

**HB 3001**

**SB 3001**

**6/24, 6/26, 7/1**

**& 7/8/08**

**SPECIAL**

**SESSION**

**DOCUMENTS**



# AGIA

## Summary of the Commissioners' Findings and Determination

Special Session  
June 2008

# Commissioners' AGIA Findings and Determination



- The pipeline project proposed by TC Alaska's application
  - will sufficiently maximize the benefits to the people of Alaska, and
  - merits issuance of an AGIA license.
- Issuing an AGIA License to TC Alaska maximizes benefits to Alaskans more than pursuing an LNG project or the Producers Project.

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
  - A feasible project plan, sponsored by a capable pipeline company
  - An economic project likely to attract firm transportation commitments and secure financing
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
  - True “open access” for explorers
- Opportunity for affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
  - Off-Take Points, and Distance-Sensitive Rates
  - Expansion Provisions
  - Does not interfere with “Bullet Line” project
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy
  - Lowest Reasonable Transportation Rates (tariff)
  - Expansion Provisions

# TC Alaska Project Evaluation



- Economic Evaluation
  - Net Present Value (NPV) to the State
  - NPV to the Producers
- Likelihood of Success

# TC Alaska Project Evaluation



- As allowed in AGIA, TC Alaska's application had alternative project designs based on how much gas was committed at the initial open season
- Analysis considered many different possible designs

- Two “Base Cases” Reported for TC Alaska’s Project
  - “Proposal Base Case”
    - 4.5 Bcf/d (including 0.9 Bcf/d from Pt. Thomson)
    - 75/25 debt to equity
    - 14% return on equity
    - 25 year shipping contracts
  - “Conservative Base Case”
    - 4.0 Bcf/d (No gas from Pt. Thomson)
    - 75/25 debt to equity
    - 14% return on equity
    - 20 year shipping contracts

- Factors in NPV Analysis
  - Gas Prices
  - Transportation Costs
    - Pipeline Project Capital Costs
    - Cost Escalation Rates
    - Initial Pipeline Throughput
    - Tariff Terms (e.g. debt to equity ratio)
  - Pipeline Construction Schedule
  - Gas Production Costs

# Project Economic Analysis



- Gas Price Models
  - Separate price forecasts were obtained from
    - US DOE's Energy Information Administration (EIA)
    - Wood Mackenzie
    - Gas Strategies Consulting
    - Black and Veatch

# Project Economic Analysis



- Project Cost and Schedule
  - “Technical Team”, included
    - Westney Consulting
    - Energy Project Consultants
    - Pingo International
    - AMEC Paragon
    - Colt Engineering
    - Mustang Management
    - Energy Operations Consulting
    - Black and Veatch
    - Merlin Associates

# Project Economic Analysis



- Project Cost Estimates – Mid-Range
  - Proposal Base Case
    - \$31 Billion in today's dollars
      - \$3.19 tariff
    - \$45 Billion in dollars spent
      - \$4.73 tariff
  - Conservative Base Case
    - \$29 Billion in today's dollars
      - \$3.59 tariff
    - \$42 Billion in dollars spent
      - \$5.33 tariff

# Project Economic Analysis



## Project Cost Estimates – Why Higher than TC Alaska's?

- Different Purposes – Project Planning vs. Risk Assessment
- TC Alaska's Cost Estimates are “realistically aggressive” and appropriate for project planning
  - Analytical team tested sensitivity of estimates to changed circumstances
- Difference Between Assumptions Mandated in the RFA and the final analysis assumptions
  - Exchange rate, cost escalation rate
- Assumed “Neutral Competence” of Operator
- Cost of the GTP
  - One vs. Two seasons of sea-lift

# Project Economic Analysis



- Project Schedule
  - Mid-range probability put first gas in 2020
  - State's Canadian Counsel advised on expected regulatory timeline in Canada, including First Nation issues

## Reporting NPV Results – Proposal Base Case

- Gas Prices (WoodMac)
- Transportation Costs
  - Pipeline Project Capital Costs (\$31.5 billion)
  - Cost Escalation Rates (4%)
  - Initial Pipeline Throughput (4.5 Bcf/d)
  - Tariff Terms (e.g. debt to equity ratio[75/25])
- Pipeline Construction Schedule (2020)
- Gas Production Costs

# Project Economic Analysis



## Proposal Base Case Results

- The State of Alaska would realize an estimated cash flow of \$261.5 billion, and an estimated NPV of approximately \$66.1 billion at a discount rate of 5%.
- The Major North Slope Producers would realize an estimated cash flow of \$147.4 billion, and an estimated NPV of approximately \$13.5 billion at a discount rate of 10%.

