

AK LEGISLATURE SPECIAL COMMITTEE FILES SCOMM 155 3309₈₃



OIL & GAS NEEDS IN THE U.S.

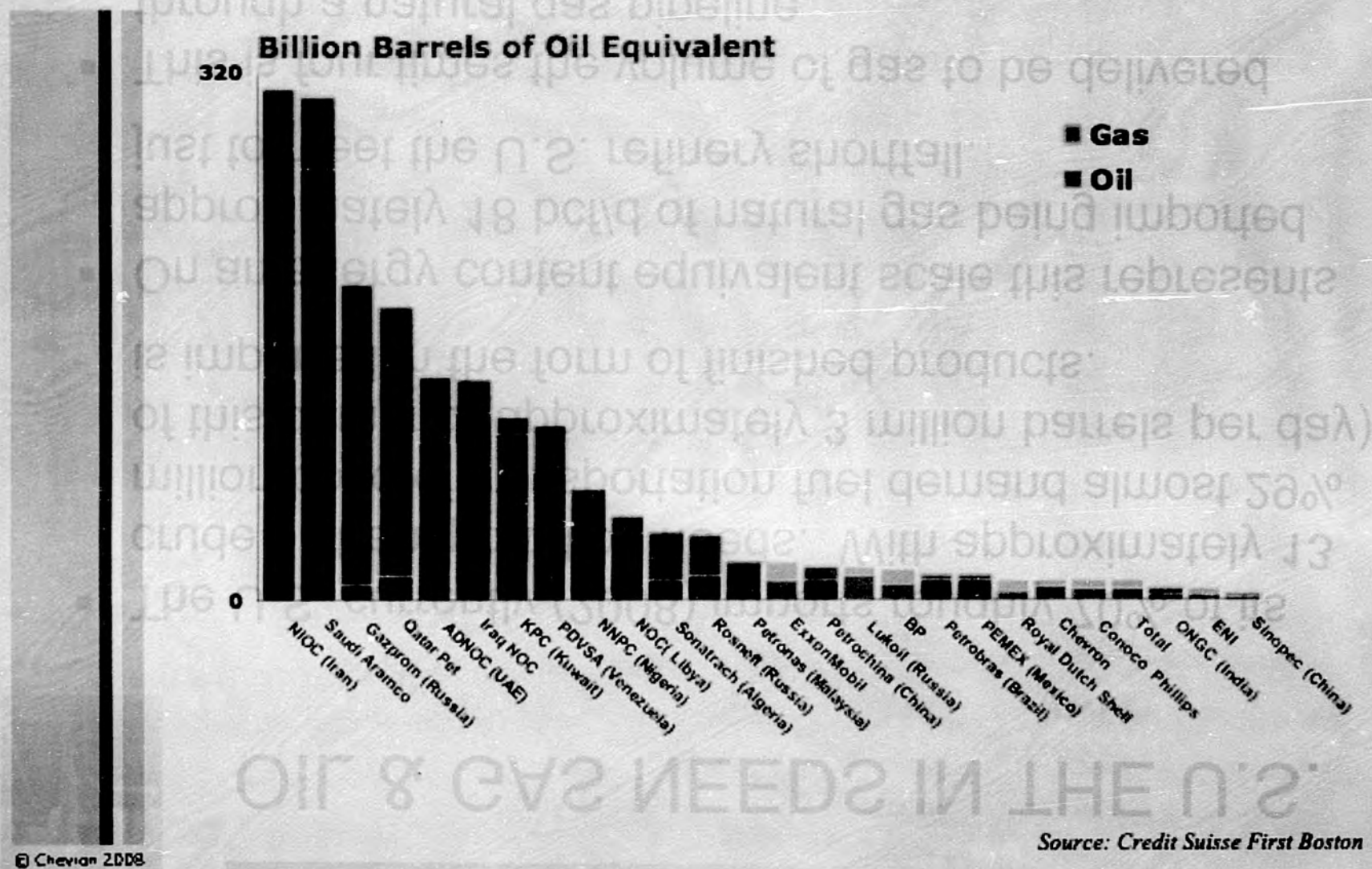
- While U.S. refiners have been adding capacity to existing refineries with process efficiency upgrades, no new refinery has been built in the U.S. since the 1970's.
- This could possibly be one of the reasons why refinery margins have crept up from the \$5 to \$6/bbl range in 1970 - 2000 era to over \$30/bbl in 2007.
- A North Slope GTL plant represents new refining capacity for the U.S. and a potential threat to these higher margins, especially on the U.S. West Coast.
- This is one potential reason GTL's are not be in the forefront of North Slope majors' gas development plans.



OIL & GAS NEEDS IN THE U.S.

- The U.S. currently (2008) imports roughly 70% of its crude oil/transportation needs. With approximately 13 million bbl/d of transportation fuel demand almost 29% of this demand (approximately 3 million barrels per day) is imported in the form of finished products.
- On an energy content equivalent scale this represents approximately 18 bcf/d of natural gas being imported just to meet the U.S. refinery shortfall.
- This is four times the volume of gas to be delivered through a natural gas pipeline.
- ~78 bcf/d for total transportation needs – 20 times

Chart 9: National Oil Companies Control 94 Percent of World's Reserves



Source: Credit Suisse First Boston



OIL & GAS NEEDS IN THE U.S.

- During this same time period the U.S. was producing approximately 64 billion to 65 billion cubic feet per day (bcf/d) of natural gas and importing approximately 9 to 10 bcf/d of natural gas, primarily from Canada.
- Of this, approximately 1.6 to 1.8 bcf/d of the total U.S. natural gas is being imported as LNG.
- Thus 14.7% of U.S. natural gas consumption is imported, with LNG representing approximately 2.4% of total U.S. natural gas needs.



OIL & GAS NEEDS IN THE U.S.

- Historically natural gas HAS sold at a lower Btu equivalent price compared to crude oil.
- From 2002 to 2007, natural gas averaged 68% of the WTI price of crude oil (i.e. 32% below crude oil).
- In April 2008, the NYMEX closing price for May 2008 deliveries of natural gas was \$10.60/mcf or, a crude oil equivalent price of \$63.60, some 45% below the then crude price of \$115/bbl.
- We believe that there was a fundamental severing in the price of natural gas compared to crude oil once oil hit the \$60 to \$70/bbl range.



OIL & GAS NEEDS IN THE U.S.

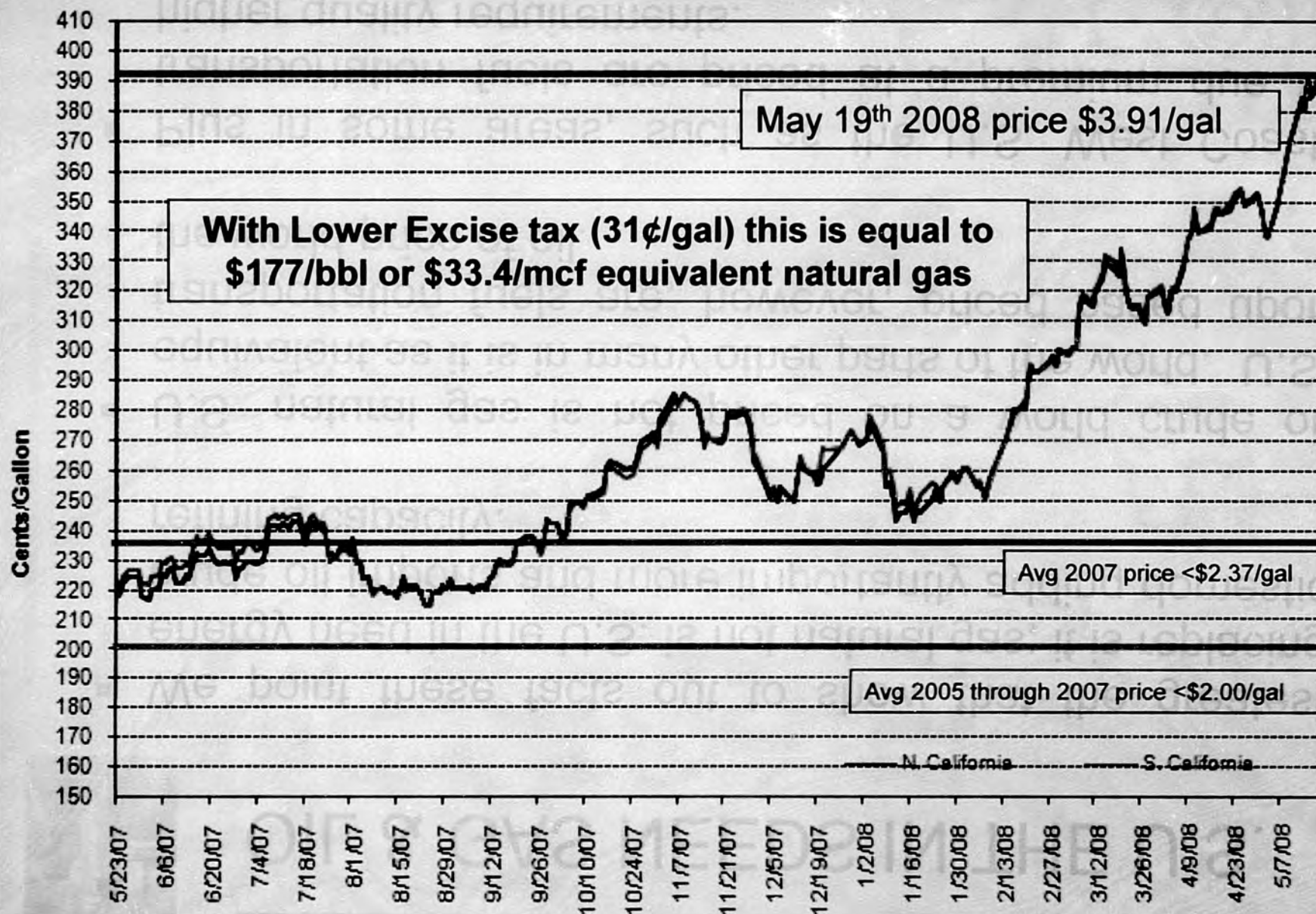
- All of the energy consumers who could have switched off crude-based products have done so but the gas industry is still able to meet demand.
- In fact, little LNG is currently being imported into the U.S. because markets elsewhere in the world, especially those linked to the price of crude oil, are paying much higher prices and few want U.S. dollars.
- If one compares a California ultra-low sulfur diesel price with an equivalent natural gas price one quickly sees a potentially greater return for Alaska in selling F-T products than selling natural gas.



