TransCanada
Alaska Gasline Development Corp

- Joint Venture Agreement partners (CoVs)
- Equity investors in the project
- Overall oversight and control of project development

Project Steering Committee *(PSC)*

bp
ConocoPhillips
ExxonMobil
TransCanada
Alaska Gasline Development Corp

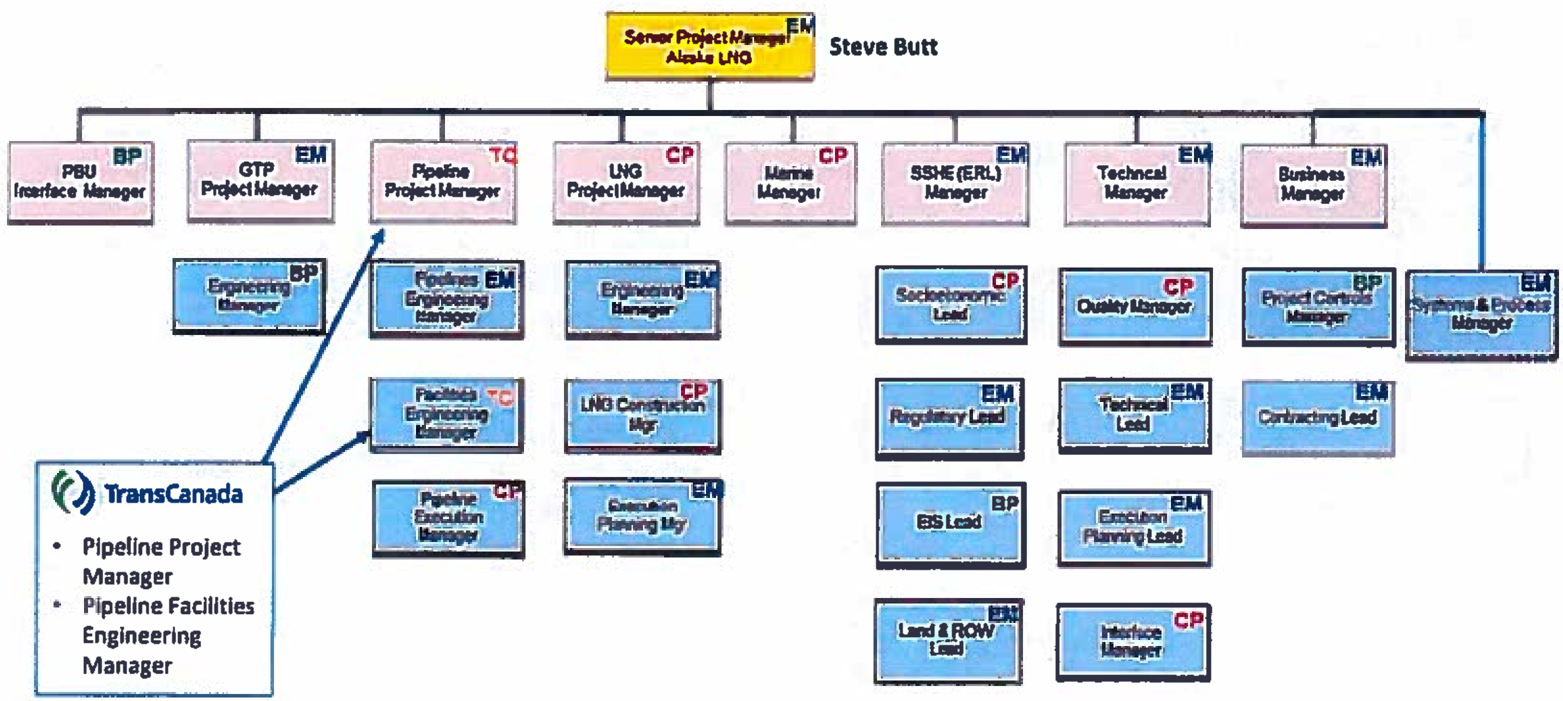
- Guidance and technical oversight of the Project Management Team (PMT)
- Advises ManCom on technical issues

Project Management Team (PMT)

LNG | Pipeline | GTP

- Integrated project team
- Day-to-day execution of pre-FEED
- Develop work scope, schedule and budget
- Engineering, design, regulatory, and environmental permitting

Project Management Team (PMT)