# Project Economic Analysis



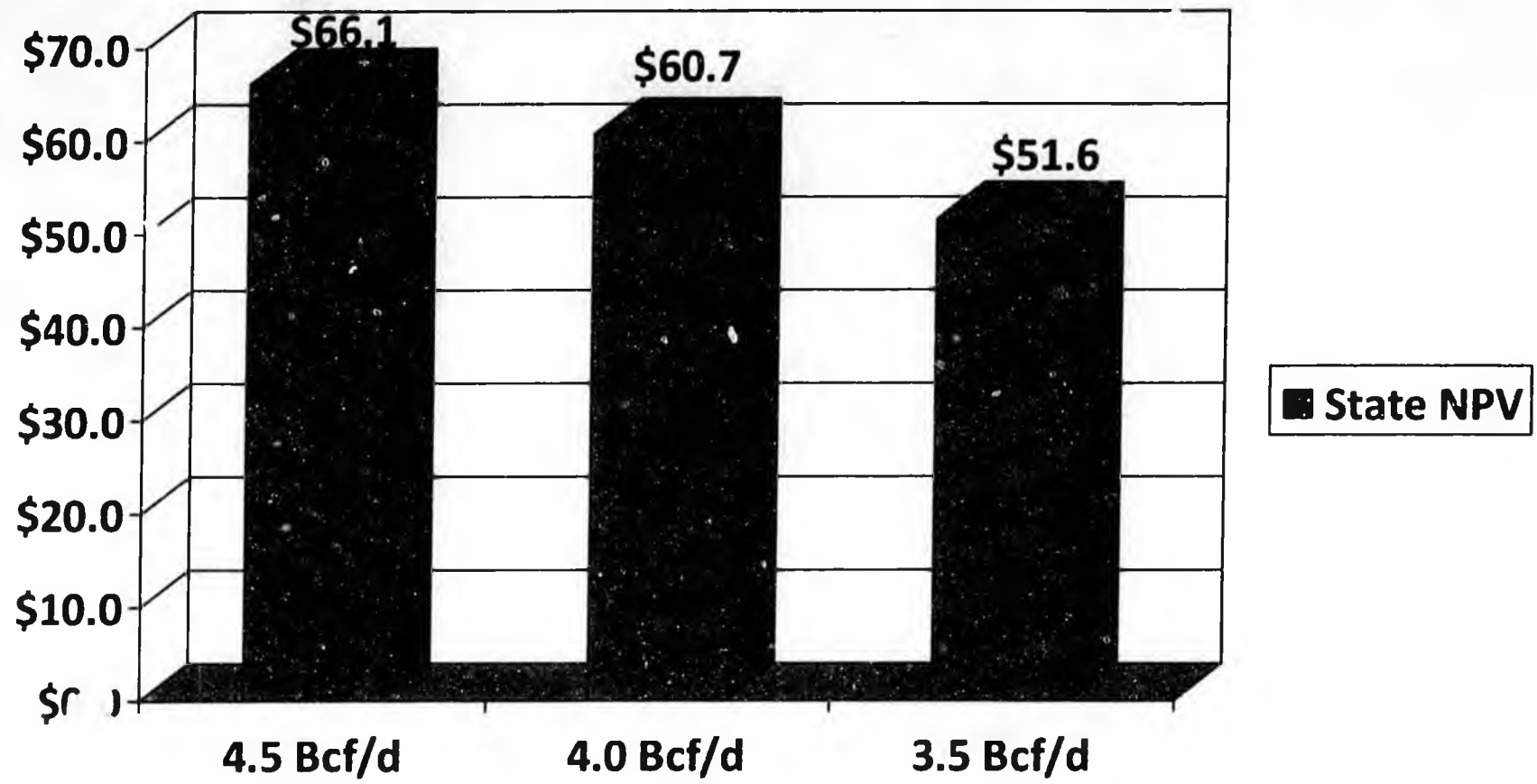
## Conservative Base Case Results

- The State's NPV decreases by 8% from the Proposal Base Case to \$60.7 billion.
- The Major North Slope Producers NPV decreases by 9% to \$12.3 billion.

# Project Economic Analysis



## State NPV at Various Initial Throughput



# Project Economic Analysis



- The Project Economics are Extremely Robust
  - It would take a “perfect storm” of worst case scenarios of multiple factors for the Project to be uneconomic to the Producers.
  - Indeed, a “perfect storm” of low gas prices and high construction costs, together, are not enough to generate a negative NPV for the State.

**\$500 Million Matching  
Contribution**



## Effect of State's \$500 Million Matching Contribution to TC Alaska's Project

- Tariff is reduced by 6 cents
- State's NPV increases by \$200 Million

## TC Alaska Project Is Likely to Succeed



- TC Alaska has submitted a plan for its project that is technically feasible, reasonable, and specific.
- TC Alaska has demonstrated the technical and financial ability to construct the project.
- TC Alaska has submitted a reasonable commercial plan which, coupled with economic and political factors, should help to encourage firm shipping commitments

# Attracting Gas Commitments to TC Alaska's Project



- Robust economics and reasonable commercial terms.
- Extremely capable pipeline company.
- State's Upstream Inducements
  - 10-year tax certainty
  - Royalty valuation certainty
- Avoid Problems of Not Committing Gas
  - Duty to develop
  - Anti-trust
  - Congressional Attention
  - Shareholder Questions

# TC Alaska Project Is Likely to Succeed



## Contingent Liability Issue

- Risk of litigation is significantly overstated.
- Potential legal claims by withdrawn partners are, at best, weak and unlikely to succeed.
- Not a reasonable basis for the Major North Slope Producers to refrain from partnering with TC Alaska or contracting with the Project.

# TC Alaska Project Comparisons



- Producer Project (Denali)
- LNG Options

# Denali Project Is More Risky For the State



- Lack of commitments create risks for state
- No certainty on project schedule
  - Likely Anti-trust Challenges
- Undefined tariff terms
  - Example, 50/50 debt to equity increases the tariff by \$1 compared to 75/25, costing the state over \$8 billion in NPV
- Undefined state fiscal concessions needed for Denali
  - SGDA concessions worth over \$10 billion
- No Certainty on Expansion Provisions
  - Producer Incentives to exercise basin control
  - Stifles North Slope basin development
  - Loss of long-term jobs and careers
  - Loss of Potential LNG development

# Producer Pipeline Considerations



- Even if TC Alaska License is issued, Producers can proceed with Denali, commit gas to it, and build it without any additional state concessions
- State has significant interest in attracting Producers to commit gas to TC Alaska's project
  - Expansion Provisions
  - Lowest reasonable tariff - Highest Netback
- State Needs to Use Power of Competition to Protect Alaskans Interests

- Extensive Analysis of LNG economics and likelihood of success
  - Asian market price
  - LNG project costs and schedule
  - How LNG projects are developed
  - Potential hurdles for LNG projects

# LNG Economic Analysis

# AGIA

The Alaska Gasline Inducement Act

- Ran economics on both a 2.7 bcf/d and 4.5 Bcf/d projects
- Alaskan LNG is economical and viable
- Confirmed Asian market premium price
- Liquefaction plant costs create an economic drag
- LNG does not provide time or cost savings over TC Alaska project
- State and Producer NPV lower under all stand-alone LNG options than under TC Alaska project

# LNG Likelihood of Success



- LNG is viable, but less likely to succeed without TC Alaska Project
  - Entire project stream, from gas supply, to pipeline, to liquefaction, to tankers, to re-gasification, to gas sales must be negotiated and executed nearly simultaneously
  - Expansions are more difficult because of size
  - Export authorization is a challenge

# Opportunity for “Y line” LNG



- If gas is committed, TC Alaska will transport gas from Delta Junction to Prince William Sound
- LNG project will benefit from TC Alaska’s financial and technical capabilities
- State will benefit from supplying gas to both LNG and North American markets
- “Y line” is the best LNG option for the state

# Additional Considerations



- Treble Damages Exposure
- Competition

# Treble Damages Exposure



## \$Millions

Year	Annual Spend	State Expenditure	TC Alaska Expenditure	3x TC Alaska Expenditure	Cumulative State Exposure
2008	\$41	\$21	\$21	\$62	\$82
<b>2009*</b>	<b>\$42</b>	<b>\$21</b>	<b>\$21</b>	<b>\$63</b>	<b>\$166</b>
2009	\$34	\$31	\$3	\$10	\$207
2010	\$141	\$127	\$14	\$42	\$376
2011	\$144	\$130	\$14	\$43	\$549
2012	\$147	\$132	\$15	\$44	\$726
2013	\$75	\$39	\$36	\$109	\$874
<b>Total</b>	<b>\$625</b>	<b>\$500</b>	<b>\$125</b>	<b>\$374</b>	<b>\$874</b>