OIL & GAS NEEDS IN THE U.S.

- April 2008 California CARB diesel wholesale price of \$3.30/gallon (\$138.60/bbl) plus the tax advantage of selling a natural gas based fuel in the transportation market of \$13.02/bbl, one has a market gas equivalent price of \$28.6/mcf.
- Compare this to the April NYMEX number and one can see that the gas price would have to increase by 270% to equal that of diesel.
- On May 19th , the wholesale price of California diesel hit \$3.91/gal or a mcf equivalent price of \$33.4/mcf.

CARB Diesel Fuel Average Rack Prices (As of 5/19/08)



Source: Oil Price Information Service



OIL & GAS NEEDS IN THE U.S.

- We point these facts out to show that the greatest energy need in the U.S. is not natural gas; it is replacing crude oil imports and more importantly adding domestic refining capacity.
- U.S. natural gas is not priced on a world crude oil equivalent as it is in many other parts of the world. U.S. transportation fuels are, however, priced based upon the world price of oil.
- Plus in some areas, such as the U.S. West Coast, transportation fuels are priced at a premium due to higher quality requirements.



GTL FACTS and FICTION

- Majors not pursuing F-T technology
- F-T Process not Efficient
 - Value vs Efficiency
- Costs of F-T too high
- TAPS - Batching/Pigging can't be done
- American needs natural gas (market)
- Value of Alaska Natural Gas
 - Do the people know Alaska gas isn't going to be cheap?





NETBACK FROM CALIFORNIA TO PRUDHOE BAY

THREE CASES TO CONSIDER:

- CASE A - Average California 2007 refinery wholesale rack price **\$2.37/gallon**
- CASE B – May 19th 2008, California refinery wholesale rack price **\$3.91/gallon**
- CASE C – Projected 2014 crude oil price of \$200/bbl and \$40/bbl refinery margin resulting in **\$5.71/gal**

Assume a \$2/bbl shipping cost Valdez to Market and a \$5/bbl TAPS Tariff
for a total \$7/bbl Prudhoe Bay to California

Assume 5.3 million btu/bbl of F-T and 1 million btu/incf of natural gas

Assume a debt service / equity recovery cost of \$31.75/bbl

Assume a GTL plant operating cost of \$18/bbl

CASE A

2007 AVG Wholesale Rack Diesel Price in California (OPIS) RED LINE

\$2.37/gal = \$99.5/bbl

F-T diesel same as CNG for road tax $\$99.5 / \text{bbl} + \$13 / \text{bbl} = \$112.5 / \text{bbl}$

Minus all costs $(\$112.5 / \text{bbl} - \$56.75 / \text{bbl} = \$55.8 / \text{bbl} @ \text{Prudhoe Bay})$

Mcf equivalent -- $\$55.8 \div 5.3 = \$10.5 / \text{mcf}$ (GTL Plant Outlet)

F-T Diesel treated same as CNG then transportation tax is reduced by 31¢/gal (\$13/bbl)

CASE B

May 15 Wholesale Rack Diesel Price in California (OPIS) BLUE LINE

\$3.91/gal = \$164.2/bbl

F-T diesel same as CNG for road tax $\$164.2 / \text{bbl} + \$13 / \text{bbl} = \$177.2 / \text{bbl}$

Minus all costs $(\$177 / \text{bbl} - \$56.75 / \text{bbl} = \$120.5 / \text{bbl} @ \text{Prudhoe Bay})$

Mcf equivalent -- $\$120.5 \div 5.3 = \$22.7 / \text{mcf}$ (GTL Plant Outlet)

F-T Diesel treated same as CNG then transportation tax is reduced by 31¢/gal (\$13/bbl)

CASE C (Tomorrow)

Assume \$200/bbl crude oil price and

\$40/bbl refining margin in 2014

2014 Wholesale Rack Diesel Price

in California (OPIS) \$5.71/gal

$\$5.71/\text{gal} = \$240/\text{bbl}$

F-T diesel same as CNG for road tax $\$240/\text{bbl} + \$13/\text{bbl} = \$253/\text{bbl}$

Minus all costs $(\$253/\text{bbl} - \$56.75/\text{bbl}) = \$196.1/\text{bbl}$ @ Prudhoe Bay

Mcf equivalent - $\$196.1 \div 5.3 = \$37/\text{mcf}$ at GTL Plant Outlet

F-T Diesel treated same as CNG then transportation tax is reduced by 31¢/gal (\$13/bbl)

THESE NEXT POINTS ARE CRITICAL TO UNDERSTAND AND IT IS A POINT THAT OPPONENTS OF CTL/GTL OFTEN USE

The F-T process converts carbon contained in the natural gas into finished transportation fuels and heat. Approximately 65% of the Btus contained in the natural gas will end up in the transportation fuels. Much of the Btu's contained in the natural gas will be captured either in the F-T fuels or waste heat to produce power. We further reduce the final number by 12% because all products don't receive the diesel price and have excise tax reductions.

Thus we reduce the mcf equivalent value of the F-T products to take into consideration the F-T (GTL) conversion process and not all the products are diesel.

Case A - $\$10.5/\text{mcf} \times .65 \times .88 = \$6.01/\text{mcf}$ natural gas at Prudhoe Bay GTL Plant Inlet

\$2.37/GAL IN CALIFORNIA - \$6.01/MCF NATURAL GAS AT GTL PLANT INLET

Case B - $\$22.7/\text{mcf} \times .65 \times .88 = \$12.98/\text{mcf}$ natural gas at Prudhoe Bay GTL Plant Inlet

\$3.91/GAL IN CALIFORNIA - \$12.98/MCF NATURAL GAS AT GTL PLANT INLET

Case C - $\$37/\text{mcf} \times .65 = \$21.16/\text{mcf}$ natural gas at Prudhoe Bay GTL Plant Inlet

\$5.71/GAL IN CALIFORNIA - \$21.16/MCF NATURAL GAS AT GTL PLANT INLET



AGIA Gas Price Projections

- A Prudhoe Bay price approaching \$18 to \$27 per mmbtu over 25 years.
- 2017 to 2042. WOW
- What do Alaskan's think they will be paying for natural gas?
- These AGIA projected gas prices are 300% to 400% higher than the 2007 prices in the Cook Inlet. This isn't "cheap" gas!



WHO RECEIVES THE MOST VALUE FROM THE GAS SALES?

- Tax the Producers natural gas at a crude oil price equivalent and the Producer may only receive a fraction of the value of the natural gas.
- At today's \$120/bbl crude oil price the PPT on natural gas would be:
 - $.25 + ((97.5-30) \times .004) + (120-97.5) \times .001 = .543$ or 54%
 - With a 1/8 Royalty (12.5%) + 54% = 66.5% of the value goes to the State – the Producer receives 33% (+ pays other taxes to the state and federal government)



WHO RECEIVES THE MOST VALUE FROM THE GAS SALES?

- At \$200 crude the % of value to the State would exceed 75%
- You can easily see why the Producer who is expected to take all of the pipeline risk isn't excited about AGIA
- Ask yourself, "Why isn't the market guaranteeing the gas line payout instead of the Producers"?



Who Should be Buying Firm Capacity Supply or Market?

If Natural Gas truly was in short supply or its projected short supply were real, then the people who need natural gas, have no other choice but to use natural gas (market) would be coming to Alaska to buy this “proven” gas resource. THEY would be contracting with TC Alaska for firm capacity to their market.

Do You See This Happening?



ENERGY CONSERVATION

Its Impact on a Gas Line



ENERGY CONSERVATION

Its Impact on a Gas Line

- 300 million people in America
- Take 1/3 or 100 million people
- Turn off two – 100 Watt light bulbs or
don't run a PC for half a day
- Save 480 billion watts per day or 20,000 MW-HR
- Assume a modern heat rate of 8,500 Btu/kw-hr
- Save 4.08 billion cubic feet per day of natural gas

**THAT'S THE ALASKA GAS LINE CAPACITY
IN A FLICK OF THE SWITCH**



ENERGY CONSERVATION

The Nuclear Threat

- We are told that Toshiba is looking at installing up to 5 of their small nuclear power plants in Alberta to supply the tar sands projects with heat and electricity that would be CO₂ free energy.
- Helps Canada meet its Kyoto obligations.
- There goes 1 to 2 bcf/d of gas market.
- Canadian supplied gas will have to flow into the U.S. market competing with Alaska AGIA gas.



MORE THAN JUST A GTL PROJECT

**HUNDREDS OF VALUE ADDED
BUSINESSES ARE POSSIBLE**

Manufacturing on a Grand Scale.