TransCanada currently has two individuals in the leadership structure of the PMT

Project Management Team (PMT)

- Project Management Team (PMT) created by Alaska LNG co-venture partners (CoVs) to lead day-to-day project development
- PMT is led by ExxonMobil's Steve Butt and staffed with other CoV employees who have been seconded to the project
- CoVs nominate employees based on skills and experience
    - PMT evaluates nominees and Management Committee approves
    - Positions are filled using a "best player plays" approach
    - Secondee's salary and expenses covered by project
- AGDC is active at all governance levels – Sponsors, ManCom and PSC
- AGDC does not currently have employees seconded to PMT
- PMT hires engineering and specialist contractors to advance design efforts
    - Vast majority of project work is done by contractors under the supervision of the PMT

Project Management Team (PMT)

Staffing Principles

- Leverage existing company strengths - ensure "right person, right job" or "best player plays"
- Joint Venture Agreement (JVA) parties can nominate employees for any position
- Ensure all parties are represented at leadership levels
- Locate teams for maximum effectiveness; co-located with major contractors where appropriate
- Appointments to leadership roles require unanimous approval of the parties

Project Secondees	EM	CP	TC	BP	Total
Leadership Team *Senior Project Manager and direct reports*	5	2	1	1	9
Key Positions	10	4	1	3	18
Other Positions	73	20	10	5	108
Total	88	26	12	9	135

TransCanada's Role Alaska LNG

- Hold the state's 25% interest in the project's mid-stream: pipeline and gas treatment plant (GTP)
- Fund pre-FEED cash calls associated with the state's mid-stream interest
- 12 secondees, primarily pipeline Subject Matter Experts (SME), in the Project Management Team
  - Leadership team, Pipeline Project Manager (1 of 9)
  - Key role, Pipeline Facilities Engineering Manager (1 of 18)
  - Environmental, Regulatory, & Land (ERL) (1 of 32)
  - Gas Treatment Plant sub-project (1 of 17)
  - Pipeline sub-project (8 of 36)

TransCanada's Role Alaska LNG

- TransCanada (TC) is not expected to build the pipeline, that will be managed by the PMT
- If TC exits the project, the PMT will seek nominations for the vacated positions
- TC has offered to allow its PMT employees to remain during a transition period
- All CoVs, including AGDC, can nominate employees to fill those positions
- AGDC has individuals qualified to nominate for Pipeline and GTP openings

AGDC Technical Team - Skills

AGDC's technical staff:

- Senior credentialed professionals with industry and mega-project backgrounds
- Arctic pipeline and facilities design, construction, and operations experience
- Alaska-specific design and construction experience
- Major capital project management expertise
- Working knowledge of technical and regulatory assets owned by AGDC

AGDC Technical Team - Results

AGDC completed development of the Alaska Stand Alone Pipeline (ASAP) Project:

- Completed Pre-FEED and FEED for North Slope gas treatment facility, 733-mile mainline, and 30-mile Fairbanks lateral pipeline
- Completed Class 3 cost estimate and project execution plan
- Delivered on time and under budget
- Core technical team still engaged on an interim basis pending state policy decisions

AGDC Ability to Assume TC's Role

- Currently holds state's interest in LNG facility – a complex and expensive component in the integrated project
- Already assumed TC's role in coordinating the FERC NEPA process
- Engaging on mid-stream technical issues currently
- Technical staff available to fill PMT positions as necessary:
  - Subject Matter Experts (SME) based in Alaska
  - Key roles in prior Alaska pipeline projects, including TAPS
  - Dedicated professionals committed to SOA interests

Alaska LNG Fund Status

AKLNG Fund Capitalization (SB 138)	$ (000)
Original Fiscal Note Allocations	
AGDC: AKLNG Project Participation FY14 & FY15	$67,265
Dept. of Revenue: Project Financing Options Report	$2,500
Dept. of Transportation: Infrastructure Studies	$70
Total Fund Cap	**$69,835**
Spending by Category Thru FY16	
RSA to Department of Revenue	($2,500)
RSA to Department of Transportation	($70)
AKLNG Project Cash Calls	($51,382)
AGDC Corporate Operating Component	($4,396)
AGDC External Contractual Support (SMEs)	($5,235)
Additional Contractual Work for TC Pickup	($5,900)
Reimbursement Due AGDC for AKLNG Project Work	$2,750
Estimated Outflow Thru FY16	**($66,733)**
Estimated Available Start of FY17 Budget Year	$3,101 **

