

AK LEGISLATURE SPECIAL COMMITTEE FILES SCOMM 155 3286

BROADWATER ENERGY

- **The project is a joint venture with Shell and will be located offshore New York State in Long Island Sound**
 - Designed with capabilities to receive, store, and regasify imported LNG
 - Average natural gas design send-out capacity is approximately 1 billion cubic feet per day (Bcf/d)
 - Significant economic incentives exist for the delivery of new gas supplies into the New York regional natural gas market

- **The project has been approved by FERC, but subsequently issues related to the project's environmental impact have been raised**
 - In March 2008, after three years of review, FERC unanimously approved the construction and operation of the project subject to the operator adopting more than 80 mitigation measures to enhance safety and security and to ensure that the project has limited environmental impacts.
 - In April 2008, The New York State Department of State (NYSDOS) issued a negative consistency determination in Broadwater Energy's Coastal Zone Management Act application, finding the project as designed is not consistent with the state's coastal zone policies.
 - NYSDOS was a cooperating agency in the development of the environmental impact statement (EIS) for the project along with: the Department of Homeland Security, the U.S. Coast Guard, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the National Oceanographic and Atmospheric Administration, and the National Marine Fisheries Service. The EIS was considered as part of the FERC approval process for the project.
 - In late April, Broadwater Energy initiated the first step in preparation for an appeal to the U.S. Department of Commerce regarding the New York State Department of State (NYSDOS) Coastal Zone Management Act determination. Broadwater filed a request with the Federal Energy Regulatory Commission (FERC), as the lead agency for the Broadwater project, to consolidate the record for the project. The 'consolidated record' includes all relevant information from FERC and other permitting agencies and will be submitted in conjunction with Broadwater's appeal to the Department of Commerce.

CACOUNA ENERGY

- **The project is a joint venture with Petro-Canada and will be located at Gros Cacouna Harbour on the St. Lawrence River in Quebec**
 - Designed with capabilities to receive, store, and regasify imported LNG
 - Average natural gas design send-out capacity is approximately 500 MMcf/d
 - Significant economic incentives exist for the delivery of new gas supplies into the New York regional natural gas market

- **Current project status is uncertain**
 - Anchor supply for the development of the Cacouna Energy (Cacouna) LNG regasification terminal was to be supplied from Gazprom's Baltic LNG project.
 - On February 7, 2008 Gazprom's management committee decided not to pursue the proposed Baltic LNG project.
 - In addition, gas supply shortages, capital cost pressures, excess North American regasification capacity, and world-wide natural gas economics have put a strain on the development of LNG import projects in North America.
 - At present, the project proponents are reported holding discussions to evaluate different options for the site and a public announcement will be made once a decision is reached. At this point, no announcements have been made as to the long-term outlook for Cacouna.

APPENDIX - POWER

TRANSCANADA POWER OVERVIEW

➤ **Bruce Generating Station**

- Owns 31.6 per cent of Bruce B, consisting of operating Units 5 to 8 with approximately 3,200 MW of generating capacity
- Owns 48.7 per cent of Bruce A, consisting of operating Units 3 and 4 with approximately 1,500 MW of generating capacity and currently idle Units 1 and 2 with approximately 1,500 MW of generating capacity, which are currently being refurbished and are expected to restart in late 2009 or early 2010.

➤ **Cartier Wind Energy has agreements for wind power projects totaling 740 megawatts (MW) of capacity**

- Located in the Gaspésie-Iles-de-la-Madeleine region and the Regional County Municipality of Matane in the province of Québec
- The assets related to the projects are indirectly co-owned by TransCanada (62 per cent) and Innergex II Income Fund (38 per cent)

➤ **Portlands Energy Centre (PEC) is a high-efficiency, combined cycle natural gas generation plant located in downtown Toronto, ON**

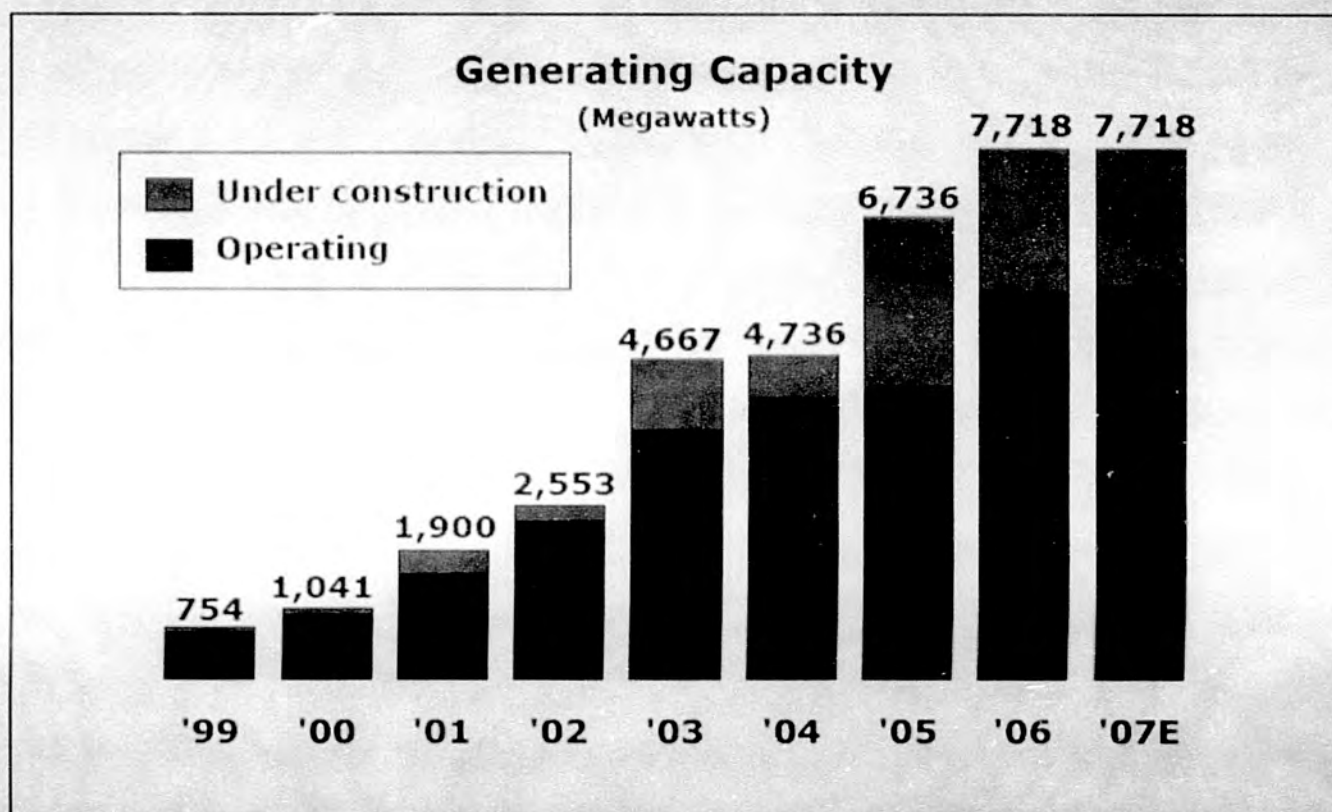
- Scheduled to begin supplying power in the summer of 2008 under a 20-year contract with the Ontario Power Authority
- 550-MW plant is owned by PEC, a limited partnership of TransCanada and Ontario Power Generation

➤ **TransCanada also has rights to electricity generated by the following**

- 560-MW, Sundance A power plant (100 per cent)
- 706-MW Sundance B plant (50 per cent)
- 756-MW Sheerness plant (100 per cent).

HISTORICAL GROWTH IN GENERATING CAPACITY

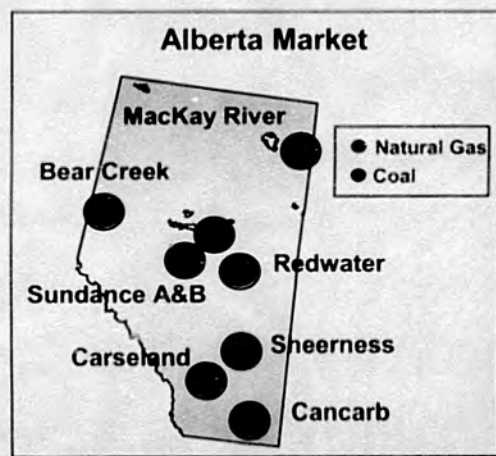
- TransCanada has built a significant power asset portfolio which has grown at a 34 percent compound annual growth rate (CAGR) over the past 8 years



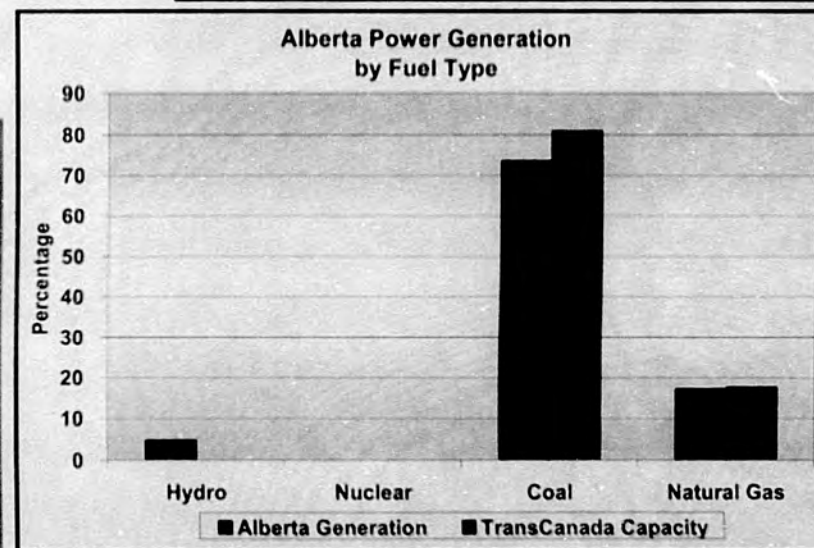
Source: TransCanada Investors Day Presentation November 21, 2007

ALBERTA MARKET

- Alberta is a deregulated market and pool prices tend to be very volatile
- TransCanada's resources match the market average
- Exposure to natural gas volatility is mitigated by natural gas capacity being cogeneration which produces much lower cost power due to higher efficiency
- Natural gas assets strategically complement pipeline and storage assets in the same market
- Coal capacity consists of long-term PPA which expires in 2017 and 2020