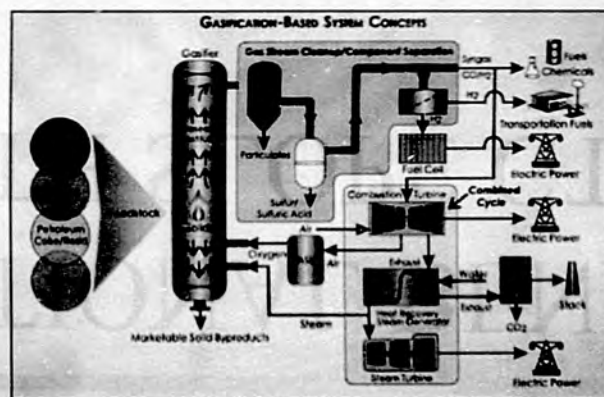
**The beginning of a new era for Alaska and Alaskans.
Supplying the world with high value finished goods
instead of basic natural resources.**

ENERGY CONSERVATION



VALUE ADDED INDUSTRIES

- The Sasol CTL plants in South Africa produce over 150 different value added products from effluent streams.
- The North Dakota Gasification plant uses the Lurgi process to convert 6 million tons per year of lignite coal to syngas and liquids. The average daily production at Great Plains is about 160 million cubic feet of high quality pipe line natural gas.
- Many by-products are also produced at the plant, including: ammonium sulfate, anhydrous ammonia, carbon dioxide, dephenolized cresylic acid, krypton and xenon gases, liquid nitrogen, naphtha, phenol, and methanol.





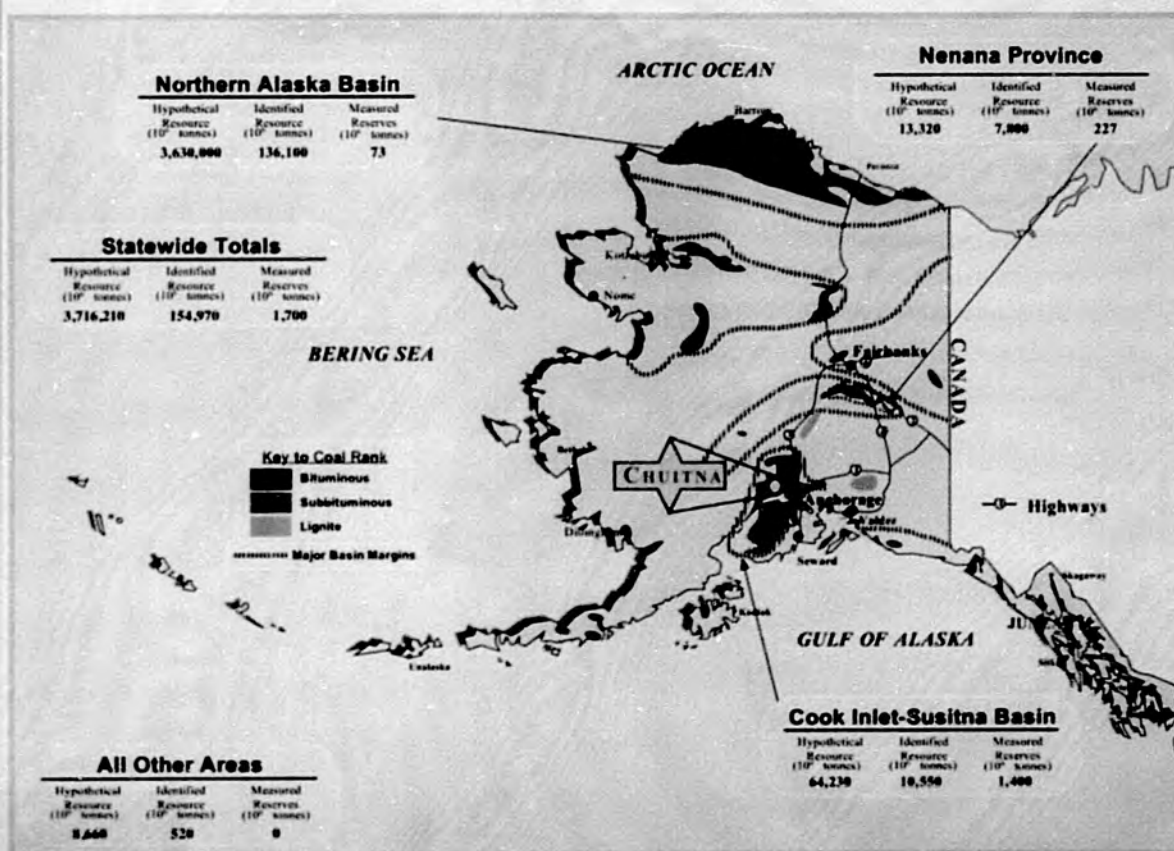
ADDITIONAL BENEFITS OF A NORTH SLOPE GTL OPTION

- Benefits of GTLs at Prudhoe Bay
 - CO₂
 - Electricity
 - Water for people and EOR
 - Synthetic drilling fluids
 - Batching NGLs – Lower TAPS tariff
 - Liquids in Fairbanks



THINK OUT SIDE OF THE BOX

Alaska's Coal Resources & Reserves



Estimated Recoverable Coal Reserves

(10⁹ tonnes)

World Total 1,038

North America 256

United States
246+Alaska

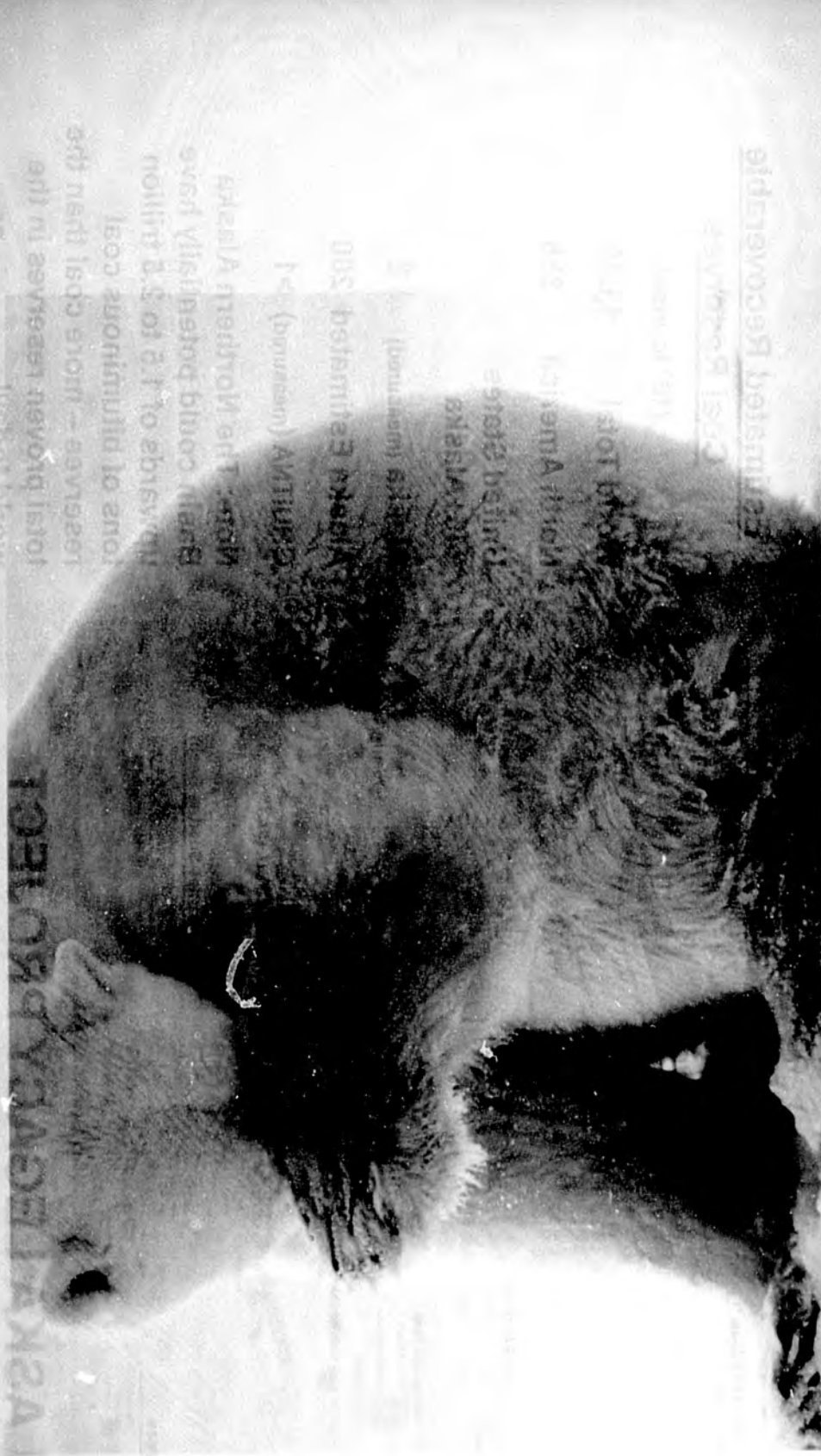
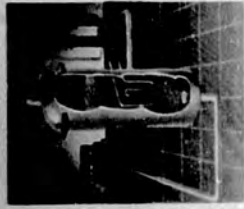
Alaska (measured) 2

Alaska Estimated 200

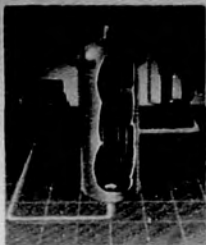
CHUITNA (measured) >1

Note: The Northern Alaska Basin could potentially have upwards of 1.5 to 2.5 trillion tons of bituminous coal reserves – more coal than the total proven reserves in the world today!