\*Scheduled Open Season

Expenditure Schedule Based on TC Alaska Application

# Competition

# AGIA

The Alaska Gasline Inducement Act



**Producers  
vs. AGIA**

**Potential Applicants  
vs. Each Other**

**Conoco Plan  
vs. AGIA**

**Denali  
vs. AGIA**

**Denali  
and TC Alaska**

Intro of AGIA

Passage of AGIA

Release of RFA

Application Due Date

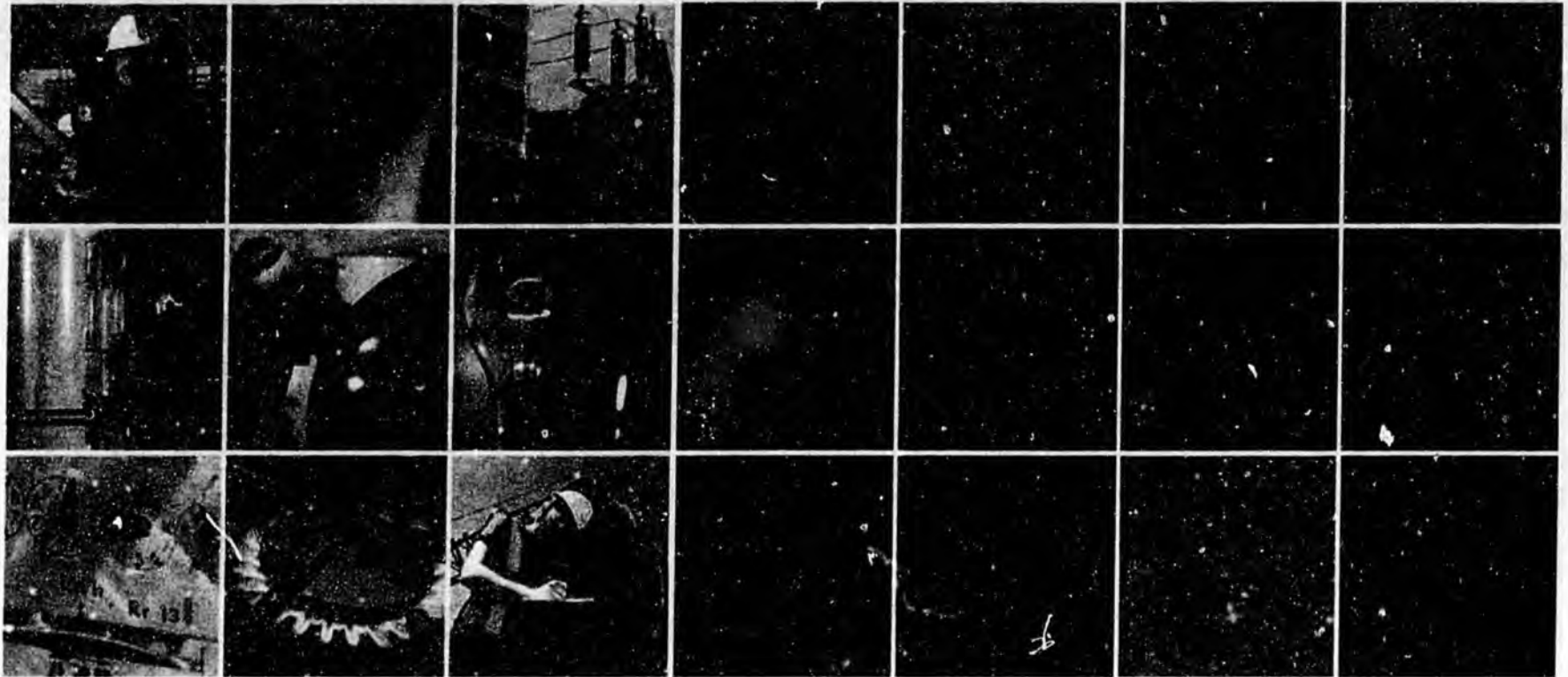
Completeness Review

Award of License

Open Season

FERC Cert

- TC Alaska's Project Maximizes Benefits to Alaskans
  - Best Chance to Get a Pipeline
  - Expansion Provisions Provide Best Chance for Jobs and Long-Term Careers for Alaskans
  - Increases Alaskans Opportunity of Affordable Energy
  - Maximizes State Revenue
- TC Alaska's Project is Better for the State than LNG Options and the Producer Project (Denali)



## TransCanada's AGIA Application Statewide Legislative Hearings

June / July 2008

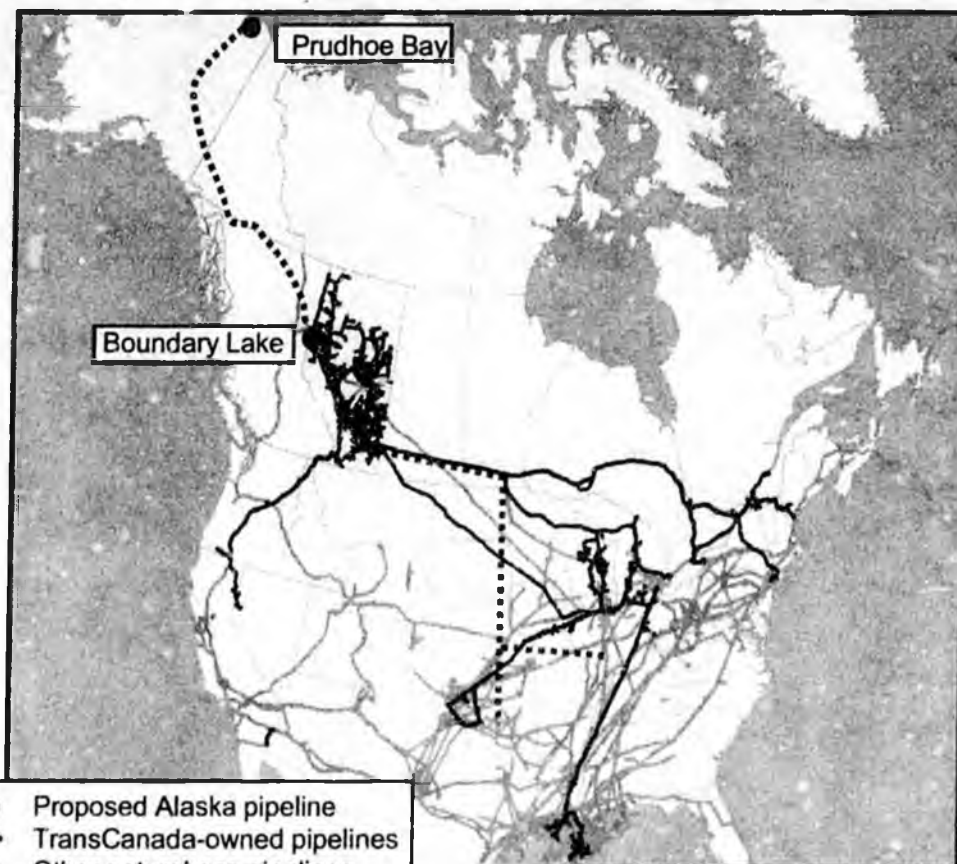


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*In business to deliver*

## TransCanada's Objectives – Alaska Project

- Early in-service
  - Largest investment opportunity in core business line and geographic footprint
  - Utilize spare capacity on existing North American pipelines
  - LNG market as alternative investment opportunity
- Encourage long-run basin development
  - Serve In-State and other markets
  - Increase market and supply diversity
  - Growth investment opportunities
    - Pipeline expansions can create “virtuous circle”
      - Pipeline expansions promote more exploration and drilling which, if successful, leads to more pipeline expansions
- Equitable treatment for all customers
  - 50-year successful track record of balancing interests
    - Initial and future
    - Large and small