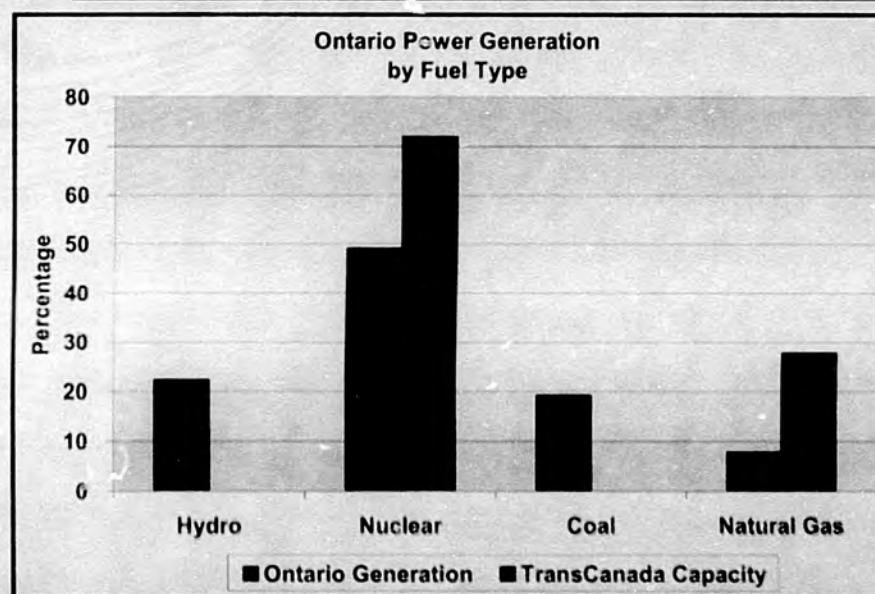
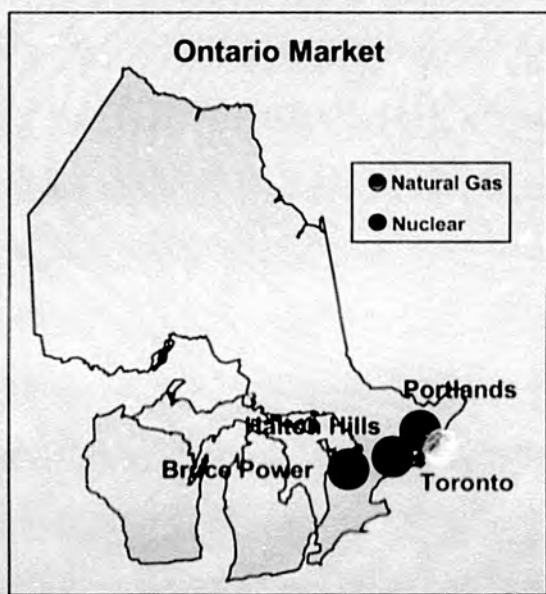
Alberta Key Statistics	
2007 Demand	9,580 MW
2007 Resources	10,698 MW
2007 Reserve Margin	11.7%
Forecast Demand Growth Rate	3.3%/Yr
Forecast 2011 Reserve Margin	11.3%



ONTARIO MARKET

- Ontario is a very low cost market due to the high percentage of nuclear and hydro capacity
- TransCanada assets are more weighted to low cost nuclear than the market average
- Natural gas capacity is under long-term contract which assures stable cash flows
- Natural gas assets strategically complement pipeline assets in the market

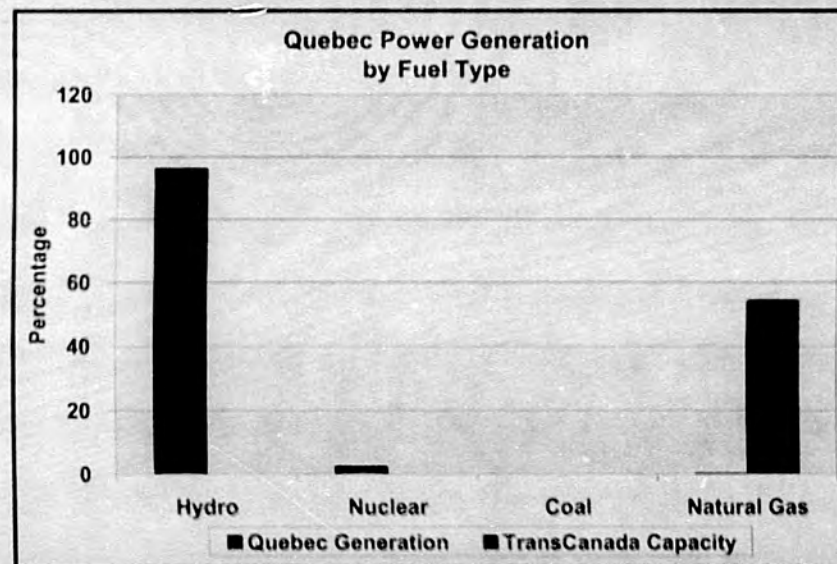
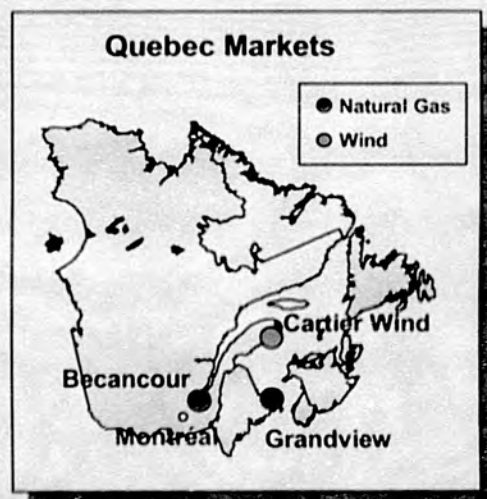
Ontario Key Statistics	
2007 Demand	25,423 MW
2007 Resources	28,727 MW
2007 Reserve Margin	13.0%
Forecast Demand Growth Rate	2.0%/Yr
Forecast 2011 Reserve Margin	17.0%



QUEBEC MARKET

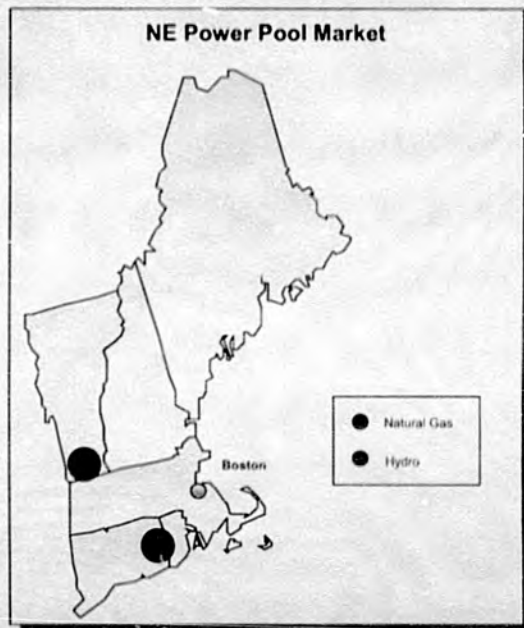
- Quebec is dominated by low cost hydro capacity
- All assets are under long-term contract which assures stable cash flows

Quebec Key Statistics	
2007 Demand	35,569 MW
2007 Resources	39,597 MW
2007 Reserve Margin	11.3%
Forecast Demand Growth Rate	0.6%/Yr
Forecast 2011 Reserve Margin	10.0%

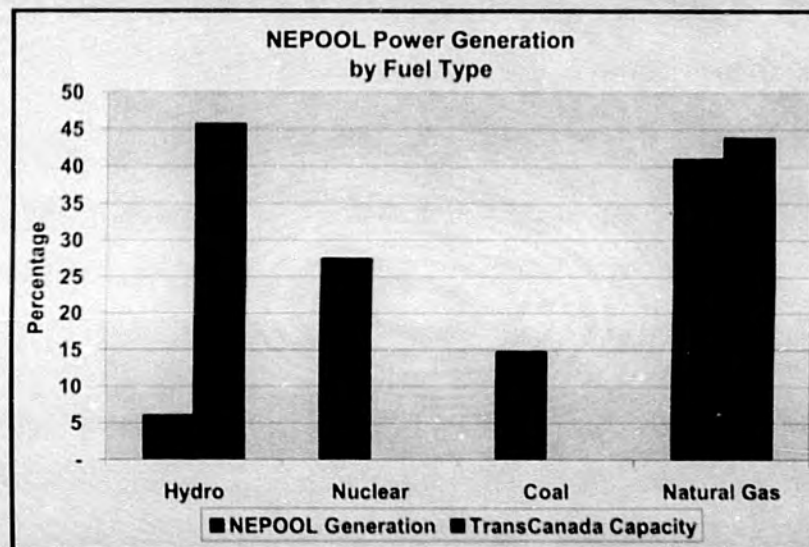


NEPOOL MARKET

- TransCanada has a high percentage of low cost hydro capacity
- Capacity payments are available in this market which provide some insulation from market volatility
- Natural gas capacity is subject to reliability capacity payments due to its location in a transmission constrained zone



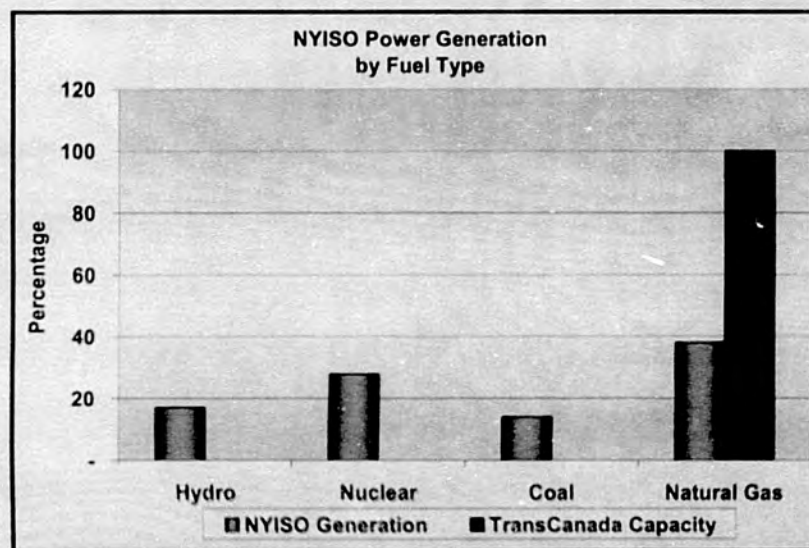
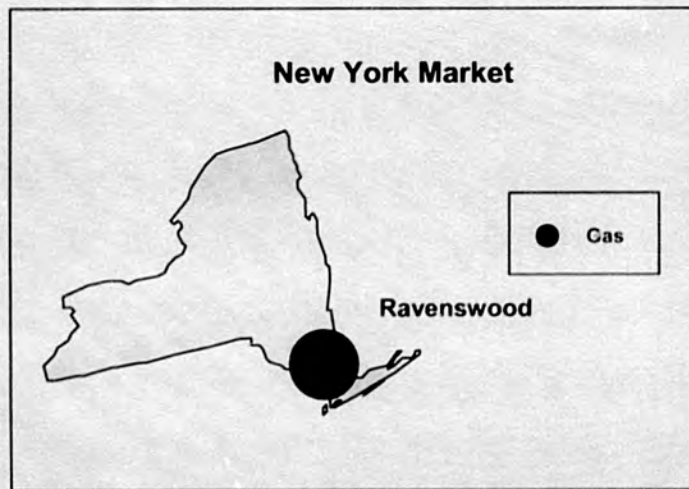
NEPOOL Key Statistics	
2007 Demand	27,041 MW
2007 Resources	31,053 MW
2007 Reserve Margin	14.8%
Forecast Demand Growth Rate	2.3%
Forecast 2011 Reserve Margin	9.2%