ALASKA LEGACY PROJECT



**THANK YOU FOR LISTENING TO
THE GTL STORY**



CONTACT DETAILS

Alaska Natural Resources To Liquids, LLC
310 K Street, Suite 200
Anchorage, AK 99501
(907) 264-6709

Richard Peterson
Managing Member
rpeterson@angtl.com

Peter Tijm
Member
Tijmp@aol.com

LT 10:30 AM

6-20-2008 Friday
printed Anch. AK
Howard Johnson Plaza



Special Session

Anchorage, Alaska

June 20, 2008

Gene Dubay, SVP & COO
Continental Energy Systems

Colleen Starring, Regional Vice President
ENSTAR Natural Gas Company



All Our Energy Goes Into Our Customers

Who We Are – ENSTAR Facts

- Established 1961
- Number of Meters – 128,000+
- Number of Alaskans Served* - 345,600
- Miles of Distribution Mains and Transmission Mains – 3,100
- Direct Impact on Alaska's Economy - \$306 mil
- Number of ENSTAR Employees – 174
- Rank among Alaskan energy Utilities – 1
- New Customers in 2007 – 2,376

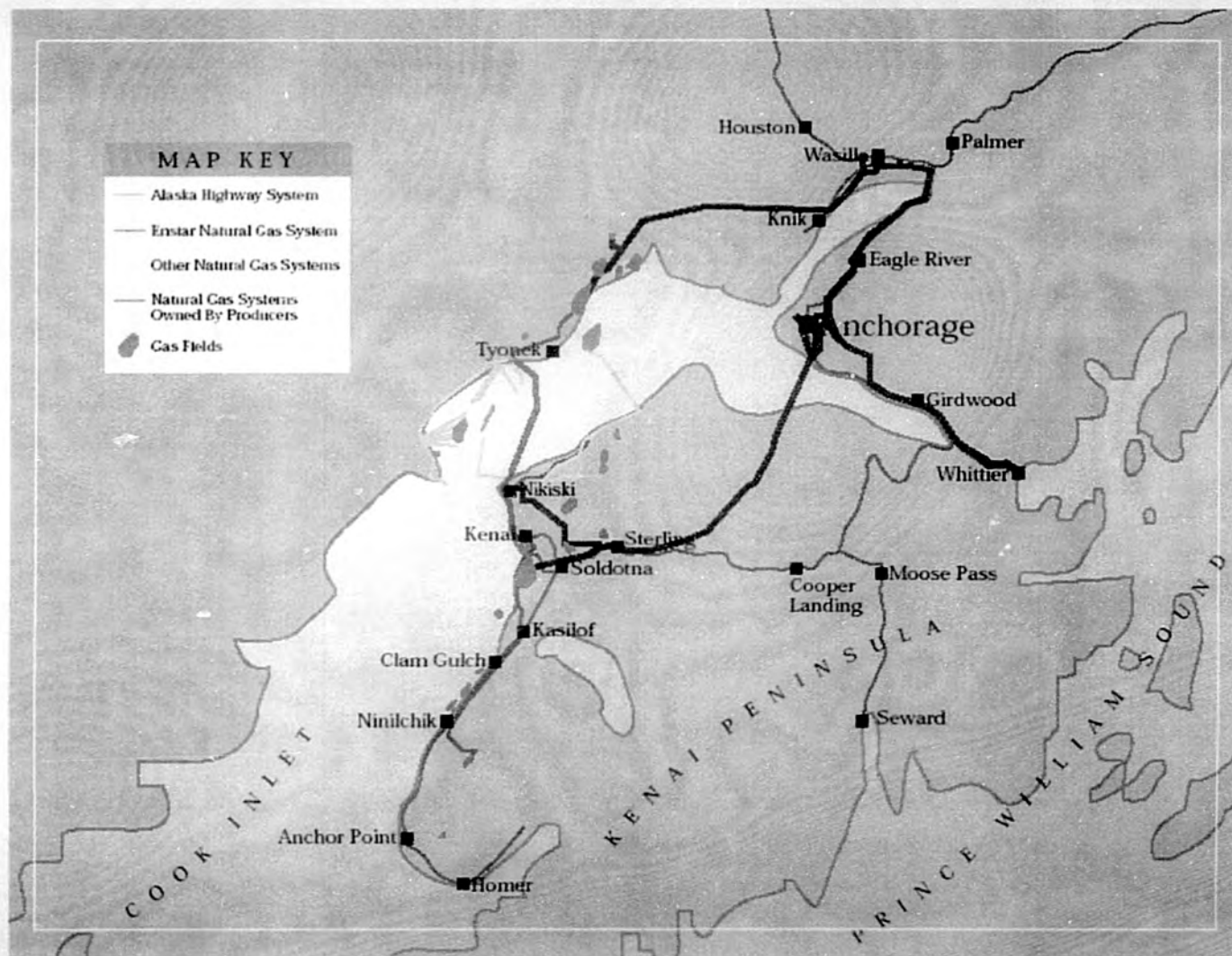
* 128,000 Meters x 2.7 Alaskan Consumers per Meter

ENSTAR

(Alaska Pipeline Company)

- Engineering/Construction
- 47 Years of Experience in Alaska
- Constructed and Operates 450 miles of Transmission Mains and 2700 miles of Distribution Mains
 - Represents 75% of all gas transmission pipelines in Alaska
 - Represents 100% of distribution mains in South-Central Alaska
- Expertise
 - Compression Plant Engineering & Construction
 - Pipeline Engineering
 - Environmental/Permitting
 - Construction Management

