

# Cook Inlet Supply and the Impact of North Slope Natural Gas for Future Generations

Presentation by:

**ENSTAR Natural Gas Company**

**Gene Dubay – Senior Vice  
President and COO, SEMCO**

**John Lau – Director of Engineering**

**Curtis Thayer – Director of  
Corporate & External Affairs**



# Who We Are – ENSTAR Facts

- Established 1961
- Number of Meters – 125,000+
- Number of Alaskans Served\* - 340,000
- Miles of Distribution Mains and Transmission Mains – 3,000+
- Direct Impact on Alaska's Economy - \$230 mil
- Number of ENSTAR Employees – 168
- Rank among Alaskan energy Utilities – 1
- New Customers in 2005 – 4,213

\* 120,000 Meters x 2.7 Alaskan Consumers per Meter

*All Our Energy Goes Into Our Customers*



# Alaska Pipeline Company (APC)

- Engineering/Construction
- 45 Years of Experience in Alaska
- Constructed and Operates 450 miles of Transmission Mains and 2600 miles of Distribution Mains
  - Represents 75% of all gas transmission pipeline in Alaska
  - Represents 100% of distribution mains in South-Central Alaska
- Expertise
  - Compression Plant Engineering & Construction
  - Pipeline Engineering
  - Environmental/Permitting
  - Construction/Construction Management

*All Our **Energy** Goes Into Our Customers*



# Norstar Pipeline Company

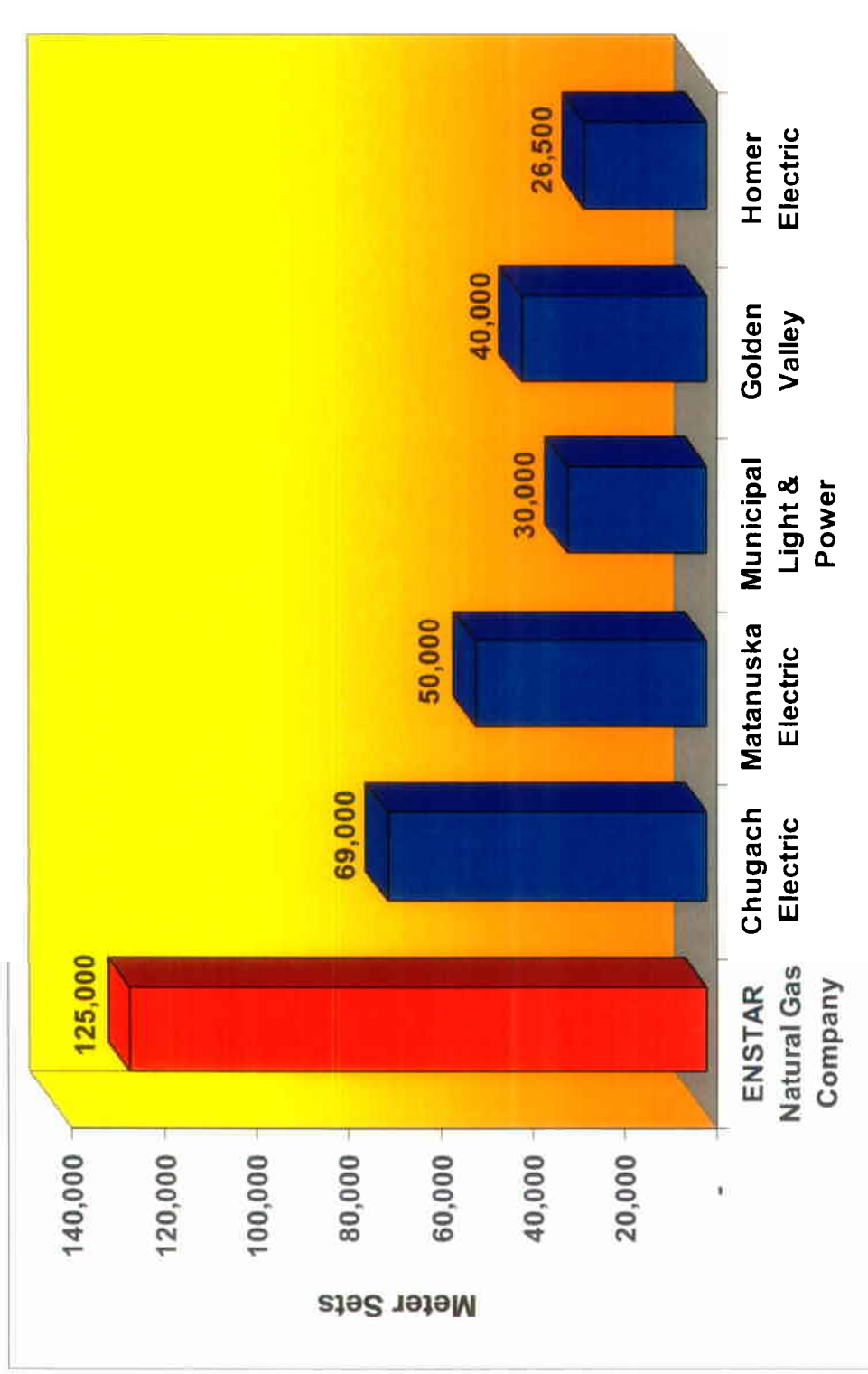
- Pipeline Engineering Services
  - Right of Way
  - Engineering
  - Permitting
  - Construction Management
  - Pipeline Operations