NYISO MARKET

- The recent acquisition of the 2,800 MW Ravenswood Station is the only TransCanada asset in the NYISO market
- The high exposure to natural gas is mitigated by a location within Zone J (New York City) which is a supply constrained zone dominated by natural gas fueled stations

NYISO Key Statistics	
2007 Demand	32,541 MW
2007 Resources	40,897 MW
2007 Reserve Margin	25.7%
Forecast Demand Growth Rate	1.1%/Yr
Forecast 2011 Reserve Margin	18.5%



Some things to look for and ask about in the AGIA License Determination

Dan E. Dickinson CPA

Legislative Budget and Audit Committee

Alaska State Legislature

June 2008 Special Session

My Assignment:

- Part I. Talk about “What to look out for - Questions to ask - Help legislators examine the issues.”
 - Commissioner Galvin: “This is just the beginning – need to understand as well as vote.”
- Part II. Ways to think about a vote

Part I. Major Reasons Given to Vote for TransCanada License

- (1) Enforceable commitments
- (2) Makes a “dazzling” amount of money for everyone – so producers will sign on and project will advance
- (3) “Guarantees” State’s must-haves for an “enhanced open-access pipeline”
- (4) Best way of getting LNG export
- (5) Best way of meeting in-state gas needs

Another Reason to Support a TransCanada License

- Probably won't harm the prospects for a line and may strengthen them

Item #1. What are the Enforceable Commitments in the License?

- Licensee agrees to 20 “must-haves” listed in AS 43.80.140 (AGIA)
- 7 Procedurals related to obtaining license
- 3 Pre-sanction commitments (ex-tariff)
- 5 Tariff commitments *come into play when pipe is in construction & operation*
- 5 Local commitments

7 License Procedurals

1. File an application on time
2. Provide thorough description
8. Describe GTP (including some rate commitments)
9. Propose reimbursement plan
16. Waive right to appeal license decision
19. Detailed description of applicant
20. Demonstrate readiness to implement project

3 Pre-Sanction Milestones

3. (FERC) & 4. (RCA) Milestones

- Open Season within 36 months
- Use FERC pre-filing procedure
- Apply for CPCN by date certain

*cert of public convenience
& necessity*

5. Assess market every two years (also in tariffs)

Is there an enforceable commitment for a pipeline?

Is there an enforceable commitment for a licensee to build a pipeline? Is there an enforceable commitment for a licensee to sanction a pipeline?

“We are not obligated to build a pipeline. That is not what AGIA requires.” – TC Vice-President, Tony Palmer, February 6, 2008, Presentation to House Open Caucus.

What is the “Enforceable Commitment” for an Open Season?

- “Must-have” is
- “...conclude by a date certain, that is not later than 36 months after the date the license is issued, a binding open season...” (AS 43.90.130 (3))
- TransCanada certifies they will “comply with AGIA”
- If license granted this summer – open season by Summer 2011?

Is there an “Enforceable Commitment” for an earlier Open Season?

- TransCanada commits...***subject to the License being issued by April 2008***, to conclude an initial binding Open Season within 18 months after issuance of the AGIA license. (TC Application page 10)
- TransCanada commits ... to conclude a binding Open Season by September 30, 2009 (TC Application page 2.2-85)
- TransCanada would conduct the Open Season...within 18 months following the date the License is issued (TC Application page 2.2-53)

Reminder: What does an Open Season accomplish?

- A Open Season is where shippers make Firm Transportation commitments – if there is a line built they will ship or pay.
- It is these commitments-to-pay that underwrite the financing of the line.
- Typically it is these commitments that demonstrate the need for the pipeline to the FERC.
- Question: Will a pipeline be built without FT?

What is the “Enforceable Commitment” for a Certificate of Public Convenience and Necessity (CPCN)?

- “Must-have” is
- “...apply for a FERC CPCN ... by a date certain” (AS 43.90.130 (3))
- TransCanada commits...subject to the License being issued by April 2008, to apply for FERC CPCN by December 2011. (TC Application page 10)
- TransCanada commits ... to apply for a FERC CPCN by December 30, 2011 (TC Application page 2.2-85)

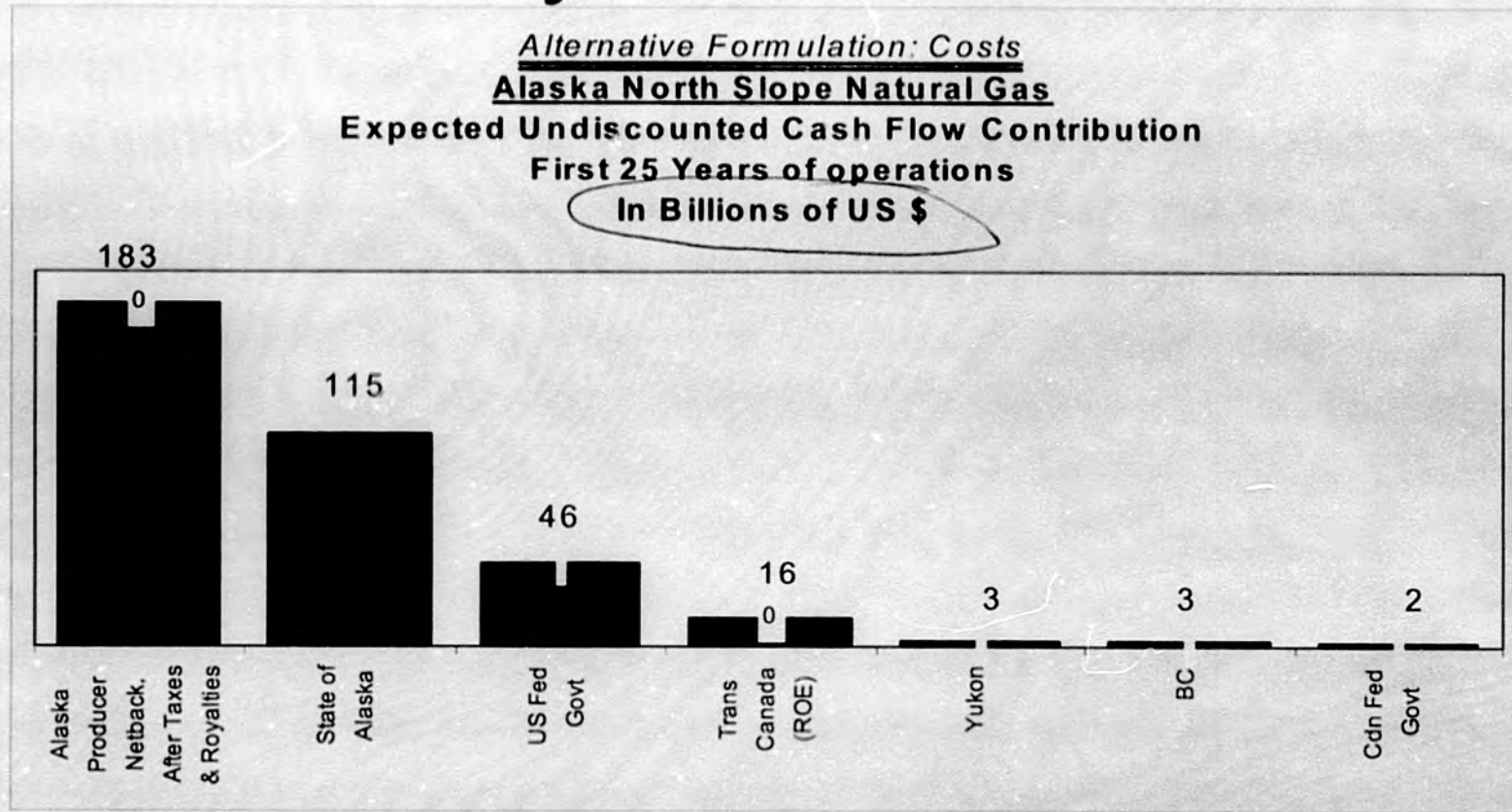
What does getting a CPCN accomplish without FT?

- If the FERC sees a project with FT commitments on the horizon will they favor a project without FT commitments?
- When do pipeline companies start placing orders? When they have FT or the Certificate?

Item #2 What kind of money does everyone make?

- (will return to the enforceable commitments for the other “must-haves” later – as they all assume a working project.)
- “Everyone” is Three Parties:
- Shippers: Producers (or their customers) that own the gas and are taking the commodity price risk - they pay production & income taxes and royalties directly to State.
- State Collects Taxes and Royalties. (US federal and Canadian authorities also collect some taxes.)
- TC is Carrier, can make a regulated rate of return shipping contracted gas. (Income and property taxes passed on in tariff to shippers.)
 - US Federal Taxes, Canadian Federal Taxes, Canadian Provincial Taxes

Who makes what money in TC January 2008 Version ?