*** Available to apply towards AGDC's FY17 Alaska LNG operating budget component*

AGDC Special Session Appropriations

Capital Appropriation ($144,045.0)

- $68,445.0 – Reimburse TransCanada and “buy-out” their mid-stream interest
- $75,600.0 – Fund state’s full 25% share of remaining pre-FEED

Receipt Authority ($5,000.0): Statutory Designated Program Receipts (SDPR)

- Allow AGDC to be reimbursed for Alaska LNG related field work conducted on behalf of the project

AGDC Special Session Appropriations

TC Buyout
$46.9 - Cash Calls thru 2015
$21.5 – Development & Carrying Costs
$68.4 – Total Reimbursement & Buyout

	Expectation Before 2016 WP&B		W/New Pre-FEED Scope & Budget Change	
TC Buyout	$	68.4	$	68.4
Pick-Up Remaining Cash Calls	$	29.6	$	29.6
Allowance for Mid-Stream Scope Changes	$	8.8	$	31.0
	$	38.4	$	60.6
	$	106.8	$	129.0
Allowance for DownStream Scope Changes	$	-	$	15.0
	$	106.8	$	144.0

30% contingency on $29.6 pick-up

Cash Calls 2016 to Pre-FEED Conclusion

$31 – Go Forward Midstream (Pipe/GTP)

$15 - Go Forward Downstream (LNG)

Pre-FEED Scope & Budget Changes

Pre-FEED scope and schedule will increase by $182 million to $694 million:

- State's total share is $173 million -- $66 million liquefaction plant, $107 million mid-stream (GTP and pipe)
- Advancing work into pre-FEED is important to have the best information available to complete internal review and make FEED decision
- Project is maturing through the stage-gate development process
- Moving some activities from FEED to Pre-FEED to facilitate better design and decision making

Pre-FEED Scope & Budget Changes

Scope changes are designed to improve project economics, permitting outcomes and the quality of information available for FEED evaluation:

- Component level optimization to lower capital costs and improve project economics ($57 million)
- Increase scope of geotechnical and geohazard work at GTP and LNG sites ($29 million)
- Increase regulatory and pre-bid work on FEED contracting; complete weather delayed off-shore field work ($66 million)
- Bring 48" pipe deliverables up to 42" level of development ($30 million)

Meeting In-State Gas Demand

AGDC's is responsible for developing pipelines and other mechanisms for delivering natural gas in-state

In advancing this goal, AGDC has:

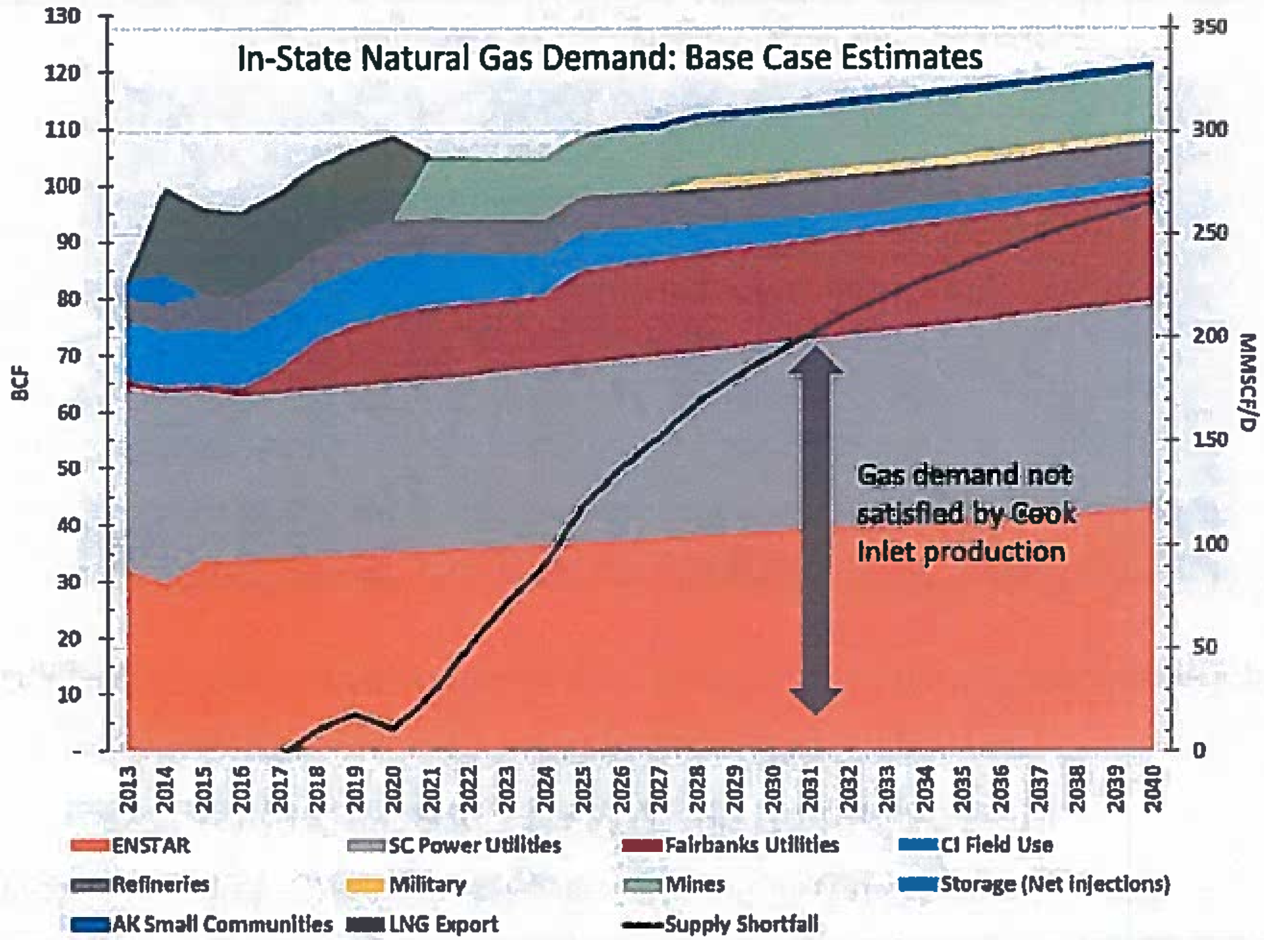
- Completed a forecast of in-state natural gas demand
- Completed preliminary cost estimates for gas off-take facilities
- Developed a framework to assist policy makers in evaluating in-state off-take infrastructure
- AGDC Board has authorized the formation of a subsidiary capable of aggregating in-state gas demand. Potential activity:
    - *Pool small quantities of in-state demand*
    - *Serve as an intermediary between resource owners (including DNR) and small in-state buyers*
    - *Assist small communities in developing local distribution entities*

In-State Gas Demand Forecasting

AGDC has completed a demand forecast for natural gas use in Alaska:

- Analyzed historical natural gas production and consumption data
- Identified existing and potential demand segments
- Developed range of demand assumptions
- Identified most likely forecast scenarios through 2040

In-State Gas Demand Forecasting



In-State Gas Demand Forecasting

- Project volumes more than adequate to meet in-state demand growth
  - Base Case 2040 demand – 333 MMscfd (122 Bcf per year)
  - High Case 2040 demand – 422 MMscfd (154 Bcf per year)
- Demand will be partially supplied from Cook Inlet during the forecast period

Demand by Segment	2014 Actual	2030	2040
Existing Demand			
Enstar, railbelt electrical utilities, and industrial users *(excluding export)*	214	227	243
Potential Demand			
Interior heating and power utilities	2.5	51	56
Industrial operations (primarily mining)	0	31	31
Small communities – within 50 miles of alignment	0	3.2	3.4
Total Base Case Demand:	**217**	**312**	**333**

In-State Natural Gas Demand: Base Case Estimates *(MMscfd)*

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In-State Gas Off-Take

Alaska LNG project can provide Alaska with a reliable, long-term supply of natural gas:

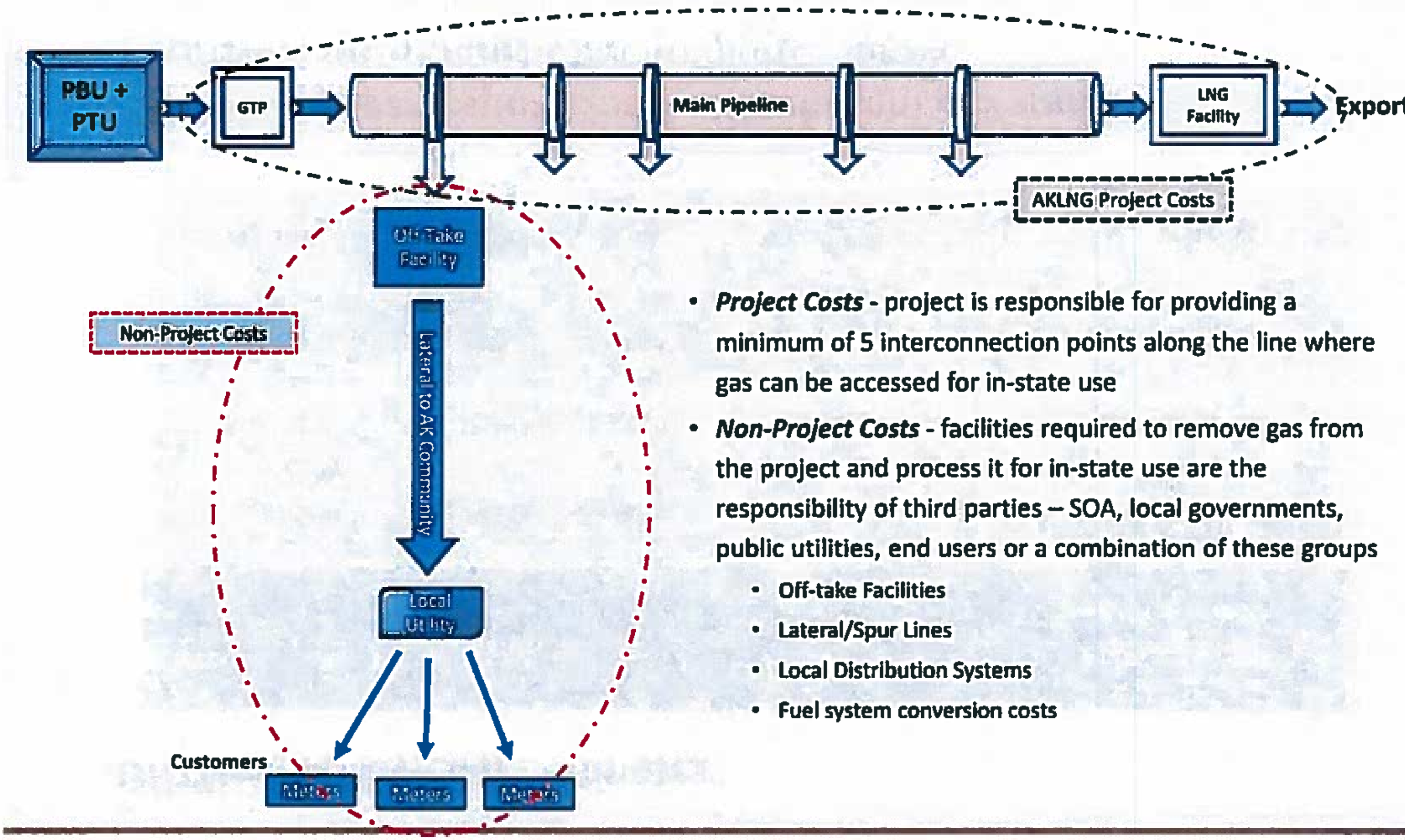
- State of Alaska's financial commitment to the project should also consider off-take facilities, transmission lines and other in-state distribution systems
- Off-take plans will involve a number of engineering, commercial, financial and policy considerations
- AGDC & DNR are developing a framework assist policy makers in evaluating options

In-State Gas Off-Take

Evaluation framework built on work done for the Alaska Stand Alone Pipeline (ASAP) Project

- Identified facilities required to meet existing in-state demand, to include Fairbanks
  - Anchorage/Mat-Su
  - Fairbanks
  - Kenai/Nikiski
- Accessing the technical and economic feasibility of communities within close proximity to access gas
- Evaluating with AEA alternative means of delivery for communities unlikely to have direct access

In-State Gas Off-Take



- ***Project Costs*** - project is responsible for providing a minimum of 5 interconnection points along the line where gas can be accessed for in-state use
- ***Non-Project Costs*** - facilities required to remove gas from the project and process it for in-state use are the responsibility of third parties – SOA, local governments, public utilities, end users or a combination of these groups
  - Off-take Facilities
  - Lateral/Spur Lines
  - Local Distribution Systems
  - Fuel system conversion costs