South Central Gas Distribution

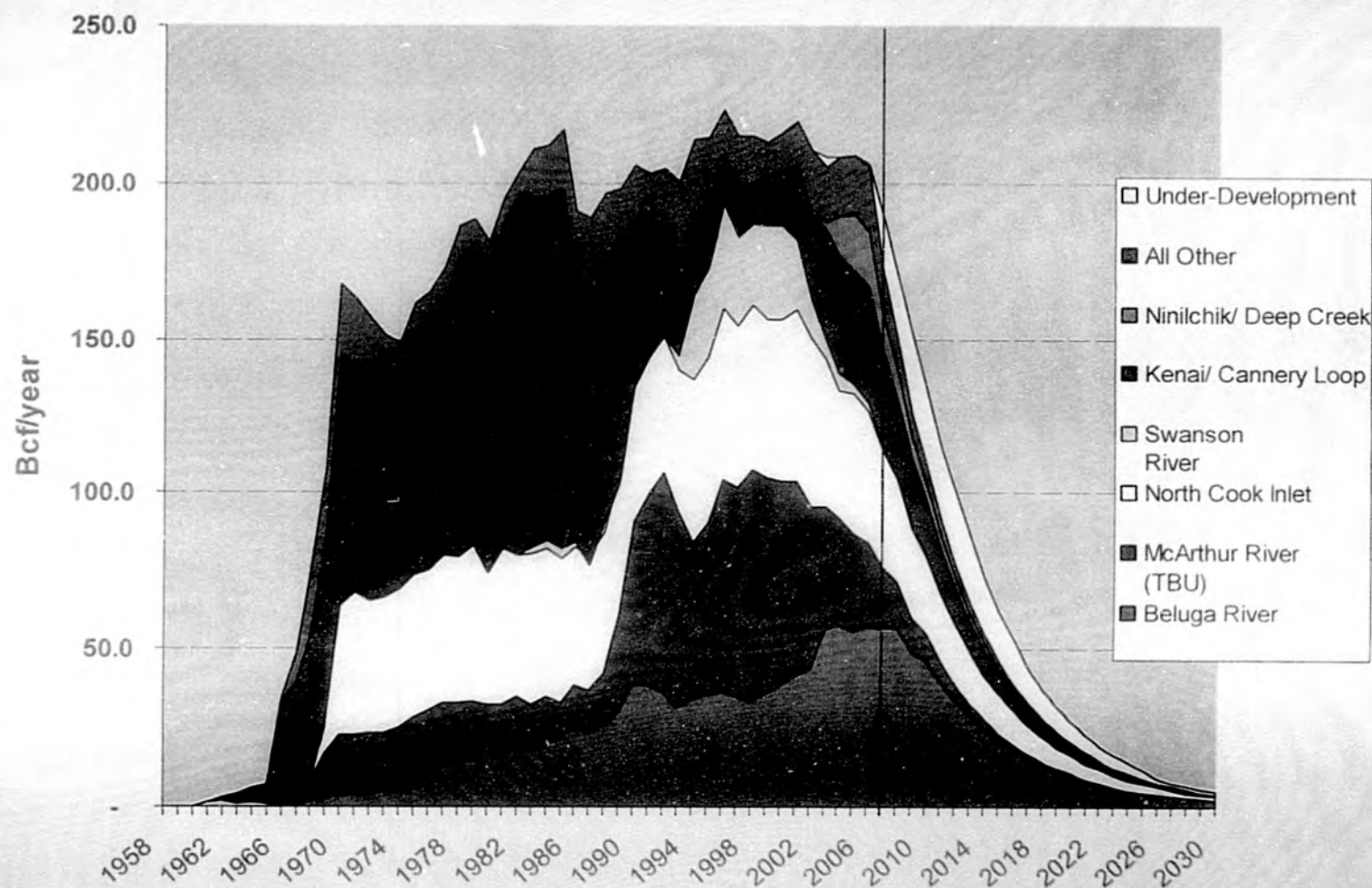




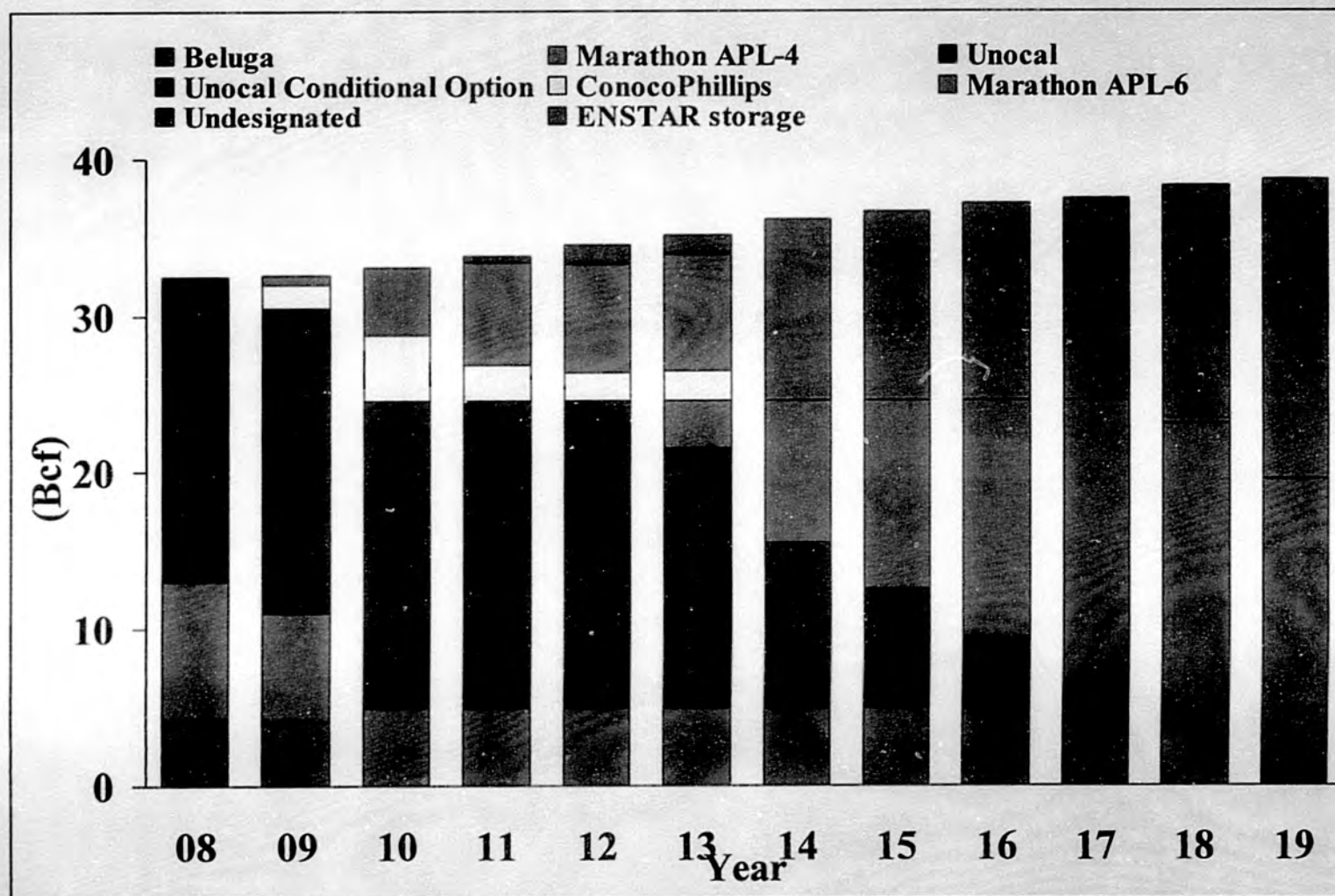
ENSTAR In-State Pipeline Phase One

Historic & Projected Natural Gas Production (Bcf/Year)

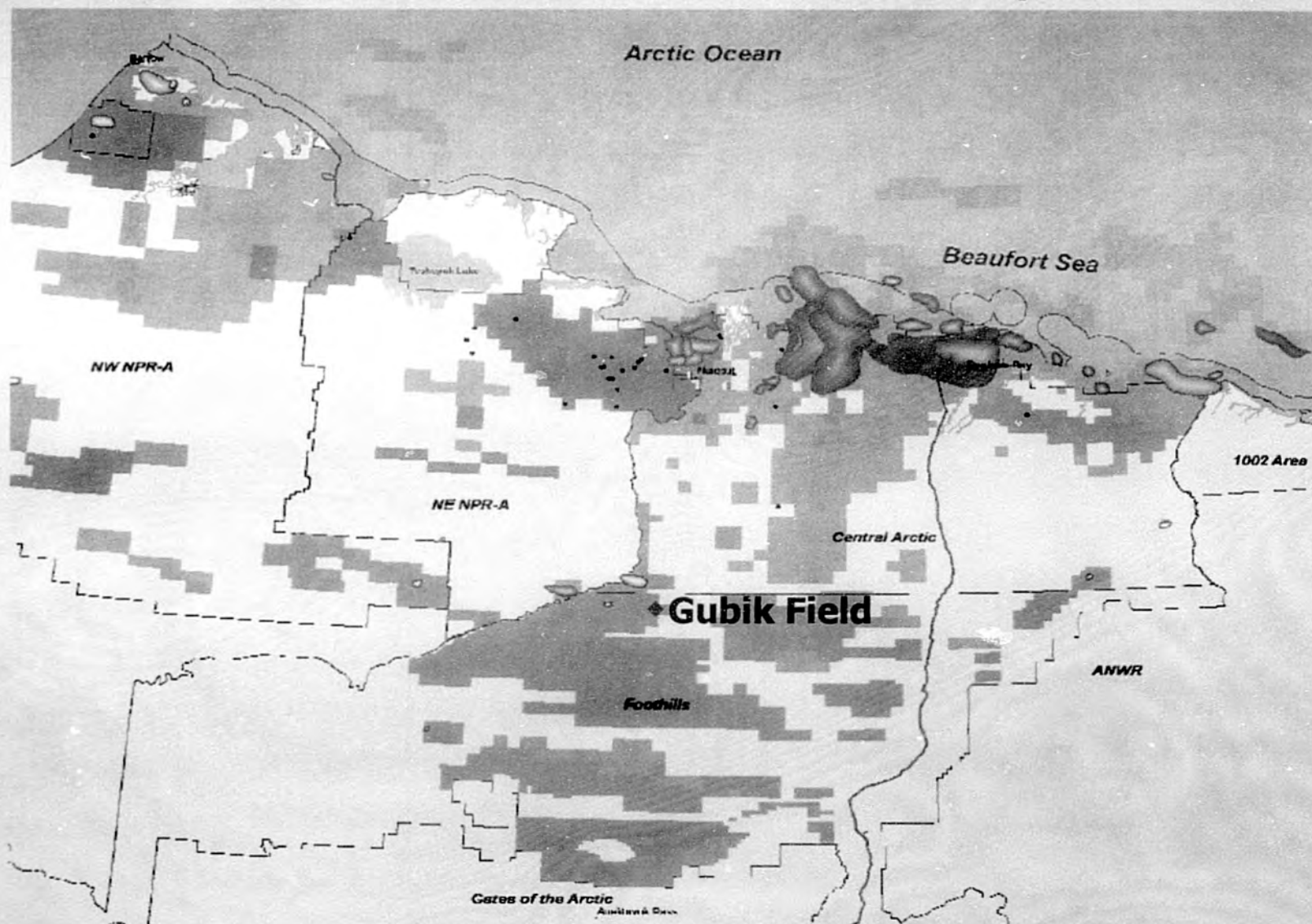
Source: Division of Oil & Gas Report 2006