# TransCanada's Credentials

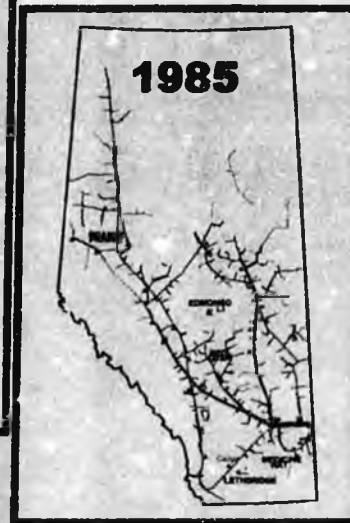
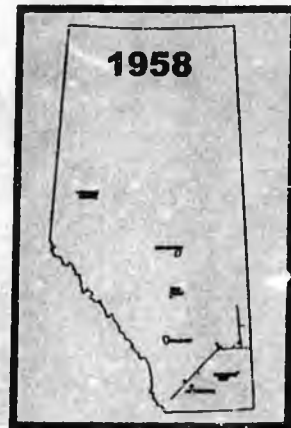


- ..... Proposed Alaska pipeline
- TransCanada-owned pipelines
- Other natural gas pipelines
- ..... Keystone pipeline

	TransCanada Total	Alaska Pipeline Project
Miles of Pipe • in U.S.	36,500 • 12,000	1,715 • 750 in Alaska
Compression Horsepower	5,370,000	750,000 • 265,000 in Alaska
Throughput Volumes	15 bcf/d	4.5 bcf/d

<u>1957/58</u> TransCanada's Mainline	Original build across Canada 2,300 miles
<u>1990s</u> Expansion	7,000 miles Completed within 0.6% of budget and on schedule
<u>2008 - 2009</u> Keystone Pipe	2,150 miles New build in U.S. - 1,380 miles

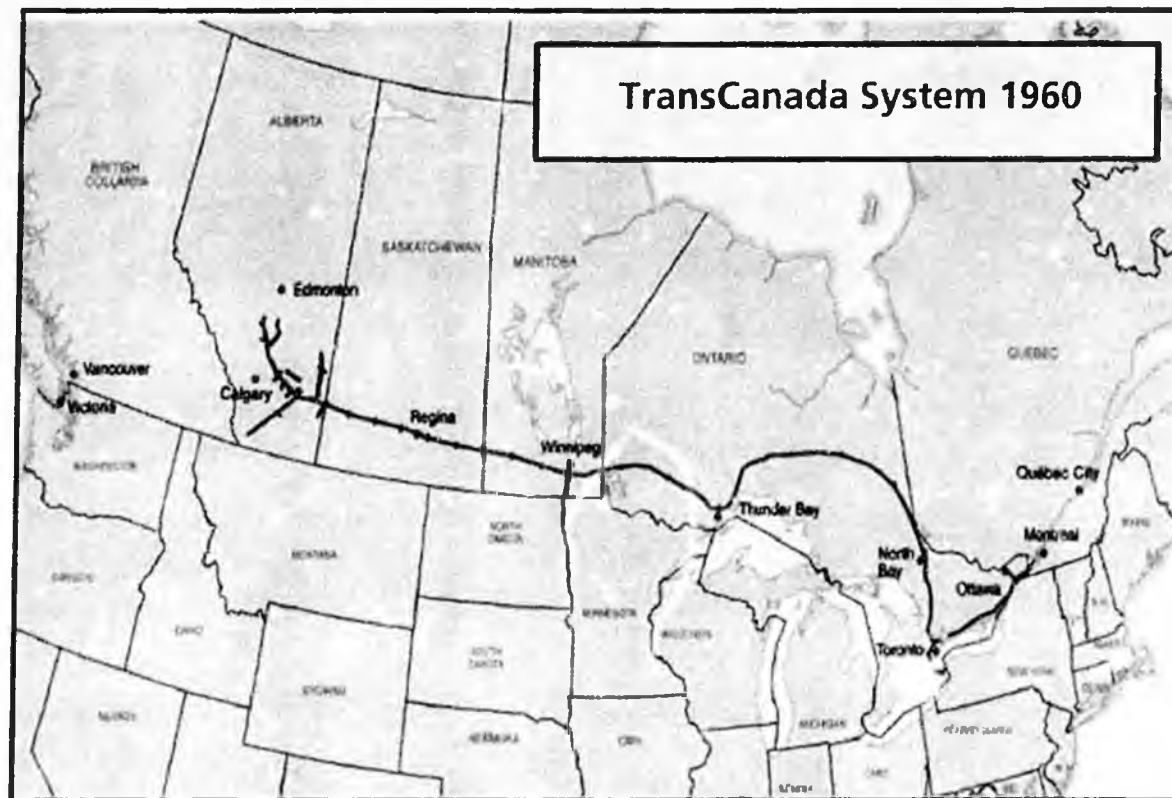
## Proven Basin Developer – Alberta Example