In-State Gas Off-Take

Off-Take Facility Cost Estimates

Size	Volume *(MMscfd)*	Off-Take Facility Capital Expense *($Mill)**	Characteristic Community
Macro	80.00 – 330.00	$38	North/South Cook Inlet
Mini	20.00 – 75.00	$28	Fairbanks Size
Micro	0.40 – 2.00	$15	Medium Density
Nano	0.04 – 0.25	$14	Very Small

*Cost of laterals, spurs, local distribution and appliance conversions not included in figures above

In-State Gas Off-Take

Progress to date:

- Approximately 20 potential interconnection points identified along pipeline corridor
- Some communities would be best served from a common access point, off-take facility and lateral
- AGDC has developed conceptual cost estimates for off-take facilities, excluding local distribution and appliance conversion costs
- Preliminary analysis highlights significant economic challenges with bringing small communities online

In-State Gas Off-Take

Summary

- No final decisions have been made
- No public money has been appropriated for the construction of any in-state off-take facilities or distribution systems
- State's plans will evolve as the project matures and policy makers weight in
- User fees and tax assessments alone will not be sufficient to finance new gas distribution systems
- May involve phased approach – some facilities built during construction, others conditioned on demand growth

Alaska Stand Alone Pipeline (ASAP)
Project Status

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ASAP Project Status

Alaska Stand Alone Pipeline (ASAP)

- State's back-up plan in the event Alaska LNG doesn't progress
- AGDC concluded FEED in Dec 2014; Construction ready – Class 3 estimate of $10 billion (+/- 20%)
- Commercial activities – tariff filing and open season - on hold pending outcome of AKLNG project
- Progressing U.S. Army Corps Supplemental EIS process to secure federal permits and right-of-way

In-State Pipeline Fund Status

In-State Natural Gas Pipeline Fund Capitalization (HB 4)	$(000)
Original Appropriation	$355.0
Spending by Major Category To Date	
AGDC: Corporate Operating & ASAP Project Development	($135.0)
Legislative Reappropriation to Public Education Fund (2015 Session)	($157.0)
DNR: North Slope Gas Commercialization Component FY16	($9.0)
Estimated Outflow as of Oct 2015	($301.0)
Current Balance	**$54.0**
Maintain ASAP Project Viability & Readiness	($12.0)
AGDC: Contractual & FY16 Operating Component	($10.0)
Estimated Available Start of FY17 Budget Cycle	**$32.0**

Questions?

Joe Dubler

VP, Commercial Operations

Frank Richards

VP, Engineering & Program Development

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Exhibit IV

Alaska LNG

Total AKLNG Project Budget for Pre-FEED (2014-2016)

As of:

Direct Costs	July 1, 2014	December, 2014	December, 2015	Variance	
PTU	7,568	7,632	1,954	5,678	
PBU	722	697	477	220	
GTP	35,369	34,140	51,553	(17,413)	1
Pipeline	101,658	102,522	139,979	(37,457)	2
LNG	94,031	83,350	91,417	(8,067)	1
Marine	41,783	42,290	58,001	(15,711)	
	281,131	270,631	343,381	(72,750)	
Indirect Costs					
IPM	42,703	47,462	92,549	(45,087)	
ERL	130,770	130,394	219,393	(88,999)	3
	173,473	177,856	311,942	(134,086)	
Total AKLNG	454,604	448,487	655,323	(206,836)	
Contingency	45,460	51,576	23,071	28,505	
Overhead	11,251	11,251	15,264	(4,013)	
WP&B Total	511,316	511,314	693,658	(182,344)	

Acronym Key
PTU-Point Thomson Unit
PBU-Prudhoe Bay Unit
GTP-Gas Treatment Plant
IPM-Integrated Project Management
ERL-Environmental, Regulatory, & Land
WP&B Work Program and Budget

1 Additional geotechnical work to be performed at GTP and LNG sites
2 42:48 inch pipeline study to be performed
3 Additional regulatory work to be performed in Pre-FEED
All Extending Pre-FEED adds IPM costs and allows additional work to be performed in all areas.