Gas Supply – April 2008 Outlook

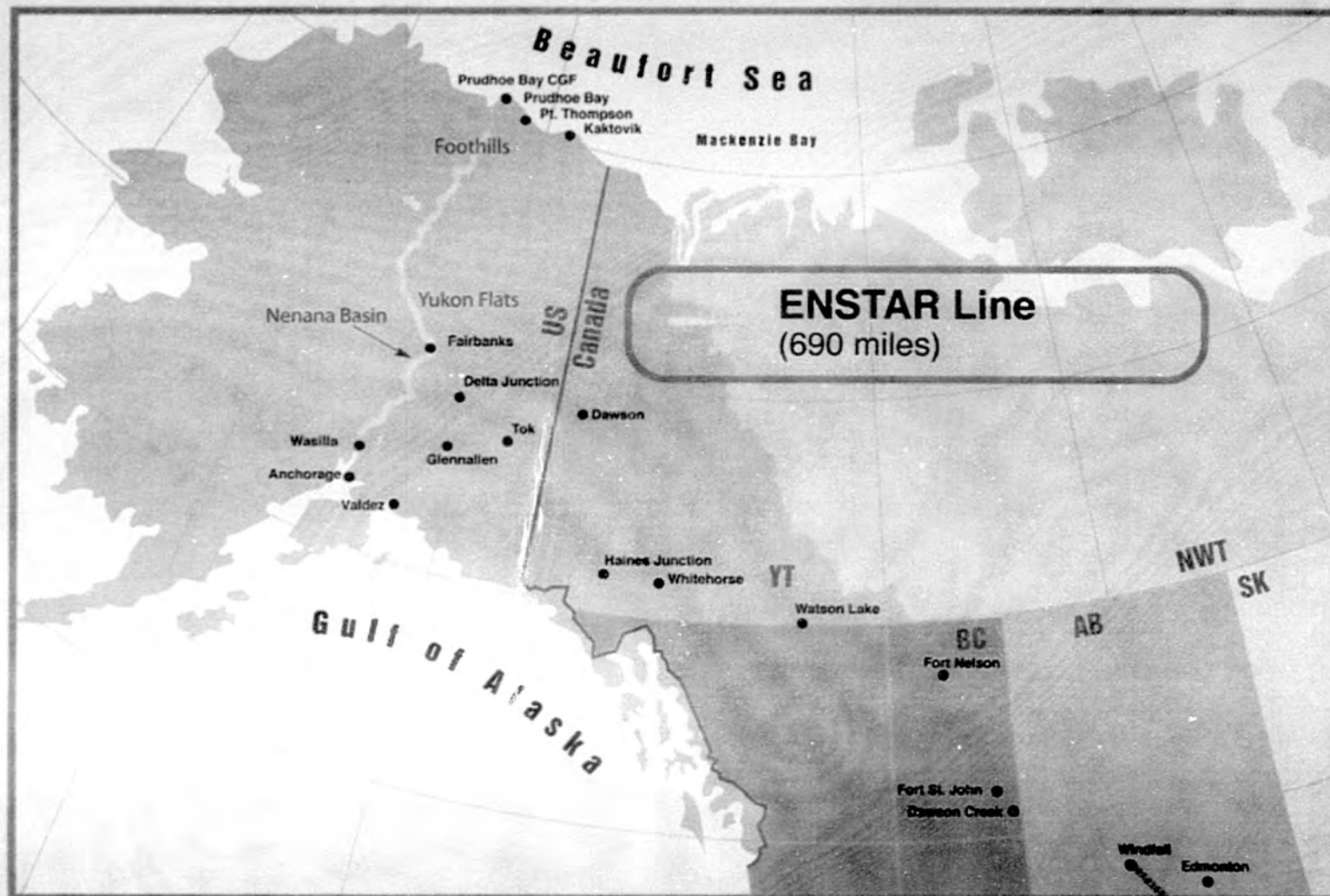


Foothills Unit Area Map



ENSTAR Line

Natural Gas for South Central Alaska



Pipeline Route & Cost

Cook Inlet to Fairbanks

- Approximately 320 Miles
- Parks Highway Route

Cost \$970 million

Fairbanks to the Foothills

- Approximately 370 miles
- Dalton Highway Route

Cost \$2.3 Billion



Total Project Cost - \$3.3 Billion for 20" Diameter

Project Timeline – 5-6 Years

2-3 Years of Permitting, Design & Procurement

3 Years of Pipeline Construction

Foothills Natural Gas Milestones

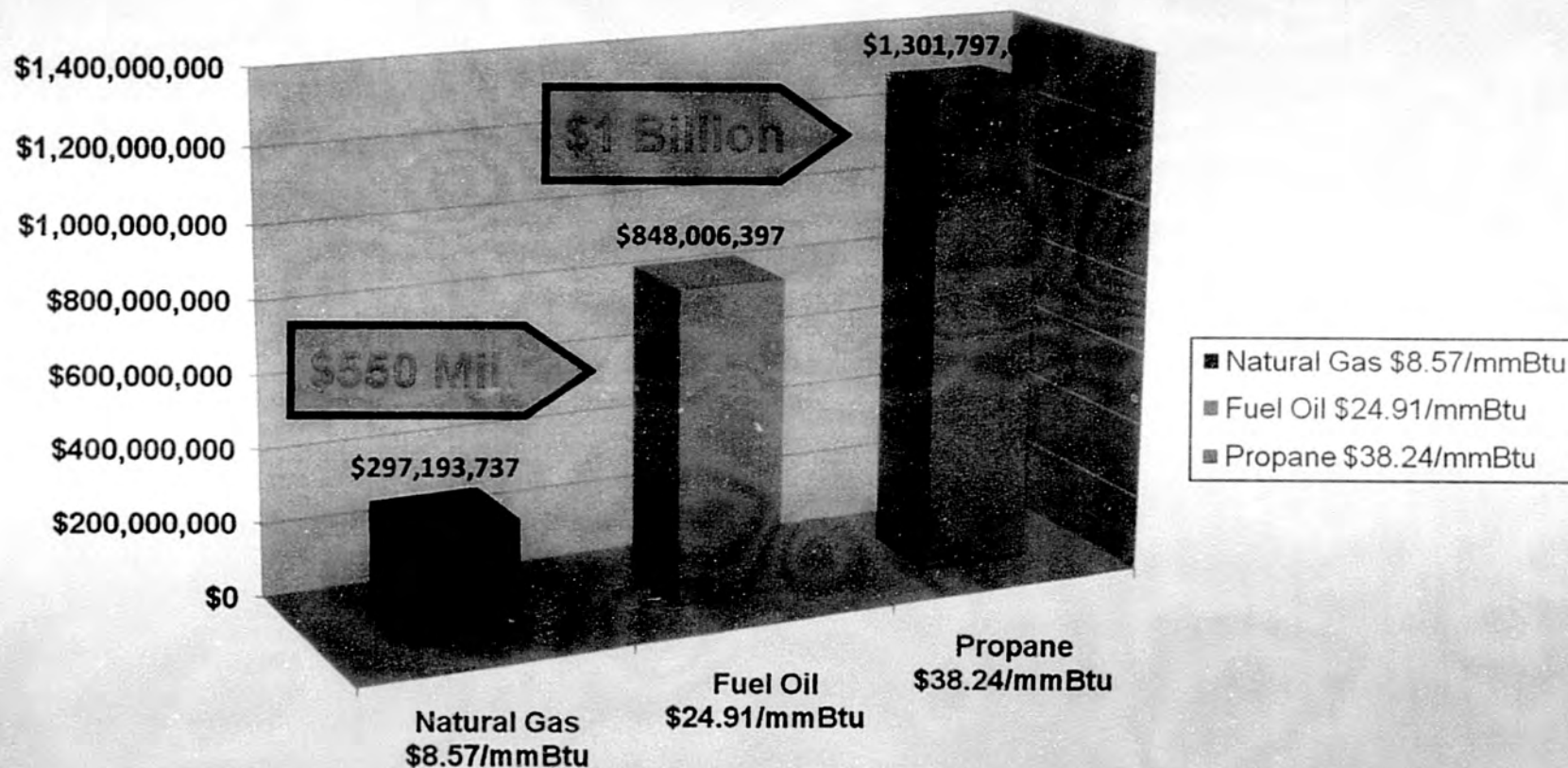
	2007	2008	2009	2010	2011	2012	2013	2014
Gubik 1st drilling season	■							
ENSTAR Pipeline - Phase 1		■						
Gubik 2nd drilling season		■						
Producer update			◆					
ENSTAR Go or No-Go Decision			◆					
Gubik 3rd drilling season			■					
ENSTAR Pipeline - Phase 2			■	■	■	■		
Construction						■	■	■
FIRST GAS								◆

Advantages of the ENSTAR Line

- Timing (First gas 2014)
- Alaska controls its' own destiny
- Long-term supply solution for the Railbelt communities
- Not mutually exclusive with pipeline to Lower 48
- Compliments AGIA and the DENALI project
- Could revive Agrium plant
- Could extend life of Kenai LNG plant
- Creates opportunities for natural gas-based industrial growth in South Central Alaska
- In-state markets qualify for lower tax burdens under Alaska's ACES
- Achieves reasonable end user pricing for Alaskans
- Ensures sufficient wellhead prices for exploration & development

Cost to Consumer

Switching to Alternative Fuels in South Central Alaska
(2008 costs)



Accessible In-State Market

- ENSTAR
- South-Central Electric Companies
 - Chugach, MLP, MEA, HEA
- Fairbanks Natural Gas
- Military Bases
 - Elmendorf AFB & Fort Richardson
 - Eielson AFB & Fort Wainwright
- Golden Valley Electric
- Tesoro Refinery
- Flint Hills Refinery
- Agrium
- LNG Export

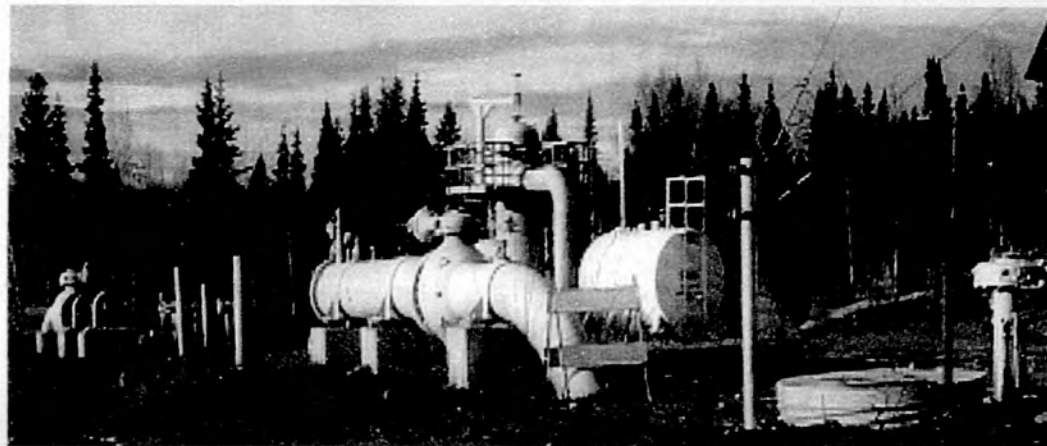
ENSTAR Pipeline Study

Throughput and Load Estimates

<u>Load Profile MMcfd</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
ENSTAR	93.710	95.110	96.540	97.990	99.460	100.950
South-Central Electric Companies	57.000	47.200	49.200	51.200	52.200	53.200
Fairbanks NG	6.000	10.000	18.000	20.000	21.000	22.000
Military Bases and Additional Commercial	13.000	13.000	14.000	14.000	14.000	14.000
Golden Valley Electric	8.770	8.770	8.770	8.770	17.530	17.530
Tesoro Refinery	11.000	11.000	11.000	11.000	11.000	11.000
Flint Hills Refinery	13.700	13.700	13.700	13.700	13.700	13.700
Agrium, Inc.	131.510	131.510	131.510	131.510	131.510	131.510
LNG Export	134.250	134.250	134.250	134.250	134.250	134.250
Total	468.930	464.530	476.960	482.410	494.640	498.140

Assumptions

- Project based on utility grade gas
- 20" diameter high grade steel pipeline
- Operating pressure ~2500 psi
- Operating pressure & design allow for additional hydrocarbon spiking



Current ENSTAR Pipeline Status

- Contracted engineering, environmental, and construction companies to assist with the project
- Update meetings scheduled with Anadarko in Alaska July 15th
- Aerial Photography
 - Southern Route (FBX to Big Lake)
 - Approximately 70% of data has been acquired
 - Data processing is just beginning – complete by Aug 31, 2008
 - Northern Route (North Slope to Fairbanks)
 - All data has been acquired
 - Processing will be complete in approximately 30-days
- LIDAR Data
 - Approximately 90% of data has been acquired
 - Processing complete by July 11, 2008
- Field Work
 - Work is underway – numerous trips for route reconnaissance, river crossing investigations, pinch point investigations, geotechnical studies, seismic studies, constructability, etc, will occur between now and October 2008.