### Regulatory Structure

- Independent pipeline model
- Rolled-in tolls
- 3 customers in 1958, 300+ today

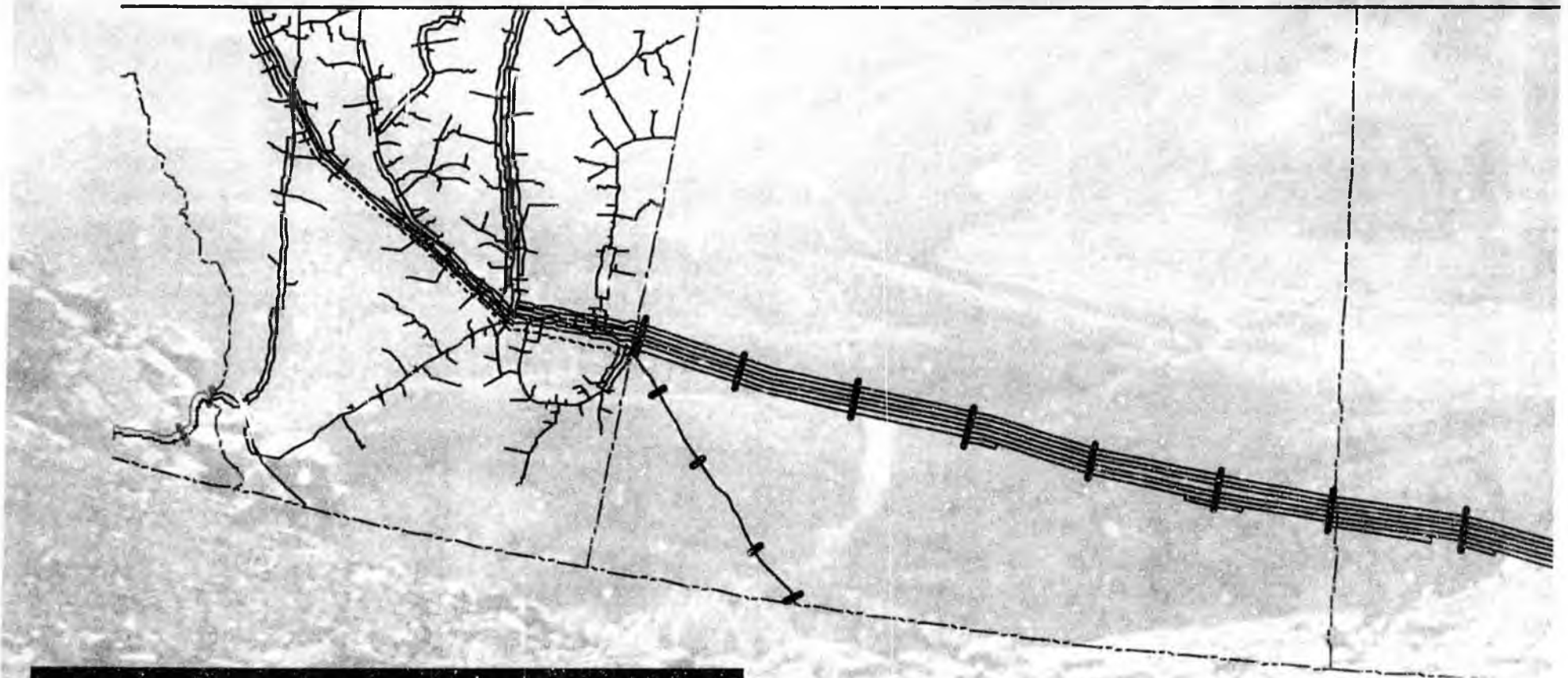
# Proven Basin Developer – Mainline Example 1960



# Proven Basin Developer – Mainline Example 2008

Alberta

Saskatchewan



## Regulatory Structure

- Independent pipeline model
- Rolled-in tolls
- 3 customers in 1958, 300+ today

## AGIA "Must Haves"

AGIA "Must Haves"	TransCanada's Application	Completeness
1. Filed by deadline	Filed on November 30, 2007	✓
2. Project details & schedule	Alaska Highway route 5 bcf/d GTP and 48" 2500/2600 psi pipe 2017 November in-service*	✓
3. Open season date certain Apply for FERC pre-filing Apply for FERC CPCN	Completed by Sept. 2009* June 2010* - not contingent on Open Season December 2011* - as above	✓
4. RCA filing	N/A	N/A
5. Open season frequency	Once every 2 years	✓
6. Expansions - Commitment to expand in engineering increments	Yes, 4.5 bcf/d initial design capacity Expandable to 5.9 bcf/d with compression only	✓
7. Rolled-in tolls	Up to 115% of initial rates in Alaska Full rolled-in rates in Canada	✓
8. Gas treatment plant	TransCanada will build if 3 <sup>rd</sup> parties do not	✓
9. State reimbursement	Up to \$500 million	✓

\* Subject to AGIA license by April 2008

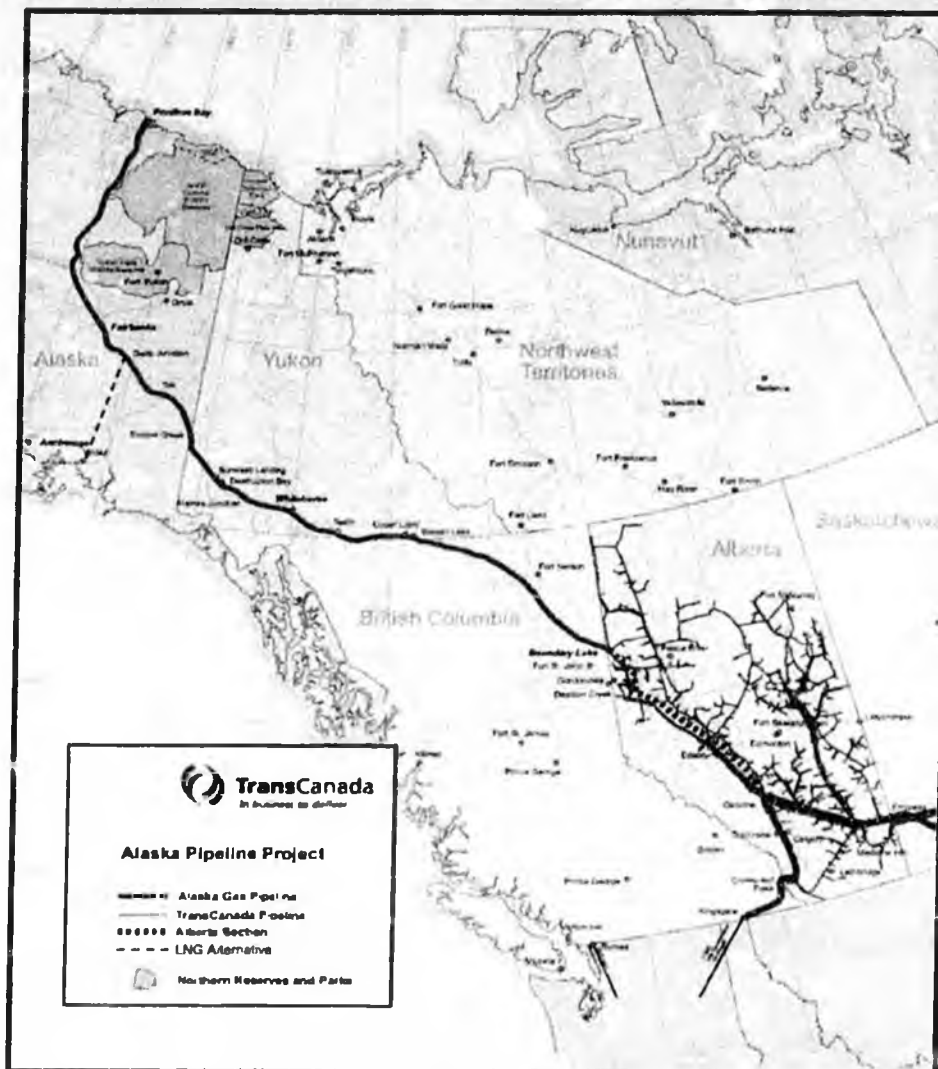
## AGIA "Must Haves"