Exhibit V

Alaska LNG

2015 AKLNG Project Spending for Pre-FEED
Presented by Calendar Year
and Compared to AGDC Budget Proposed in December, 2015

Direct Costs	CY 2015	Proposed CY 2016	Variance
PTU	394	489	(95)
PBU	81	119	(38)
GTP	6,041	12,888	(6,848)
Pipeline	18,068	34,995	(16,927)
LNG	10,848	22,854	(12,006)
Marine	5,976	14,500	(8,524)
	41,408	85,845	(44,437)
Indirect Costs			
IPM	8,451	23,137	(14,687)
ERL	11,834	54,848	(43,015)
	20,284	77,986	(57,701)
Total AKLNG	61,692	163,831	(102,139)
Contingency	-	5,768	(5,768)
Overhead	1,420	3,816	(2,396)
WP&B Total	63,112	173,415	(110,303)

Acronym Key
PTU-Point Thomson Unit
PBU-Prudhoe Bay Unit
GTP-Gas Treatment Plant
IPM-Integrated Project Management
ERL-Environmental, Regulatory, & Land
WP&B Work Program and Budget

Exhibit VI

Scope Changes to 2016 Work Program and Budget

1. Pre-FEED ("PF") Schedule information, based upon the schedule underpinning the proposed 2016 WP&B:
    a. Finalization/integration of sub-project agreed PF deliverables thru 1Q2016 (based on 42" pipeline). Was Sep 2015; delay is prudent to achieve high quality and reap some PF-discovered improvements
    b. Development of 48" pipeline deliverables to same PF basis as 42" by 30Apr, 2016 (new item)
    c. Extensive sub-project optimization work in the first half of 2016 (reduce capex or improve economics)
    d. Maintain regulatory (i.e. pre-permitting) pace; 2nd draft of Resource Reports submitted in the first half of 2016 and FERC final-application submitted in Oct, 2016
    e. Thorough FEED-preparation cycle throughout 2016:
        i. Complete optimization work to secure FEED scope ("spec") in the Invitation To Tender documents
        ii. Market engagement with FEED bidders for an aligned bidders list
        iii. Sufficient time for FEED bidders to prepare competitive and quality bids
        iv. Sufficient time for bid evaluation to capture value
        v. Sufficient time for Co-Venturer companies to complete internal decision processes
    f. Resulting in a FEED-funding decision in the first half of 2017; possibly as early as Apr or as late as Jun (approx. 36 months after ramp-up of Pre-FEED). Earlier projections of FEED-funding were Mar, 2016 and then Jun, 2016. The first half of 2017 scenario is set as the schedule and budget basis because:
        i. PF discovery of optimization scope shows the potential to improve project economics if the optimizations are incorporated into the FEED spec
        ii. Preliminary market-engagement advice, and the need for thorough FEED preparations to ensure quality work and value capture during FEED
2. An Acceleration Sensitivity schedule has been prepared that shows the possibility of a FEED-funding decision in Dec, 2016. This carries execution risk that needs understanding by completing the first half of 2016 optimization work; plus requires completion of accompanying non-Project ("commercial") activities (such as gas supply agreements and incorporated-JV formation), and less time for CoV approval processes (currently 120 days)
3. PF cost information, based upon the underpinning schedule described in #1 above:
    a. Total cost has increased from $511.3mm to $693.7mm (+$182.4mm, or +36%). Major components:
        i. 48" pipeline evaluation: $30mm
        ii. Regulatory 2015-carryover or 2016-planned work described in 3.b below: $43mm
        iii. Regulatory work planned for 2017 that will now occur in PF: $23mm
        iv. Additional geotechnical work at the LNGP/GTP sites: $29mm
        v. Additional PF run time for the PMT, as offset by other cost savings: $57mm
    b. 2016 WP&B component for AGDC is $22.1mm, and for TC is $37.8
        i. In addition to the activities described or associated with #1 above; certain regulatory field work that was not completed at the end of the 2015 summer season (due to excessive weather delays) will be rescheduled in 2016, and
        ii. certain regulatory field work planned for 2016 that would have occurred in FEED under the previous schedule will still be performed as scheduled (to maintain permitting certainty)
    c. Assuming that Pre-FEED completion and FEED preparation activities run until 30 Jun, 2017; then a first half of 2017 budget projection has been made consisting of $5.7mm for AGDC and $10.4mm for TC
    d. Historical 2014 costs of $7.5mm for AGDC and $13.3mm for TC
    e. Historical 2015 plus 4Q-budgeted costs of $30.6mm for AGDC and $46.0mm for TC