

In an attempt to meet the timeframe set out in HB 369 the in-state gas line project team has identified a number of critical work products, and a minimum staffing levels needed to direct the work. The cost associated with contractual services to perform the detailed pipeline engineering, facilities design, field work, and permitting to get the project ready to begin construction is more than \$350 million dollars. However, the exact amount of funding needed cannot be determined without significant amount of additional engineering and estimation work. A class 4 cost of Transportation estimate is scheduled to be completed by the current in-state gasline work team by July 1, 2010. Additional major cost components necessary to allow construction initiation are not included in these estimates, and include the cost to purchase the pipe, and commitment to facilities construction. These later costs will likely be greater than \$500 million dollars. Additionally, a realistically achievable timeline is attached to this document to provide context for the work needed prior to construction.

In the absence of peer reviewed estimates, an analogy can be drawn between the instate stand-alone project, and the AGIA and Denali pipeline efforts that are on-going and in preparation to achieve project sanction. The table below outlines the estimated costs published in the AGIA January report to legislators. This amount does not bring the project to construction readiness.

<b>Estimated Project Spending Through FERC Certification (Thousands \$)</b>								
<b>Fiscal Year</b>	<b>Pre-License</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>TOTAL</b>
<b>Total Annual</b>	\$2,527	\$17,812	\$126,498	\$139,517	\$137,128	\$137,128	\$137,128	
<b>TC Alaska/EM</b>	\$2,527	\$11,431	\$68,833	\$18,573	\$13,713	\$13,713	\$68,950	
<b>State of Alaska</b>	\$0	\$6,381	\$57,666	\$120,944	\$123,415	\$123,415	\$68,178	
<b>Total Cumulative</b>	\$2,527	\$20,339	\$146,837	\$286,354	\$423,482	\$560,610	\$697,738	<b>\$697,738</b>
<b>TC Alaska/EM</b>	\$2,527	\$13,958	\$82,791	\$101,363	\$115,076	\$128,789	\$197,738	<b>\$197,738</b>
<b>State of Alaska</b>	\$0	\$6,381	\$64,047	\$184,991	\$308,406	\$431,821	\$500,000	<b>\$500,000</b>

The funding requirements below outlines the increase staff needs to manage such a project and builds on and incorporates the funding requested in the FY 2011 Governor's Office operating budget. The details of the initial 6,500.0 funding request is also attached.

**PERSONAL SERVICES: 1223.2** - increased to include 7 staff as follows:

Project Manager Rg 26  
 Engineering Manager Rg 26  
 Commercial Manager Rg 26  
 Permitting and Right of Way Manager Rg 26

(Personal Services – continued)

Legislative Liaison/Public Outreach Officer Rg 23

Finance/budget analyst Rg 22

Schedule Coordinator Rg 21

Current 6500.0 request includes 322.2 for personal services, fiscal note increases total personal services to 1,223.2. Following years include schedules merit increases for all but professional staff.

**TRAVEL: 116.8** - increases project travel to accommodate Steering Committee meetings to include 3-day meetings in Anchorage each month for 4 months, 1-day Steering Committee meeting each month for remaining 8 months in FY11. FY 2012 includes project travel and Steering Committee meetings for four months. Fiscal note includes travel costs for the 16 committee members appointed under Sec. 38.34.070 (9) and assumes that for members identified in Sec 38.34.070 (1) thru (8) travel will be paid by individual's employing agencies. FY2013 thru FY2016 reflects project travel only.

**CONTRACTUAL: Indeterminate**

The level of engineering and environmental work necessary to sanction and begin construction on a gas line project of this magnitude is substantial. Determining minimum cost estimates that can be included in this fiscal note is not possible with the available time. The numbers included below should be viewed as minimums and are based on pipeline construction experience and initial costing work by the contractors currently on the project. These numbers are not final and will have a wide variance as work continues.

Pipeline Engineering:

A minimum of 41,666.6 each year for 3 years (total 125,000.0) for fast track engineering costs up to project sanction. This is a very rough estimate and does not include funding for equipment, facilities and pipe purchase, or any associated pre-construction costs materials costs.

Pipeline engineering services up to construction focus on the development of the construction plan, construction schedules, determination of long lead items a funding quality cost estimate and preparation of bid ready plans and specifications,. The design effort defines and optimizes pipeline routing, pipe material and ancillaries, balancing the cost and the need to acquire permits and ensure integrity throughout the design life.

(Contractual – continued)

Key activities include:

- Refined route topographical definition through survey, aerial photography, LiDAR and other data acquisition techniques
- Additional route geotechnical characterization through field investigations, borehole acquisition, trenching and fault identification
- Refining waterway crossing designs through field reconnaissance of crossings, flow characterization, scour analysis, bank and approaches evaluation
- Pipeline design including product hydraulics analysis, coupled gas-subsurface interaction analysis, geohazards evaluation, pipe and coatings material selection, welding specifications
- Civil material source (gravel, select fill) identification and quantity/quality evaluation, site opening and operations plan, site restoration plan
- Construction logistics including facilities requirements for ports/airports/roads, new access roads, trucking requirements, laydown yards
- Construction plan including construction camp design, alignment ROW design, construction roads (ice/snow/gravel), pipe laying productivity, special design areas (e.g. Atigun Pass)
- Post-construction activities planning including ROW restoration and revegetation, monitoring of alignment and construction completion, startup of pipeline

Environmental:

10,333.3 each year for 3 years (total 31,000.0) for environmental costs up to project sanction (see ASRC cost estimate attached)

Facilities engineering: Estimated greater than 200,000.0 but indeterminate at this time. The costs for this engineering effort will be available upon completion of current facilities work, estimated availability: May of 2010. Facilities engineering services leading to construction mirror pipeline procedures and focus on completion of the design of the project facilities. This includes planning to enable procurement lead time to start the module construction, evaluation of the module transport and completion on-site, and aiding the permitting process to ensure all facilities construction and planned operations are in full compliance with regulations and stipulations. Key activities include:

- Specifications of natural gas input streams and desired product streams. Key is the development of the process flow diagrams to enable this
- Site identification and site design preparation, including development of data needs to satisfy regulatory requirements (e.g. EPA)
- Identification of major process design elements, specification of design requirements for each process element
- Identification and qualification of potential vendors for major process design elements

(Contractual – continued)

- Process and Instrumentation diagram (P&ID) depicting interconnections of mechanical and electrical systems
- Preparation of facility building design including mechanical layouts
- Design of operational requirements including controls, HAZOP, safety requirements, fulfillment of regulations and stipulated requirements
- Preparation of design for development of a funding quality cost estimate
- Preparation of construction bid(s) for both module construction, and installation on-site
- Module logistics, including transportation safety and material handling requirements
- Alaskan installation construction plan including development of construction camp, construction personnel requirements, camp support and interface with pipeline construction requirements.

500.00 for FY2011, 2012 and 2013 for commercial analysis of downstream industrial opportunities; reduced to 200.0 for 2014 thru 2016.

100.0 for public outreach, information dissemination, printing, advertising, postage.

83.0 annual office lease space

RSAs: 1172.3 - for state agencies required participation:

500.0 for Joint Pipeline office (includes funds to F&G, DEC, etc. for state permitting activities FY2011 only

672.3 DNR Division of Mining, Land, and Water – FY2011 only (see fiscal note attached)

**SUPPLIES: 29.0** increases FY2011 request to 29.0 for increased staff and fast-track activities.

**EQUIPMENT: 84.3** one-time office set-up