AGIA "Must Haves"	TransCanada's Application	Completeness
10. Project debt ratio minimum	Construction - 70% Operation - 75% (to reduce tolls)	✓
11. Capital cost overrun measures	TransCanada's return reduction (penalty) Potential \$18 B loan guarantee (stable tolls)	✓
12. In-state deliveries	Min. 5 delivery points	✓
13. In-state delivery rates	Distance sensitive rates	✓
14. Local headquarters in Alaska	Yes	✓
15. Local hire, local businesses, etc.	Opportunities for local hire and businesses	✓
16. Waive right to appeal	Waived	✓
17. Project labor agreement	Commit to negotiate PLA	✓
18. Treatment of State reimbursement	Excluded from rate base	✓
19. Details of Applicant	Provided	✓
20. Readiness, financial resources and technical ability of Applicant	Proven record and demonstrated capability	✓

## TransCanada's Competitive Response to AGIA

- TransCanada bid to win – competitive enhancements
  - Initial system design with inexpensive expandability
  - Gas treatment plant ownership, if no 3<sup>rd</sup> party willing to build
  - Equity opportunity for shippers committing gas in initial open season
  - 75% debt vs. 70% minimum limit in AGIA
    - Toll reduction of \$0.09/mmbtu
  - TransCanada's return reduction in event of capital cost overruns
  - Fort Nelson Option upside
    - Toll reduction of \$0.13 - \$0.18/mmbtu
  - LNG alternative if insufficient gas commitments through Canada , or via Y-line

# Alaska Pipeline Project



- **Alberta Hub is the most liquid market in North America**
- **TransCanada's Alberta System is the Alberta Hub**
- **Access to all North American markets coast-to-coast on TransCanada's existing pipelines**
  - **By 2018, spare takeaway capacity sufficient for full Alaska volumes**
- **One-third of Alaska pipeline in-service as Prebuild moving 3 BCFD**
- **LNG alternative if insufficient gas commitments through Canada or via Y-line**

## Project Description

- Gas treatment plant at Prudhoe Bay
  - 5 Bcf/d initial capacity
  - TransCanada will develop/own only if necessary
- Natural gas pipeline from Prudhoe Bay to Alberta Hub
  - 4.5 Bcf/d initial capacity
    - Expansion to 5.9 Bcf/d with compression only
  - More than 1700 miles
  - 48-inch diameter; 2500/2600 psig
- Alberta Hub to Lower 48
  - TransCanada's existing pipeline system in Alberta is the "Alberta Hub"
    - TransCanada's Alberta pipeline is both a physical and commercial system
    - Largest natural gas trading hub in North America
  - By 2018, downstream pipelines projected to have spare capacity for full Alaska volumes

## Project Economics <sup>1</sup>

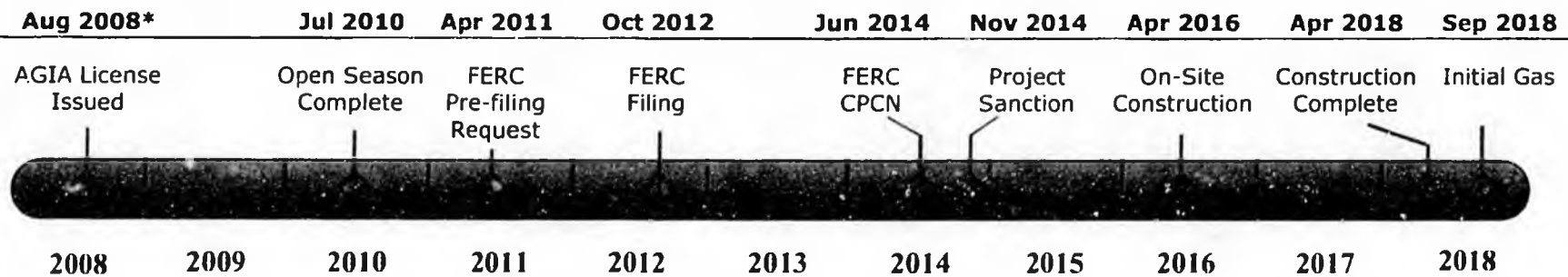
- Capital costs
  - \$26 billion (2007 \$US excluding AFUDC)
    - Approximately \$0.6 billion for Open Season and regulatory certification
- Tolls
  - \$US 2.76/MMbtu in 2018 to the Alberta Hub
    - Levelized negotiated toll for 4.5 Bcf/d in nominal dollars, including fuel
  - Expansion Tolls
    - Rolled-in tolls in Canada
    - Rolled-in tolls in Alaska up to 115% of initial tolls, including fuel

<sup>1</sup> Based on information provided by the State and current TransCanada estimates

## Financial Parameters

- Debt/Equity Ratio
  - 70/30 during construction
  - 75/25 upon completion of initial project
  - 60/40 for all expansions
- Return on Equity
  - U.S. 10-year Treasury Note plus 965 basis points
  - TransCanada's ROE will be adjusted downward in first 5 years by up to 200 basis points in the event of CAPEX overruns
- Fuel
  - 7.9% including GTP from Prudhoe Bay to Alberta Hub
  - \$US 0.35/MMbtu in 2018 @ 4.5 Bcf/d

# Project Schedule



\* AGIA license assumed to be issued in August 2008

## Partnership Opportunity

- TransCanada will offer equity opportunity to Shippers in the initial Open Season that subscribe for a threshold volume
  - Should improve likelihood of success and alignment of interests between project sponsors and Shippers

## Upstream Fiscal Terms

- TransCanada's AGIA obligations are not conditional on a review of Alaska's upstream fiscal terms.
- TransCanada acknowledges that this issue is between the State and natural gas producers.
  - TransCanada requests that the State review upstream fiscal terms for natural gas prior to the initial open season.