Current ENSTAR Pipeline Status

■ Agency and Stakeholder Communications

- Initial communications have occurred with the following agencies or organizations: BLM/JPO, (three regions), ADOT (both Northern and Southern Regions), COE, DNR, National Park Service, NGO's (including National Parks Conservation Association, Alaska Center for the Environment, Trustees for Alaska, and Defenders of Wildlife), CIRI, Doyon, Alyeska Pipeline Service Company, and Conoco Phillips.
- Communications are planned with Fairbanks Northstar Borough, Denali Borough, Mat-Su Borough, Fish and Wildlife, University of Alaska, EPA, USGS, Mental Health Trust, AHTNA, and others.

■ Data Gathering

- Research data is being gathered and stored to a project library. To be used as reference material for the project. Data includes geotechnical, seismic, environmental, regulatory, engineering, and construction design information.

■ Document Management System

- DMS developed to store data (GIS, environmental, regulatory) relevant to the project. Data is stored and is available for all entities that are involved with the project.

Development Plan Priorities

- Continue regulatory permit acquisition
- Prepare economic & financial models
- Address environmental work
- Public outreach & public involvement
 - Alaska Support Alliance, Fairbanks Economic Development Corporation, Rotary Clubs, South Central Chambers, ASRC, CIRI, Doyon, KTUU, KTVA, Anchorage Daily News, Fairbanks Daily News Miner, Peninsula Clarion, Talk Radio Programs, Platts Gas Daily
 - Continued updates planned
- State ROW application preparation

Questions and Comments

SCOMM

155:17

ALASKA STATE LEGISLATURE

Senator Charlie Huggins, Chair
Senate Special Committee on Energy
State Capitol, Room 119
Juneau, AK 99801
Phone: 465-3878
Fax: 465-3265



Representative John Harris, Chair
House Rules Subcommittee on AGIA
State Capitol, Room 208
Juneau, AK 99801
Phone: 465-4859
Fax: 465-3799

Third Special Session
Twenty-Fifth Legislature

Train Depot, Palmer Alaska
Tuesday June 24, 2008
1:00-8:00 p.m.

Joint Meeting AGENDA

Presentations: Review of AGIA Findings and Determination; Natural Gas Pipeline Project as proposed by TransCanada Alaska Company, LLC and Foothills Pipelines Ltd. (TC Alaska) to the State of Alaska.

➤ **Findings & Determination Summary**

Pat Galvin, Commissioner, Dept. of Revenue

➤ **TransCanada AGIA Application**

Tony Palmer, Vice President, Alaska Gas Development

Testimony: By Invitation

➤ **6:00 – 8:00 PM Public Testimony**

Testimony – Time Limit May Be Set

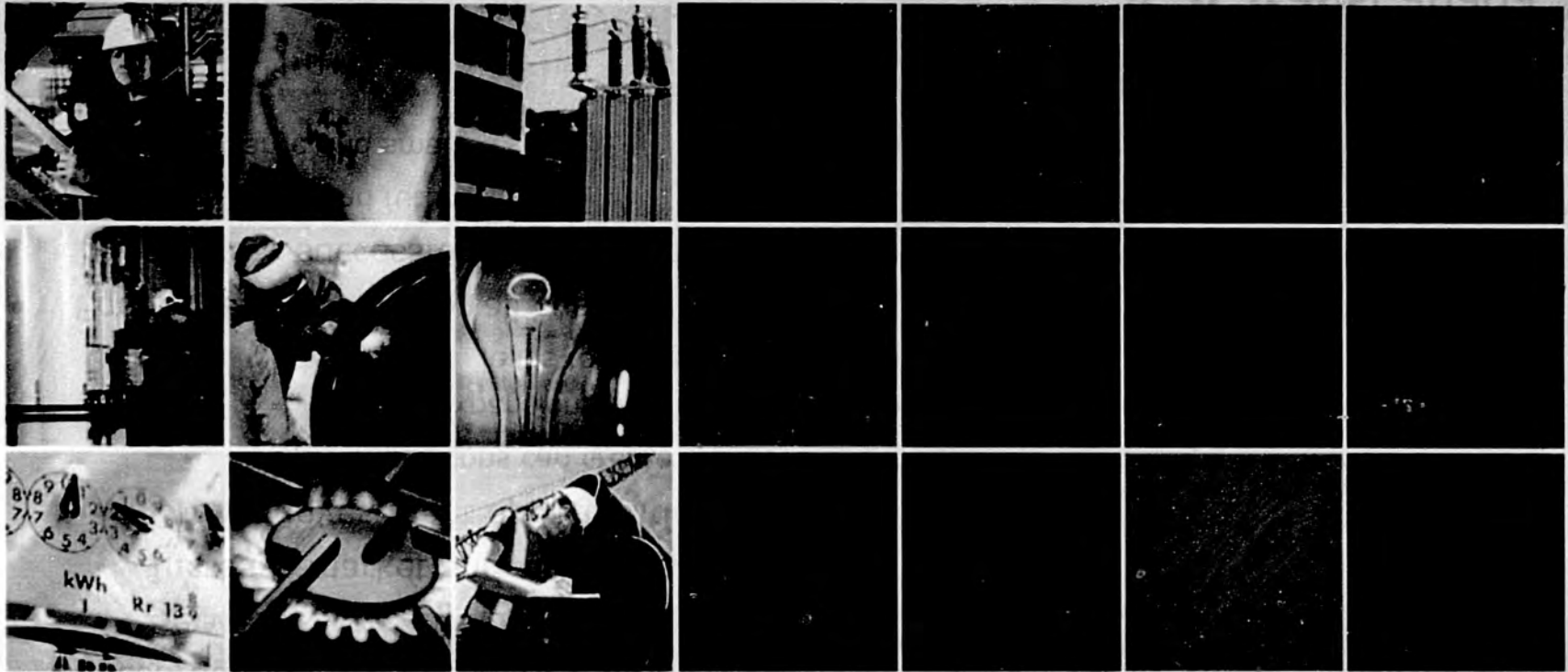
Teleconference- Listen Only

6-24-2008

Public Testimony

- ✓1 - April Moore -
- ✓2 - Don Benson (AK Nat Gas Dev. Authority) for AG1A
- ✓3 - Jean Woods - asks Q's of Mr. Palmer
- ✓4 - David Cheezum - (owns firesteel books) "talk radio is VECO wing of Republican party"
- ✓5 - Knoll Woods - thinks admin is antagonist to producers
- ✓6 - Burt Cottle - Mayor Valdez - Chair of Port Authority ^{AK Governor} - thank you to Sarah Palin
- ✓7 - Jim Sykes - AK Pub Int Research Grp - Supports Palin ^{wants dual open seasons for LUG & AG1A}
- ✓8 - Nikki Campbell - ^{represent self & future of AK} not convinced AG1A is perfect answer
- ✓9 - James Harpster - ^{former teacher} 42 yrs. resident, Hickel makes sense
- ✓10 - Annette Harpster - DNR doesn't deal in good faith.
- ✓11 - Lucille Frey - ^{nothing concrete in AG1A} too sketchy to form an opinion on
- ✓12 - Curt Menard - ^{supports AG1A, Gov. & Administration} mayor Mat-Su Borough
- ✓13 - Tom Lakose - ^{is Denali pjt real or fake?} license AG1A & move on
- ✓14 - Gabrielle Lo Russo - } not wishing to testify
- ✓15 - Dime Lo Russo - }
- ✓16 - Ralph Buzard - ^{vote NO on AG1A} not for Canada - they blockaded our ferries -
- 17 - Justin McDonald
- ✓18 - Mark Richard - gold miner - ^{mining operations} how will pipeline affect mining operations
- ✓19 - Darrogl Nelson - ^{- thanks for hearings on road for AK's to be heard.} oil co's been sitting on the leases over 30 yrs.
- ✓20 - Bonnie Nelson - ^{- Producers shouldn't do pipe / cause monopoly / need to} Chugach - thinks these are governors hearings ^{Port Authority} Blind
- ✓21 - ANDREI Buckareff - ^{since 1972 - against TC}
- ✓22 - Gabriel Lo Russo - 11 yrs old
- ✓23 - Stu Graham - ^{let business do what business does} ch. of commerce - ^{best Gov't only step in} ^{re safety & other govt issues - let} ^{economics drive decision} ^{Vote AG1A down}