Source: TC Application, January 15, 2008, Corrections Attch D page 2.10-6

Dan E. Dickinson, CPA

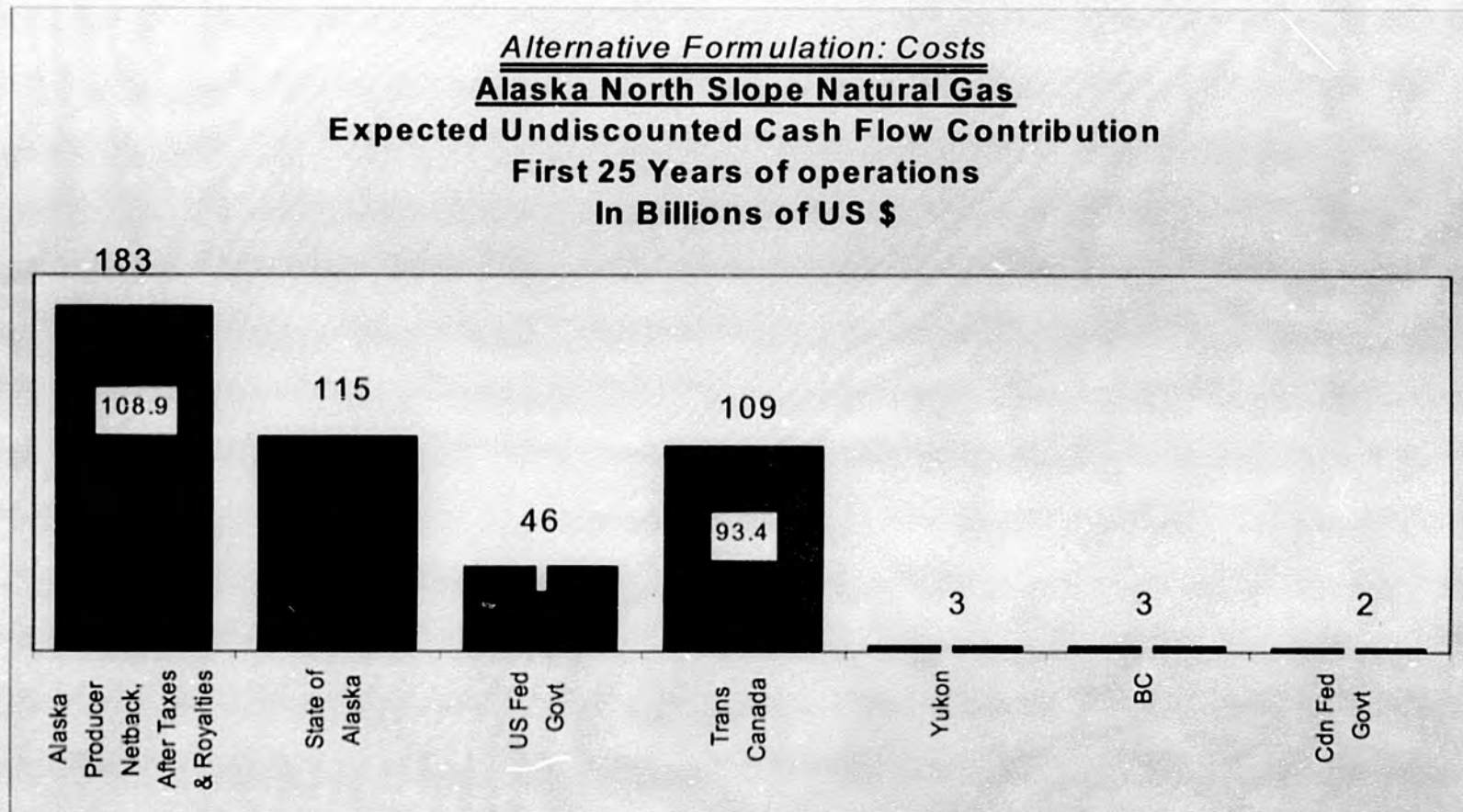
Legislative Budget and Audit
June 2008

*must question
"how were costs treated?"*

15

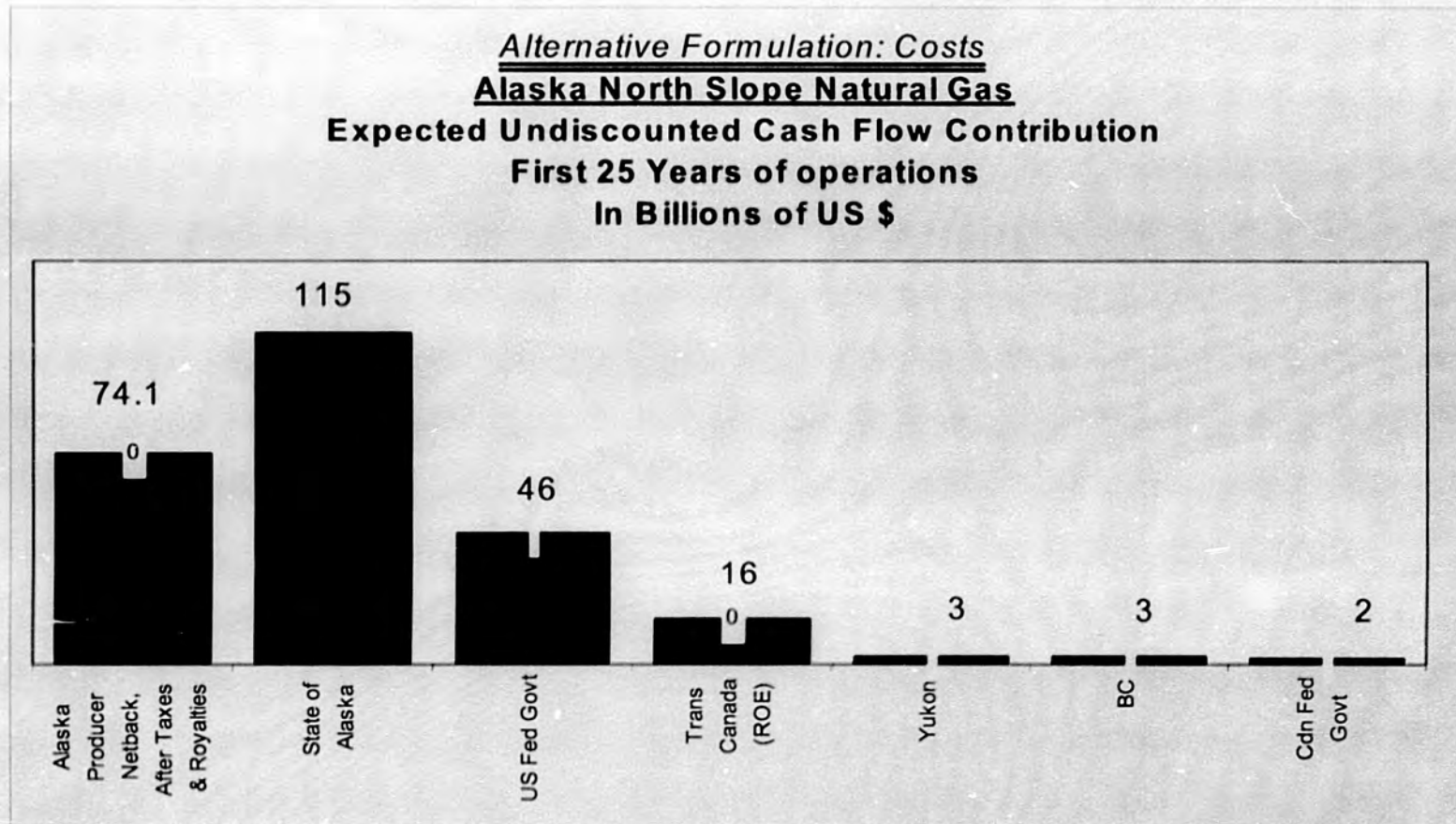
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Does parallel treatment of costs yield a clearer picture of who makes money?



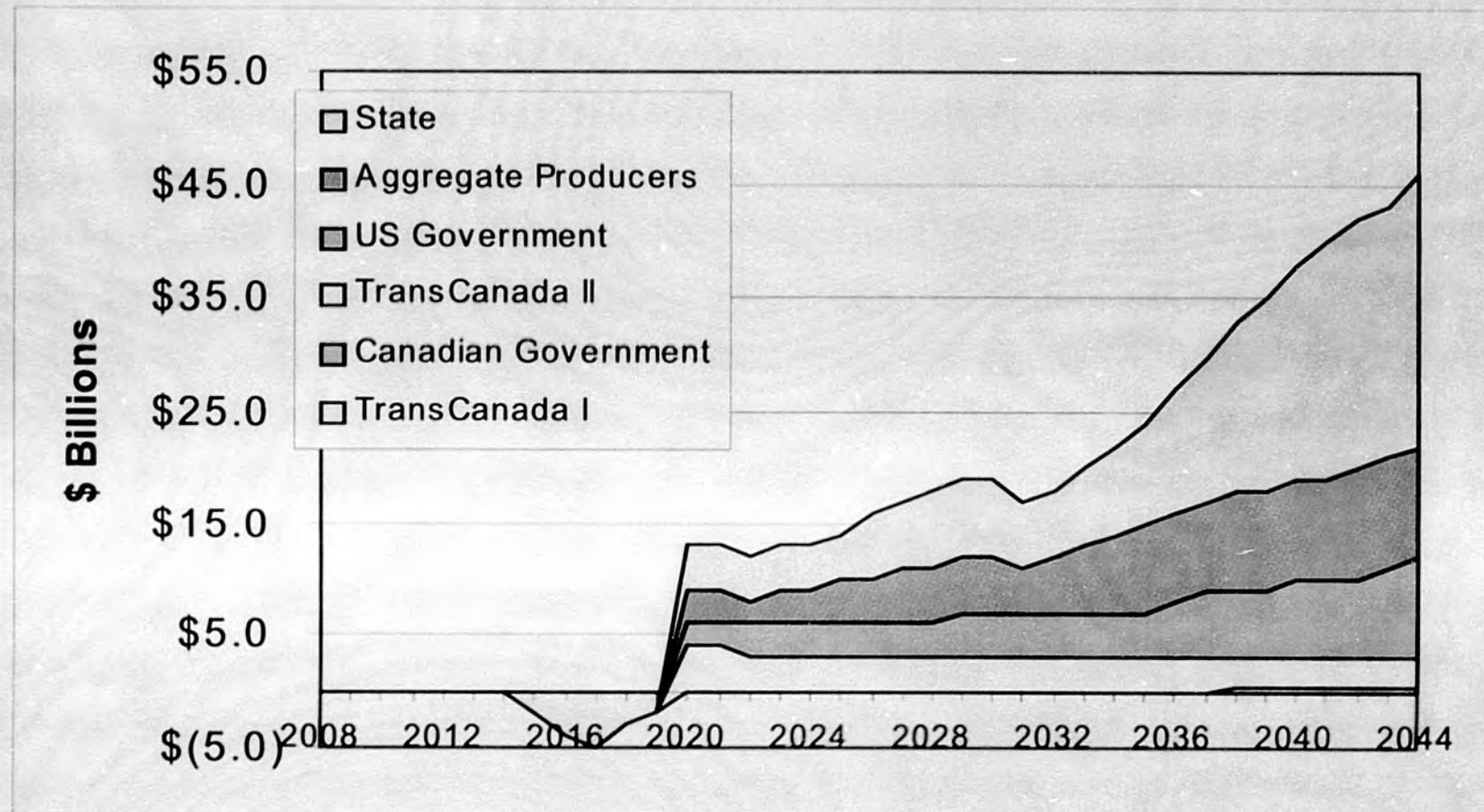
Source: TC Application, January 15, 2008, Corrections Attch D page 2.10-6

Does parallel treatment of costs yield a clearer picture of who makes money?