## Other Project Components

- Natural Gas Liquids (NGLs) Extraction
  - TransCanada can accommodate NGL extraction in Alaska or downstream
  - TransCanada's Alberta system is straddled by three NGL complexes owned by third parties
  - Excess capacity expected at those plants sufficient to process Alaskan gas if Shippers so choose
- LNG Alternative
  - TransCanada is willing to offer gas treatment and transportation services from Prudhoe Bay to an LNG terminal should insufficient gas be committed through Canada or via a Y-line

## Regulatory Structure



- Alaska
  - TransCanada Alaska Company, LLC will proceed under Alaska Natural Gas Pipeline Act of 2004
- Canada
  - Foothills Pipe Lines Ltd. will proceed under the Northern Pipeline Act (NPA)
- Canada/U.S. Treaty
  - The pipeline will follow the route set out in the Treaty and the NPA

## AGIA "Must-haves" Promote Basin Development

- Rolled-in tolls up to 115% of initial rates in Alaska
- Open Season every 2 years
- In-State deliveries
  - Distance-sensitive tolls
  - Minimum 5 delivery points
- Low equity ratio requirement for pipeline sponsors
- State fiscal incentives (if any) targeted to AGIA pipeline shippers

## Long-run Basin Development – Pipeline Expansions



- Value to Producers / Governments?
- Does Alaska have enough gas?
- Drilling impacts?
- Impact of rolled-in tolls?

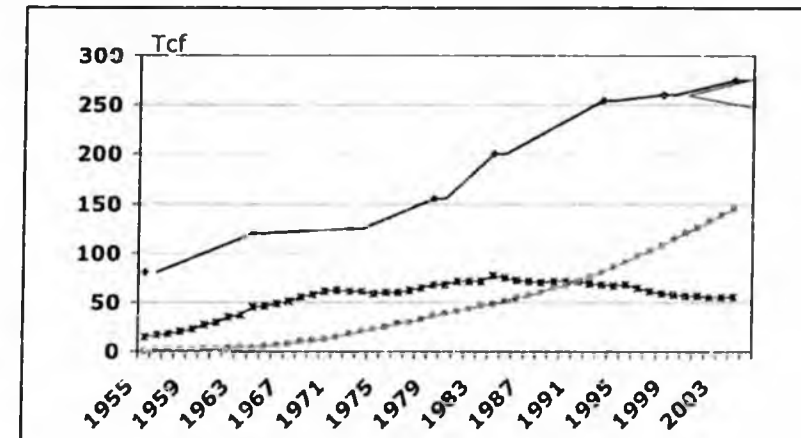
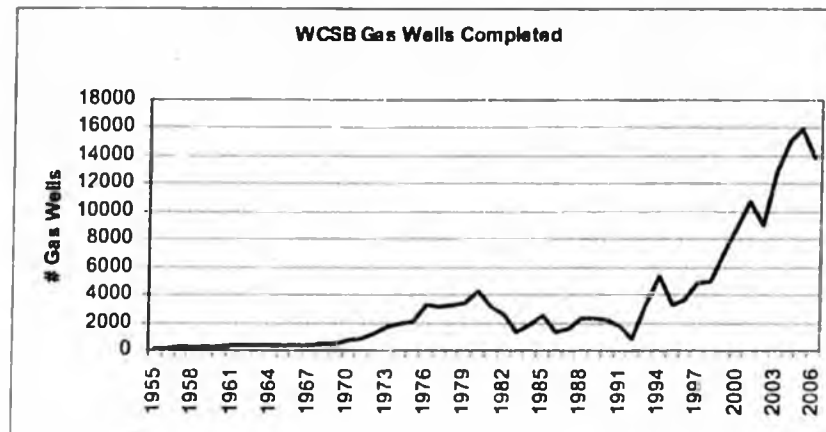
## Value of Potential Expansions (\$Billions)<sup>1</sup>

	<u>Producer/Govts. Total Revenue *</u>	<u>Expansion Value</u>
Base Project		
- 25 years @ 4.5 Bcfd	\$350 Billion	
Expansions		
Case I		
- Base volumes for 10 years (4.5 Bcf/d)		
- 30% expansion for 25 years (5.9 Bcf/d)	\$600 Billion	\$250 Billion
Case II		
- Base volumes for 10 years (4.5 Bcf/d)		
- 60% expansion for 25 years (7.2 Bcf/d)	\$700 Billion	\$350 Billion

<sup>1</sup> Assumes annual average netback of \$6.89/MMbtu

\* Direct revenue only  
- no indirect impacts from additional E&P activity and spin-offs

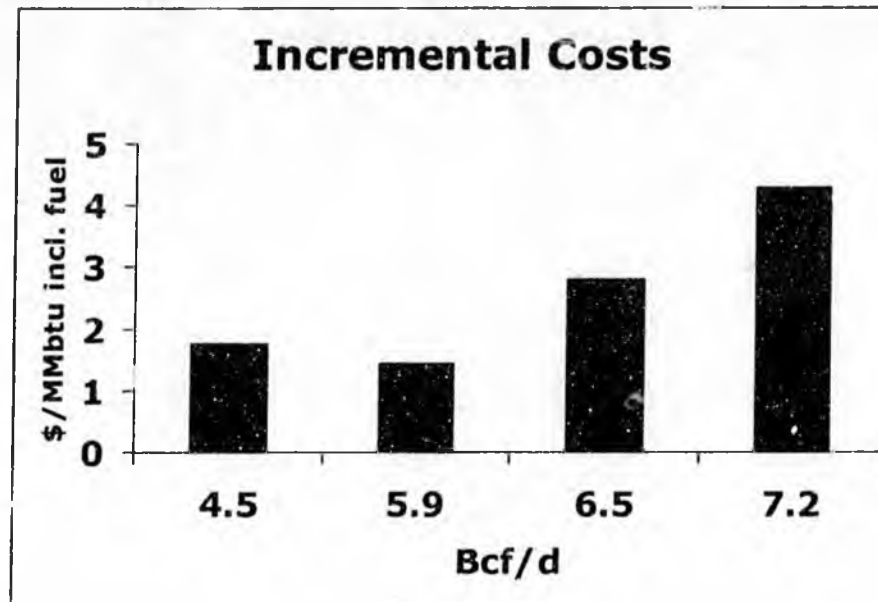
## Basin Development – Western Canada Example



— Ultimate Resource Potential Estimate  
 - - - Proven Reserves  
 . . . Cumulative Production

- Pipeline expansion can create “virtuous circle”
  - More exploration and drilling
  - If successful, leads to more pipeline expansion
- Exploration and drilling drives service industry and employment over long term