Tony Palmer presented 6-24-08
Tuesday - 1:46 PM
Palmer Train Depot



TransCanada's AGIA Application Statewide Legislative Hearings

June / July 2008



TransCanada

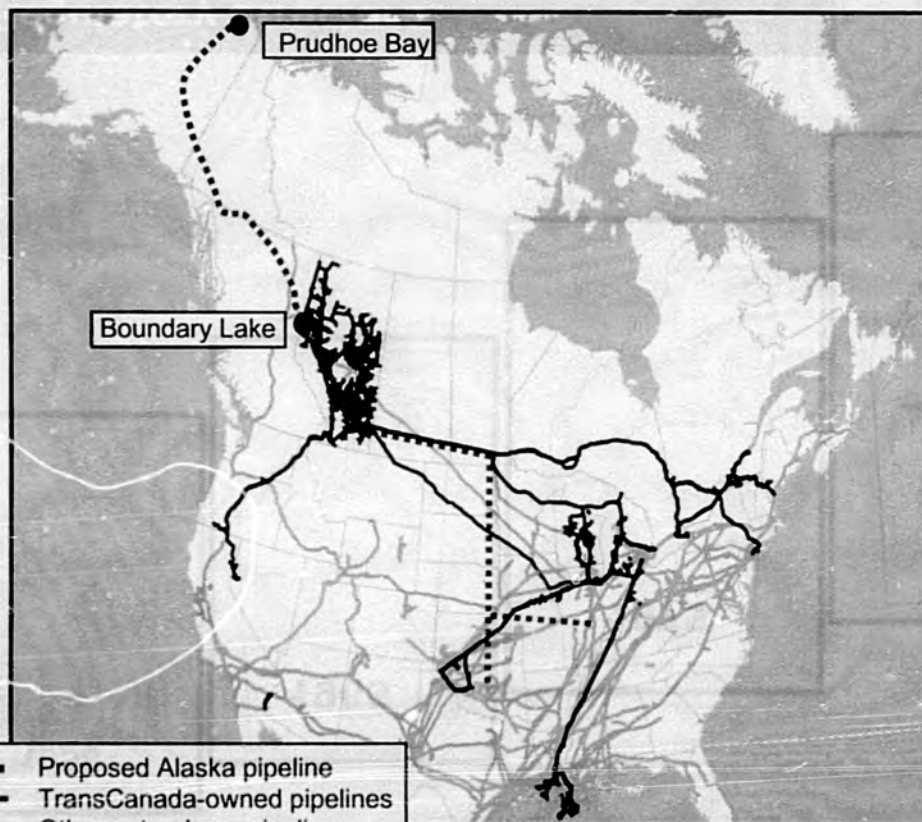
In business to deliver

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

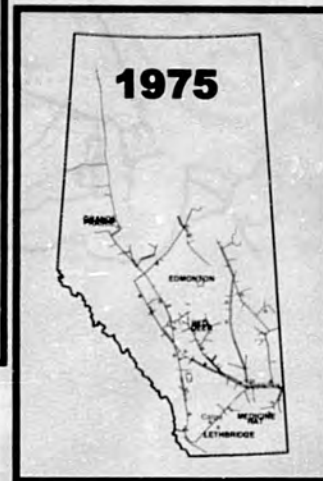
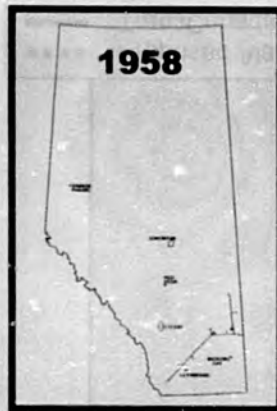
TransCanada's Credentials



- 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

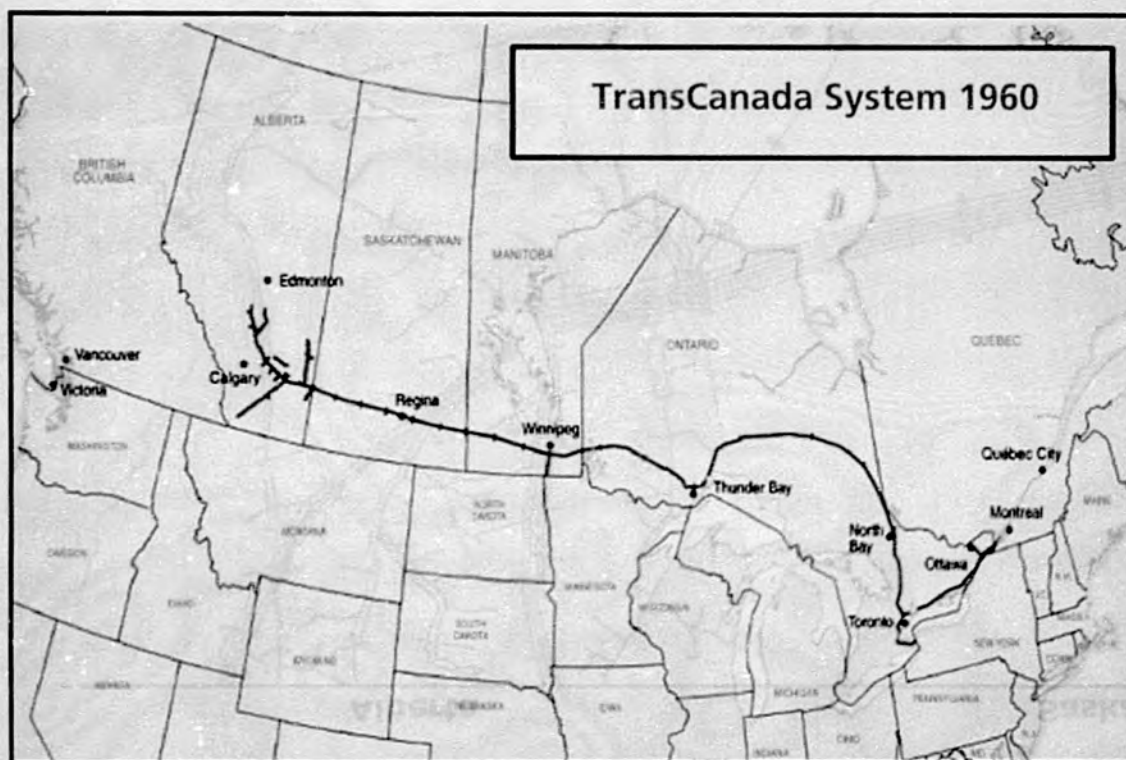
<u>1957/58</u> TransCanada's Mainline	Original build across Canada 2,300 miles
<u>1990s</u> Expansion	7,000 miles Completed within 0.6% of budget and on schedule
<u>2008 - 2009</u> Keystone Pipe	2,150 miles New build in U.S. - 1,380 miles



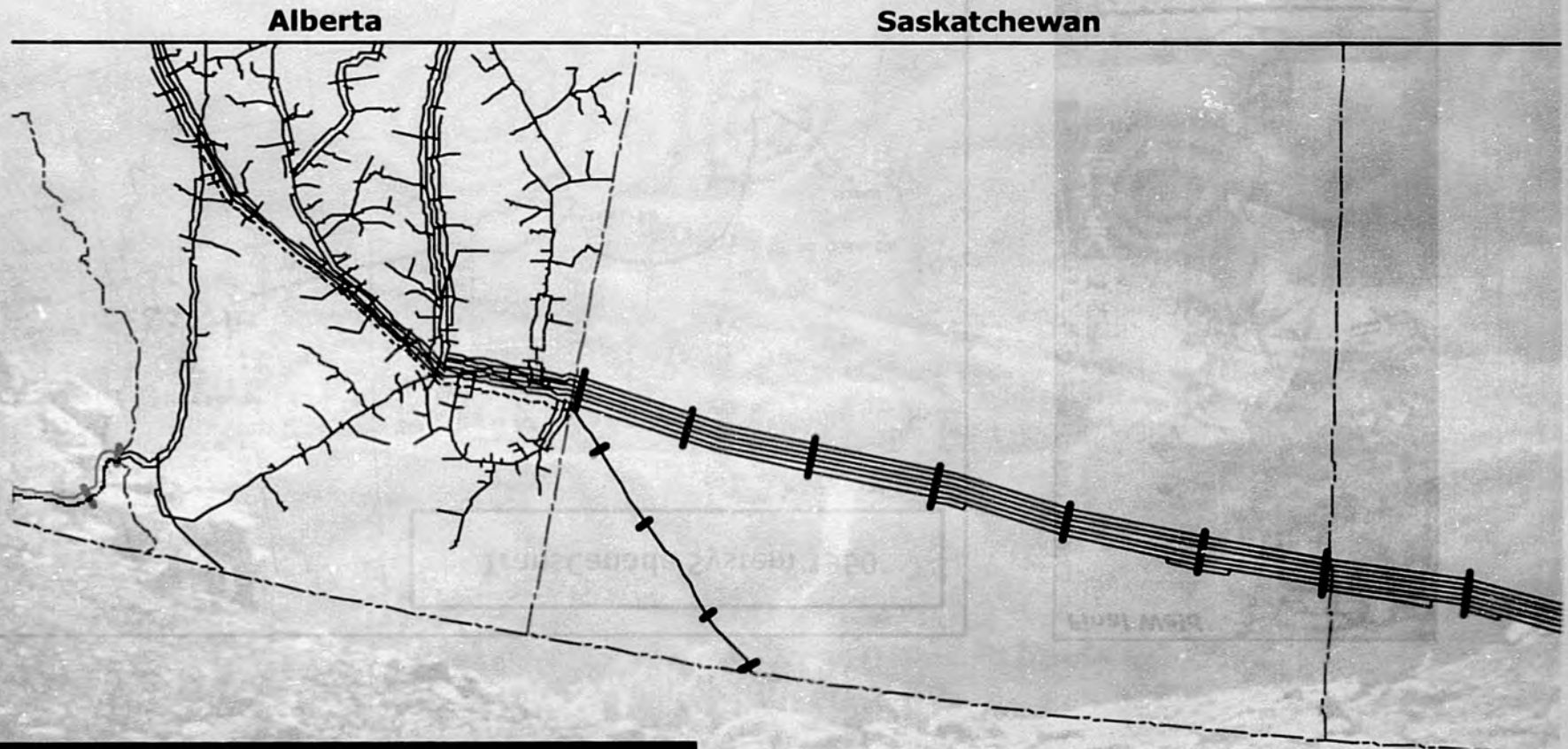
Regulatory Structure

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

Proven Basin Developer – Mainline Example 1960



Proven Basin Developer – Mainline Example 2008



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 rd 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 3rd 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