Source: TC Application, January 15, 2008, Corrections Attch D page 2.10-6

Who makes money in Black & Veatch May 2008 Version?



Reproduction of Figure 5-2 Bcf/d Proposal Base Case Expected Cash Flows
(AGIA NPV Analysis Report, Black & Veatch, May 2008, page 122)

Who makes money in Black & Veatch May 2008 Version?

Expected Cash Flows extrapolated from figure 5-2

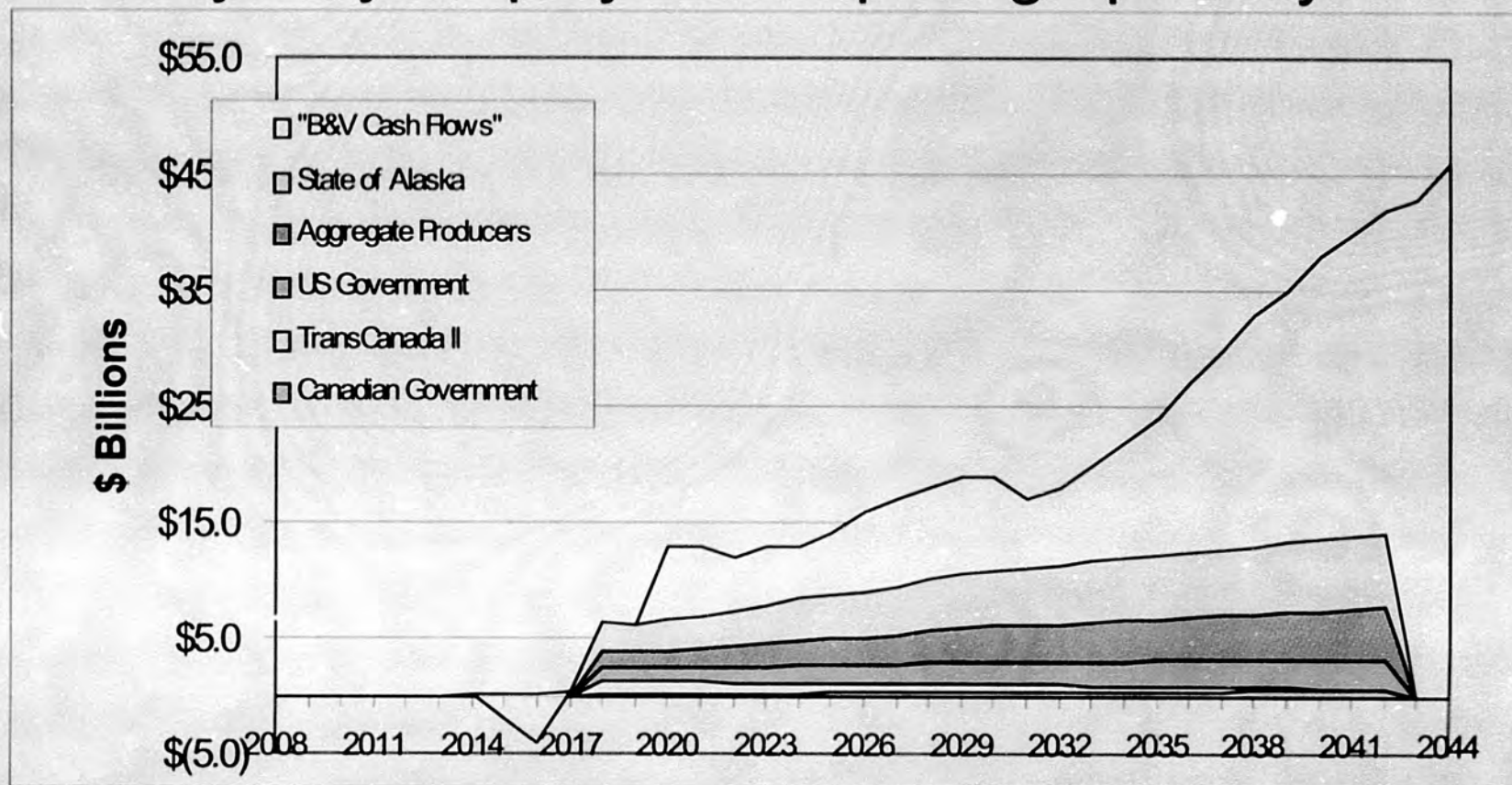
	Total Dollars		Discounted Dollars
	Estimate of Black & Veatch Analysis	Discount Rate	Black & Veatch Analysis
In Billions of Dollars			
Canadian Govts	\$ 3.5	5.0%	\$ 0.7
US Federal Govt.	114.0	5.0%	30.5
State of Alaska	257.0	5.0%	66.1
Trans Canada	57.5	8.8%	4.5
Producers	154.0	10.0%	13.5
Producers		15.0%	5.2
Total Dollars	<u>\$ 586.0</u>		

(AGIA NPV Analysis Report, Black & Veatch, May 2008, pages 123, 193 173, 160, 175 for NPVs)

How do the Black and Veatch May 2008 Analysis and TransCanada Jan 2008 Analysis of 4.5 bcf/d, 25 year project compare?

	Total Dollars (undiscounted)			Percent Change between Analyses	Discounted Dollars			Percent Change between Analyses
	Trans Canada Application	Estimate of Black & Veatch Analysis			Discount Rate	Trans Canada Application	Black & Veatch Analysis	
In Billions of Dollars								
Canadian Govts	\$ 8.2	\$ 3.5	-57%	5.0%	\$ 2.4	\$ 0.7	-72%	
US Federal Govt.	46.4	114.0	146%	5.0%	14.7	30.5	107%	
State of Alaska	114.6	257.0	124%	5.0%	36.1	66.1	83%	
Trans Canada	16.4	57.5	251%	8.8%	3.6	4.5	25%	
Producers	74.1	154.0	108%	10.0%	8.1	13.5	67%	
Producers				15.0%	3.4	5.2	53%	
Total Dollars	\$ 259.7	\$ 586.0						

How do the Black and Veatch May 2008 Analysis and TransCanada Jan 2008 Analysis of 4.5 bcf/d day 25 year project compare graphically?



TransCanada "Economic Viability Analysis", TransCanada, January 15, 2008

Correction to AGIA Application, Appendix R

Dan E. Dickinson, CPA

Legislative Budget and Audit

June 2008

What prices were used in Black & Veatch work ?

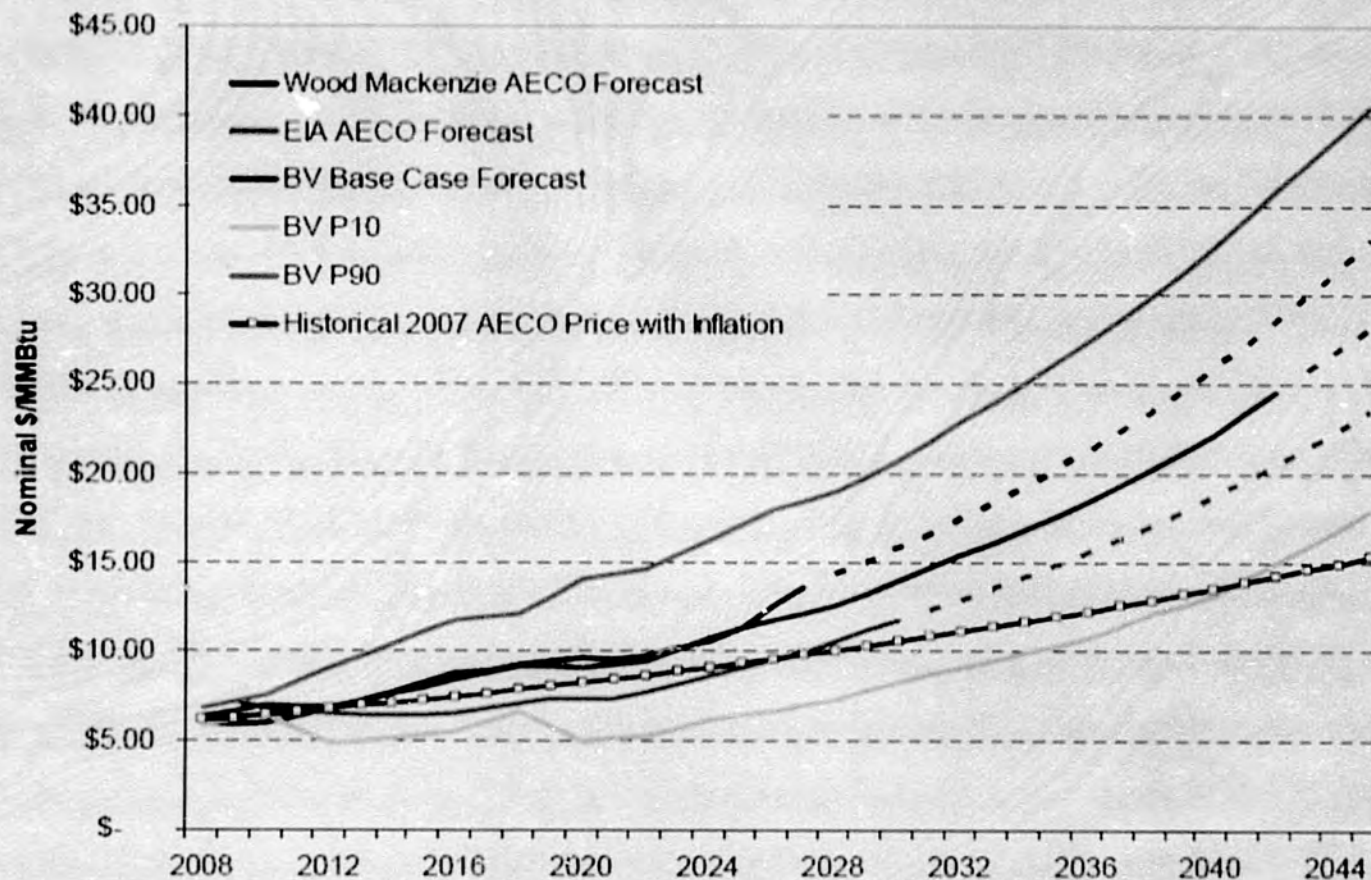
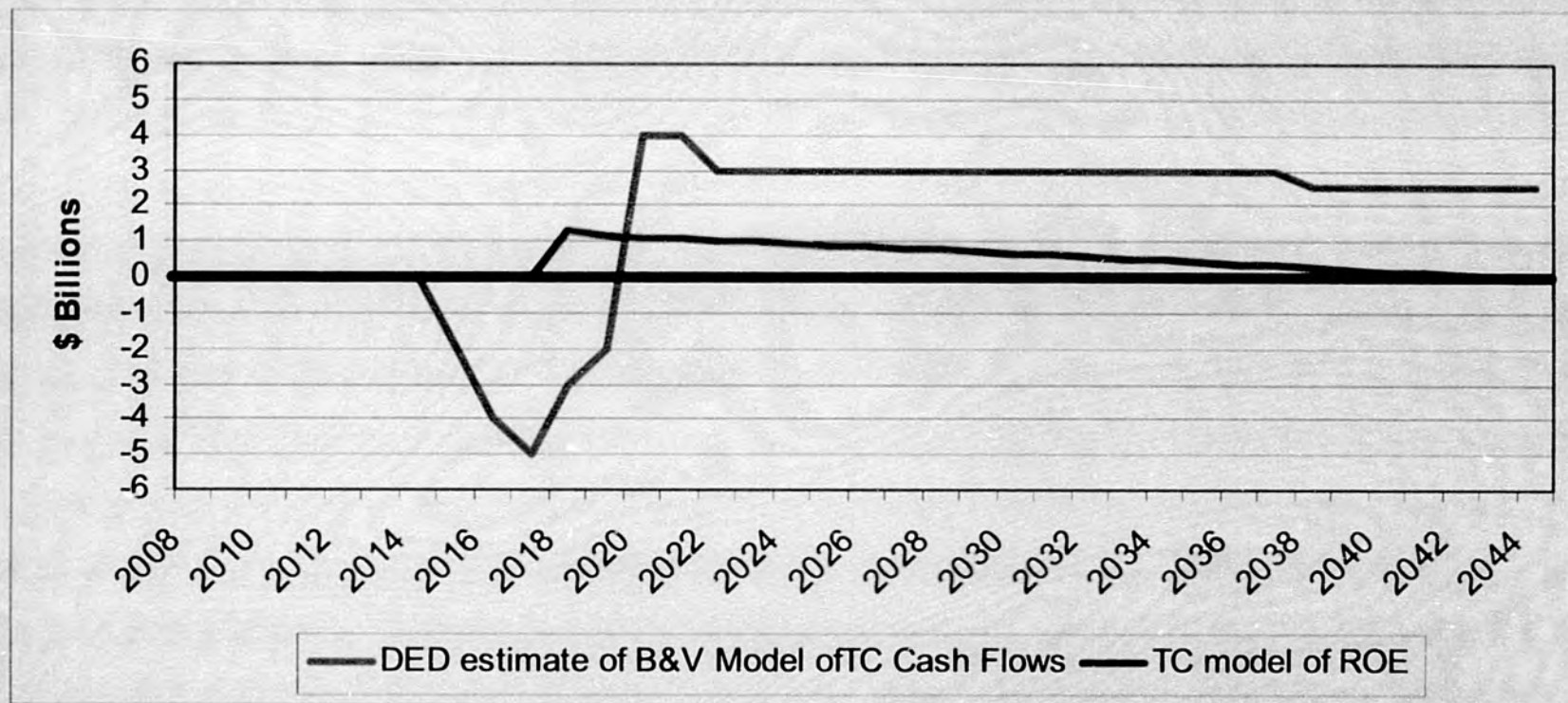