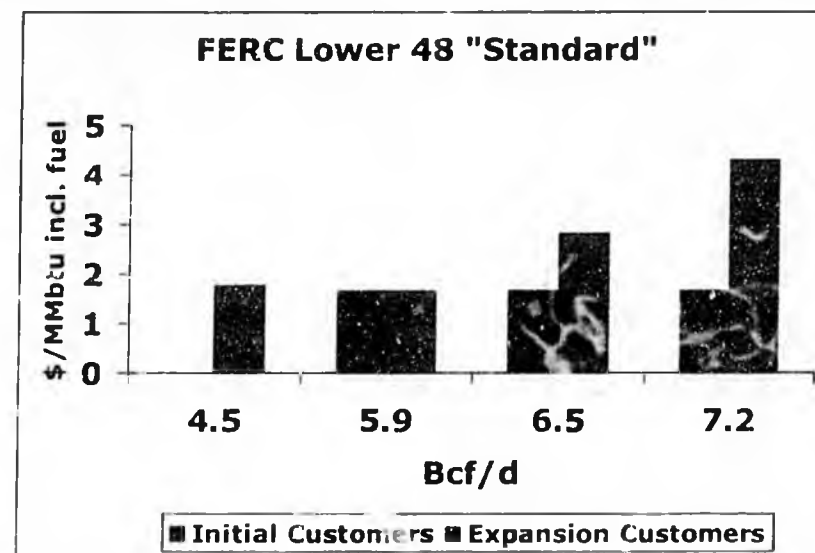
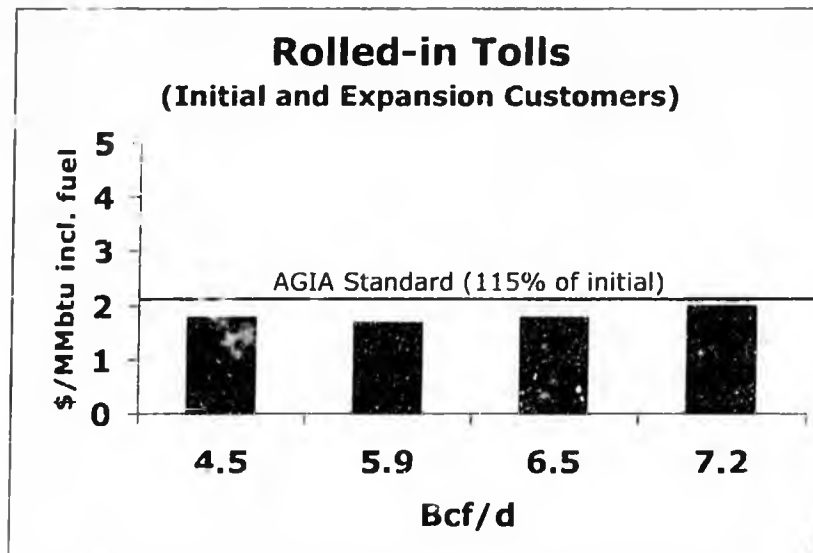
## Impact of Rolled-in Tolls?



Alaska & Yukon-B.C. sections only

Assumed Volumes: 4.5 Bcf/d years 1 & 2  
5.9 Bcf/d years 3 & 4,  
6.5 Bcf/d years 5 & 6,  
7.2 Bcf/d years 7 & beyond

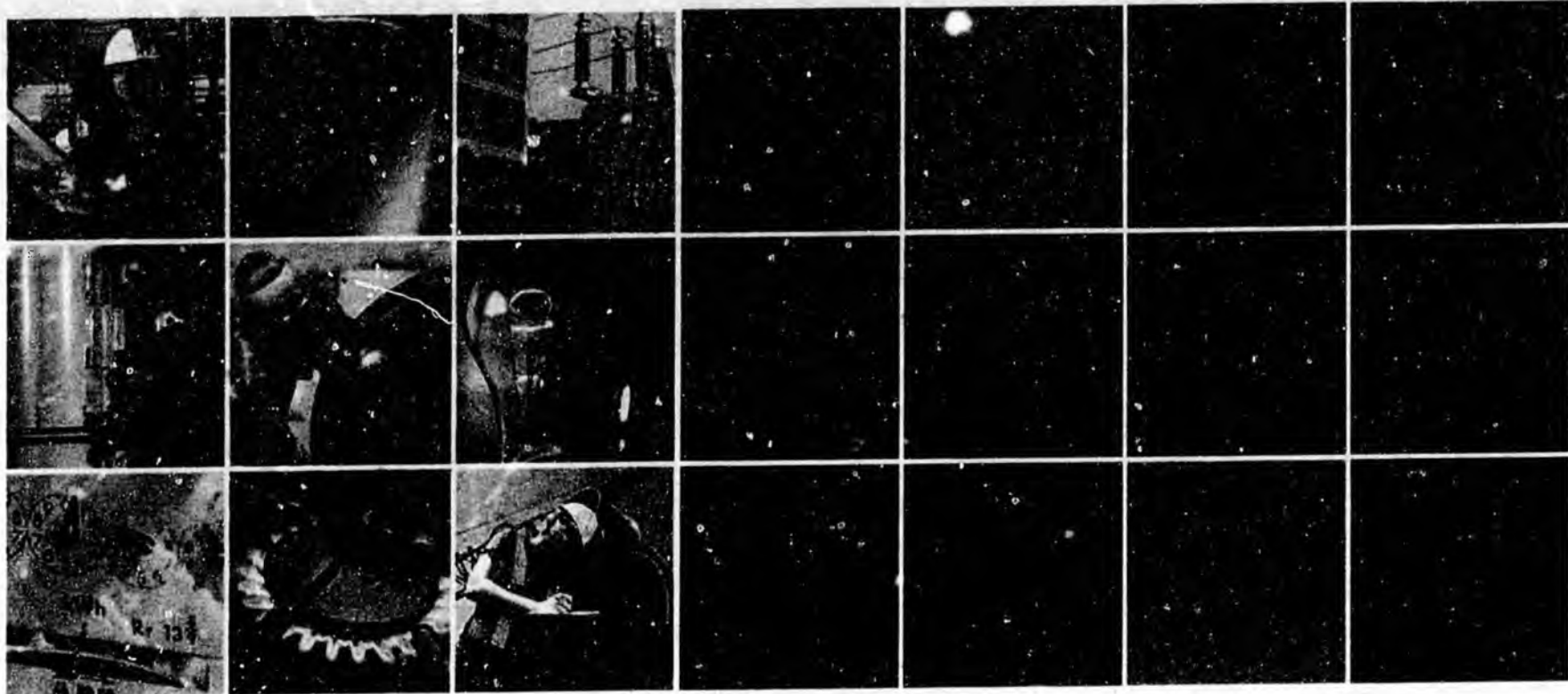
# Impact of Rolled-in Tolls?



- Rolled-in tolls increase chance of expansions above 5.9 Bcf/d
  - 35% lower tolls for expansion customers to 6.5 Bcf/d
  - 50% lower to 7.2 Bcf/d

## Summary

- Last year, the Administration and Legislature established AGIA as Alaska's transparent and competitive process to advance a gas pipeline project
  - AGIA was structured to encourage:
    - Construction of base project
    - Long-run basin development
    - Open access terms for:
      - Initial and future shippers
      - In-State, Lower 48, and LNG markets
- TransCanada has the credentials and capacity to build, own, operate and expand the project
- TransCanada's objectives are aligned with AGIA
  - Early in-service
  - Long-run basin development
  - Open access -- equitable treatment for all customers



**Thank You**



**TransCanada**

*In business to deliver*