Figure 4-35 Aeco Price Forecasts (Nominal \$) (AGIA NPV Analysis Report, Black & Veatch, May 2008, page 105)

How do the forecast prices Black and Veatch used compare with those TC used?

	2042 AECO nominal Price per mmbtu
Wood MacKenzie AECO Forecast	\$ 27.00
EIA AECO Forecast	21.00
BV Base Case Forecast	25.00
BV p 10	15.00
BV p 90	37.00
Historical AECO w/inflation	14.50
 TC 2005 EIA inflated	 \$ 13.30

What is the difference between TC and B&V estimate of TC Dollars? (B&V includes outlay and return of investment?)



ask -

Is State harmed or helped by delay in project?

(Data from longer delays not published)

Table 5-3: NPV₅ for the State⁷¹

	Base Case (NPV ₅)	1 Year Delay (NPV ₅)	Difference (NPV ₅)
Royalties	\$21,149	\$21,273	\$124
ACES Tax	\$35,664	\$37,482	\$1,818
Property Tax	\$2,709	\$2,656	(\$53)
State Corporate Income Tax	\$4,579	\$4,446	(\$132)
State of Alaska Totals	\$64,099	\$65,857	\$1,758

AGIA NPV Analysis Report, Black & Veatch, May 2008, page 157

Are producers harmed or helped by delay in project?

(Data from longer delays not published)

Table 5-2: NPV₁₅ for all Producers

	Base Case (NPV ₁₅)	1 Year Delay (NPV ₁₅)	Difference (NPV ₁₅)
Producer Total Revenue	\$16,915	\$15,222	\$1,692
Less Cash Expenses:			
Capex	\$1,415	\$1,146	\$270
O&M	\$506	\$433	\$73
Royalties	\$2,256	\$2,027	\$229
ACES Tax	\$3,392	\$3,234	\$158
Property Tax	\$358	\$313	\$45
State Corporate Income Tax	\$565	\$488	\$77
Federal income Tax	\$3,238	\$2,884	\$353
Producer Net Cash Flow	\$5,185	\$4,697	\$488

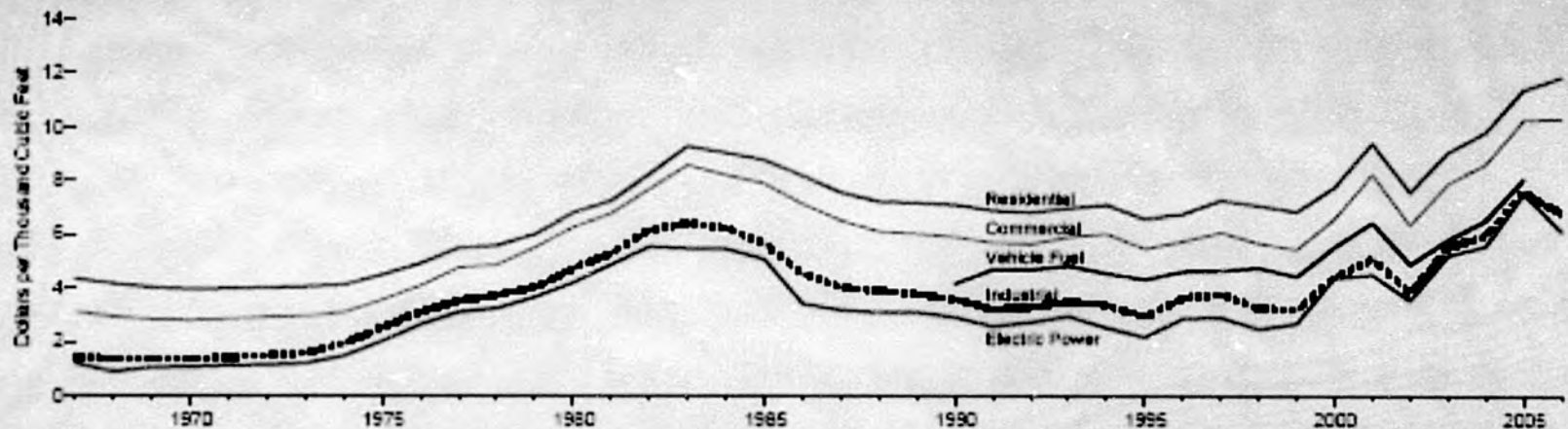
AGIA NPV Analysis Report, Black & Veatch, May 2008, page 157

Is State harmed or helped by delay in project?

- State investment buys progress
 - Delay Costs the State – deferred revenue
 - Intrinsic value ~ deferred revenue from gas commercialization
 - Extrinsic value ~ weakened bargaining position
- Left over from a lower price assumption?
- (Is AGIA Worth \$500 Million? Alaska Gasline Determination May 30, 2008)

How robust is the assumption of rising real prices over life of project?

Real^a Prices, 1967-2006



^a See "Nominal Dollars" in Glossary.

^b Based on 97.8 percent of volume delivered.

^c Based on 78.5 percent of volume delivered.

^d Based on 21.3 percent of volume delivered.

^e Based on 93.8 percent of volume delivered.

^f In chained (2000) dollars, calculated by using gross domestic product implicit price deflators. See Table D1.

Source: Table E.1.

Why are the producers concerned about fiscal certainty?

- What are the producers concerned about?
Low prices when the state will have revenue issues of its own?
- Or high prices with lots and lots of Upstream rents?
- Both? Neither?

Words Matter

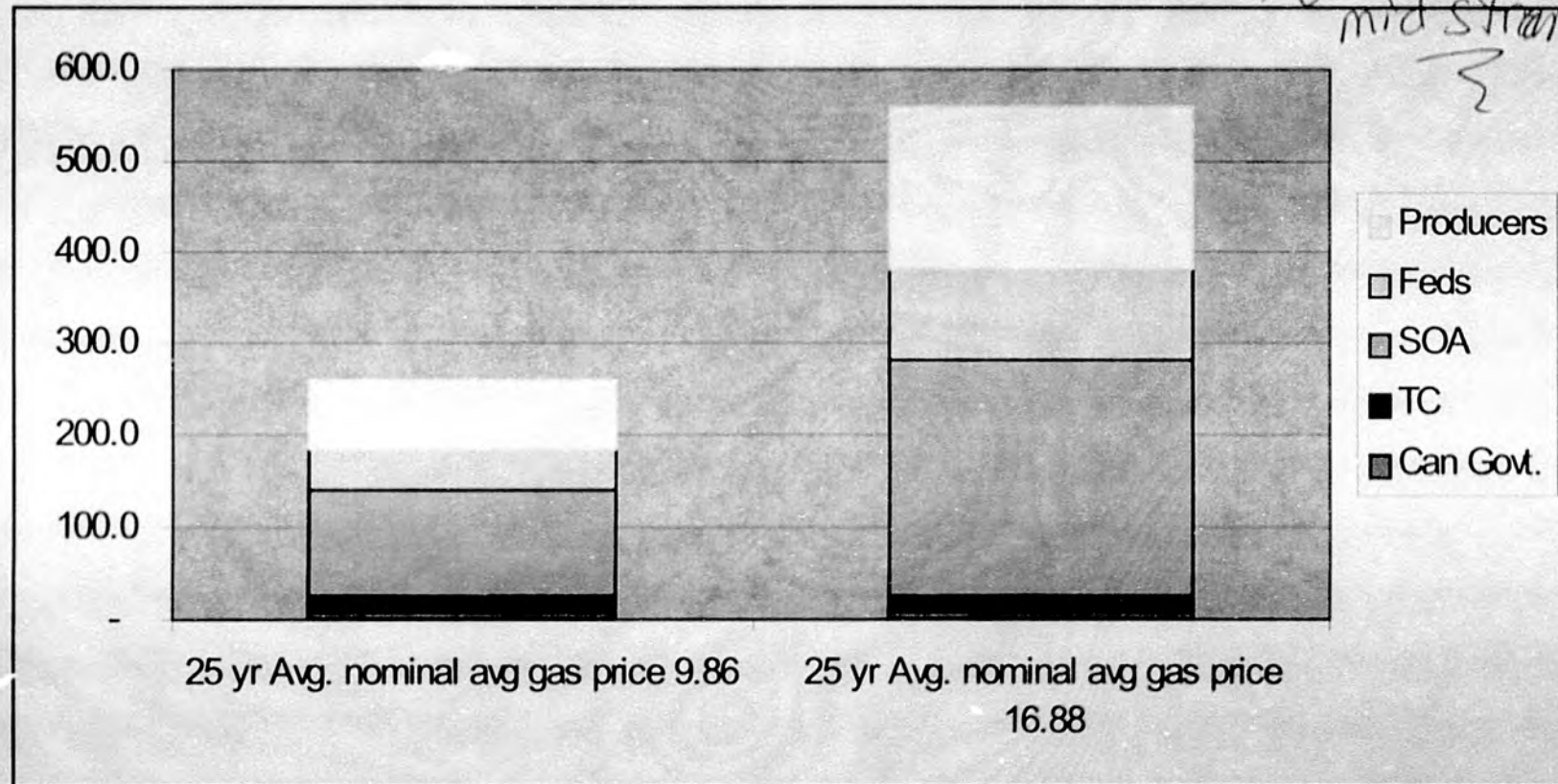
- Avoid:
- a “subsidy”
- “\$10 billion dollars in concessions”
- OK:
- “Quid pro quo, Something for Something”
- “State investment buys progress”
- “State investment buys provisions”
- (Is AGIA Worth \$500 Million? Alaska Gasline Determination May 30, 2008)

If Everyone Makes Money – Is there Room To Move?

- State used quid pro quo and found someone to build pipeline.
- Now it needs to find someone to sign FT commitments to finance pipeline. Is current quid pro quo sufficient?
- At high prices what is the relative weight of midstream and upstream dollars?

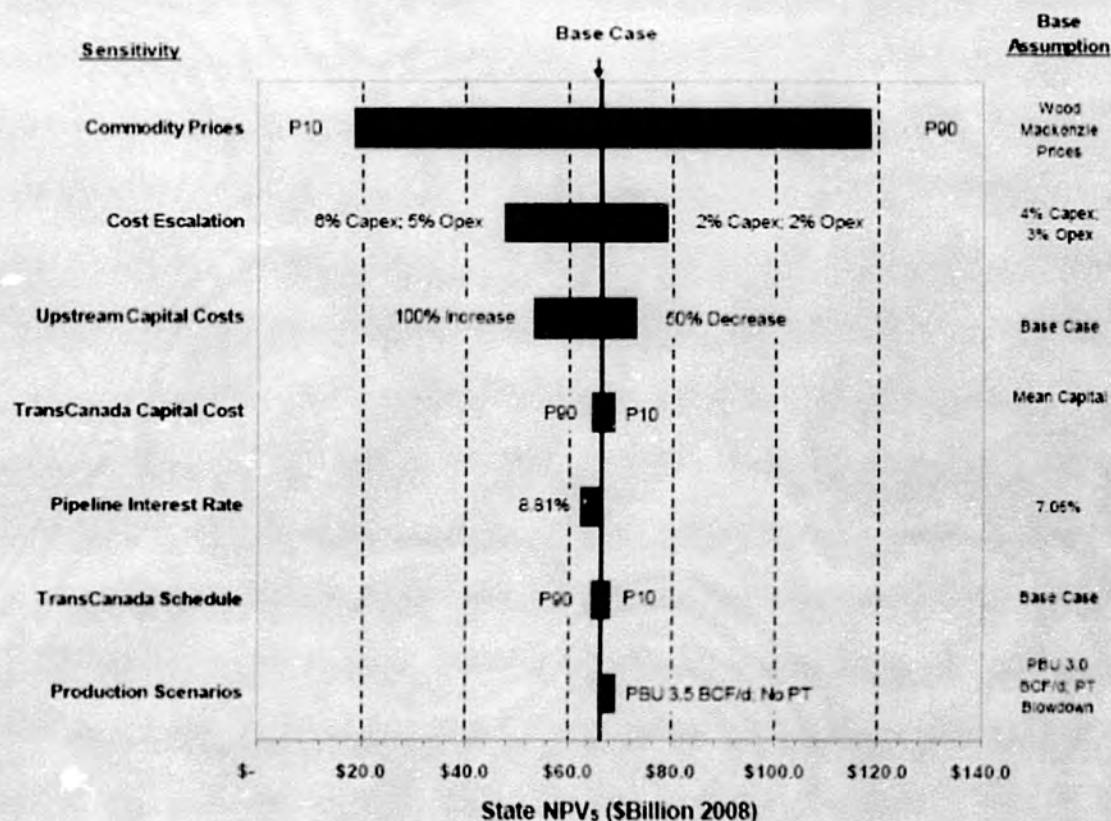
How important is the allocation of upstream value driven by price to the state? TC answer (does not incorporate progressivity):

Because they're (TC) focused on mid stream



How important is the allocation of upstream value driven by price to the state? B&V answer:

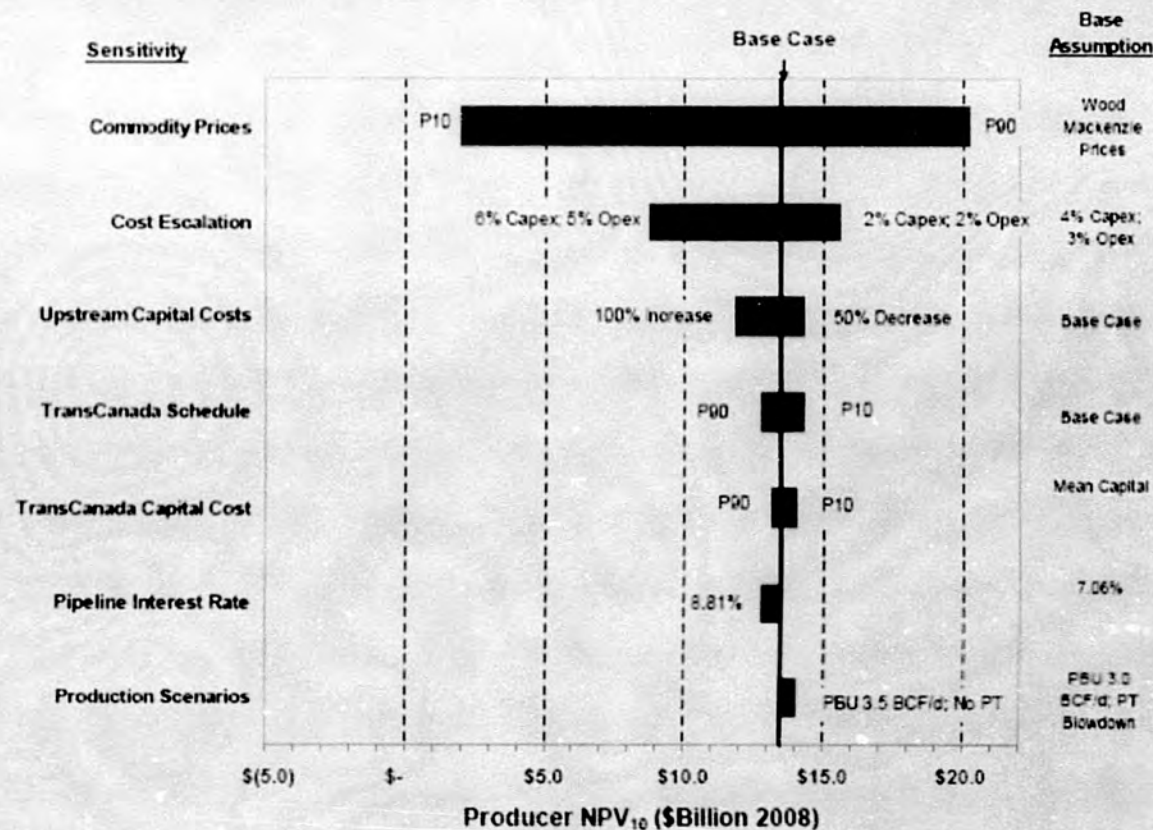
Figure 5-4: State NPV_s Sensitivities for the 4.5 Bcf/d Proposal Base Case (Tornado Diagram)



Commodity price is greatest driver

How important is the allocation of upstream value driven by price to the ~~state~~ ^{PRODUCERS}? B&V answer:

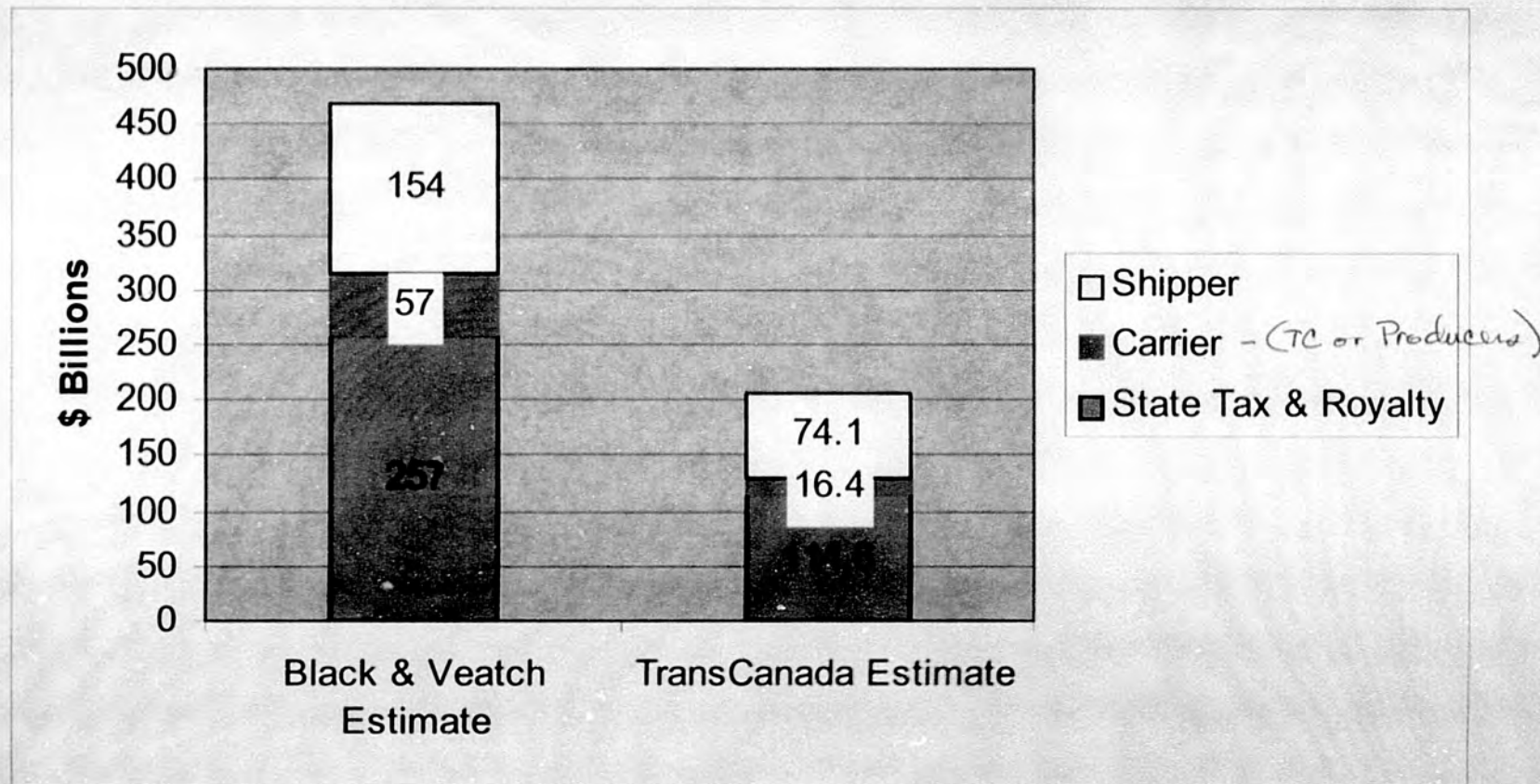
Figure 5-5: Producer NPV₁₀ Sensitivities for the 4.5 Bcf/d Proposal Base Case (Tornado Diagram)



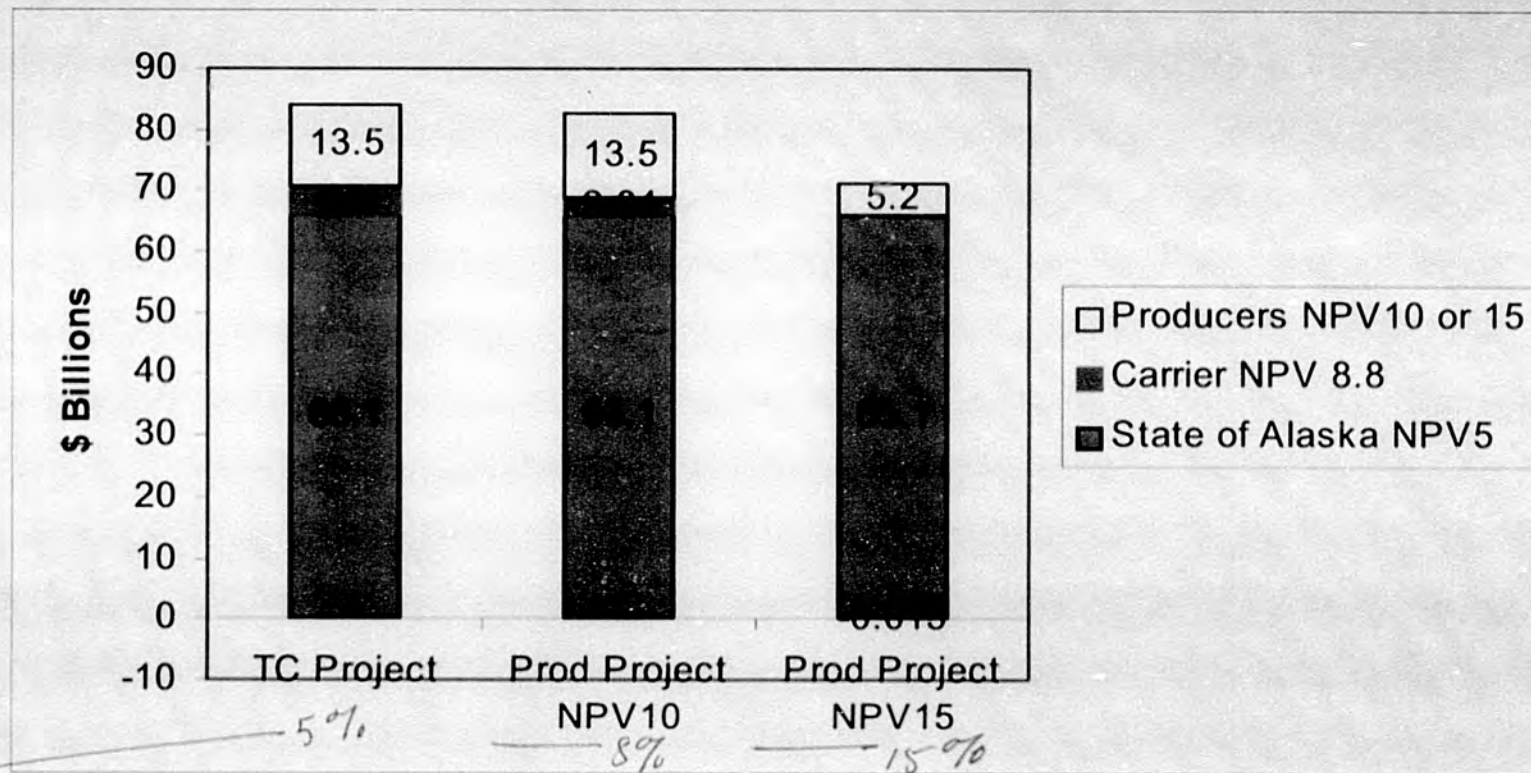
Everyone Makes Money Questions: Would the producers make more as producer/carriers?

- Are the producers making so much money (114 billion or 256 billion) that they would sign on to this project no matter what?
- Assume producers agreed to all the AGIA “Enhanced Equal Access” provisions and built and owned pipeline instead of TC
What happens?

Simplistic estimate of effect of moving shipper cash flows from TC to producers (ignores income tax)



Everyone makes money questions



Note: NPV8.8 TC cash flows of \$4.5 billion shrink to \$2.8 when restated as NPV10 Producer Cash flows, and become negative \$ 15 million when restated as NPV15 Producer Cash flows. (Income taxes ignored)

Everyone Makes Money

- Take Away Questions: If State, Shippers and TC all make money from the TC project, do combined shipper/producers make more from a producer project?
- How much of state money flows from state incremental effects of must-haves and how much from “unenhanced” project?
- Which leads to Item #3 - “enhanced open access line”

Item # 3. How does the state achieve an “enhanced open access line?”

- Pipeline will be open access pipeline under federal law.
- Goal of “must-haves” is to turn it into an “enhanced open access pipeline”
- Does obtaining commitments from Trans Canada about the positions they will take in front of regulators or the negotiated outcomes they will accept guarantee an “enhanced open access pipeline?”

What are the Enforceable Commitments for an “enhanced open access line”?

- FERC or NEB not bound by AGIA – and they will know that TC has contracted to take the position they are advocating.
- FERC and NEB have jurisdiction over negotiated rates.

How will Third Parties be affected by TransCanada's commitments?

- Imagine yourself as an explorer facing “an unknown and uncertain regulatory process - that doesn't exist anywhere else, don't know how long it will take, don't know whether it will succeed” — DOR Commissioner Galvin May 28, 2008, Alaska Gasline Determination Public Forum)
- Is navigating the new rules at FERC any clearer with TransCanada commitments?

What has FERC's usual practice been in these cases?

- Have any of the unique requirements added by the US Congress in ANGPA have ever been part of FERC traditional practices?

(new world
as of 1984(?))

5 Tariff Commitments

- 6. Expand in reasonable engineering increments and on reasonable commercial terms.
- 7. Rolled in Rates (up to 15% of original tariff)
- 10. Minimum 70% debt (TC license @75%)
- 11. Cost overrun mechanism
- 18. \$500 million state spending not in rate base *(which lowers tariff)*

How will Third Parties be affected by TransCanada's commitments on rolled in rates?

- True "Open Access" will be when – "Explorers have confidence that pipeline will be expanded...new gas will pay a fair transportation rate (rolled in rates) (In State Energy Alaska Energy Authority May 30, 2008, Alaska Gasline Determination Public Forum)
- "Explorers won't explore without confidence..." (DNR Dept. Commissioner Marty Rutherford May 30, 2008, Alaska Gasline Determination Public Forum)
- Does TransCanada's commitment make the difference in confidence above and beyond federal presumptions? Does TransCanada's commitment increase make the difference to overcome likely objections from existing shippers?
- Are rolled in rates money out of TransCanada's pocket or just rearranging dollars between shippers?

Are there better ways of achieving “Rolled In Rates” or other “Must-Haves”?

- FERC already has presumption favoring rolled in rates for an Alaska Project (Any pipeline – not just this project).
- Who is going to object to rolled in rates? In general – the existing shippers long term contracts for volumes.
- Is having that conversation with those shippers more likely to achieve the “must have”?

What happens in tariff negotiations?

- Limit on Equity % – TransCanada pays, shippers gain.

What happens in tariff negotiations?

- Cost over run risk mechanisms – TransCanada takes on some risk. Wide variety of mechanisms with different winners and losers under different circumstances?

What happens in Tariff negotiations?

- According to the Administration \$500 million “credit to rate base pays for itself in increased future revenues.”
- Were the rest of the “must-haves” free?
- If the state paid for entire line and had only operating cost as tariff would “credit to rate base pay for itself in increased future revenues? Where is the breakeven point?

Does state already have a tool to protect upstream tax revenues from on tariff issues?

- Under new AS 43.55.150 if (a) "the shipper is... affiliated with the transportation carrier or with a person that owns an interest in the transportation facility..."
- (b) gross value at the point of production is calculated using the actual costs of transportation or the reasonable costs of transportation ... whichever is lower. The department shall determine the reasonable costs of transportation using fair market value...or other reasonable methods."

if producer
own some
portion ~~then~~
of pipe then
this is
triggered
— doesn't apply
to "3rd party"
owner (TC)
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Items 4 & 5 – Does this license create unique opportunities for Local Gas and LNG export ?

- Wrap together the local “must have” enforceable commitments and the “best path to LNG export” and “best path to local energy use.”
- How will this license lead to in-state gas in ways that other project won't?
- How will this license lead to an LNG project in ways that other project won't?