*All Our **Energy** Goes Into Our Customers*





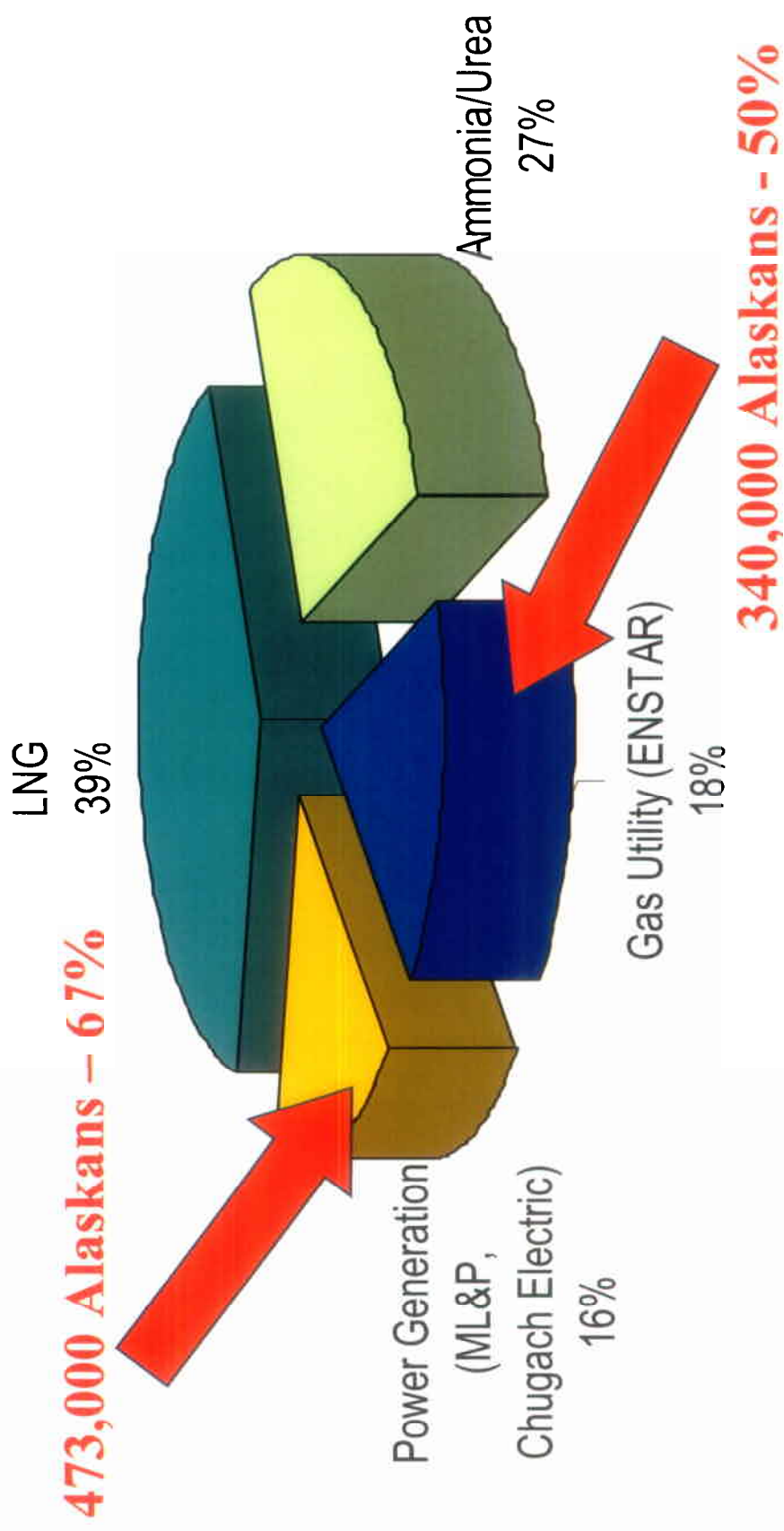
# Utilities – Number of Meters



*All Our Energy Goes Into Our Customers*



# Cook Inlet Natural Gas Usage by %

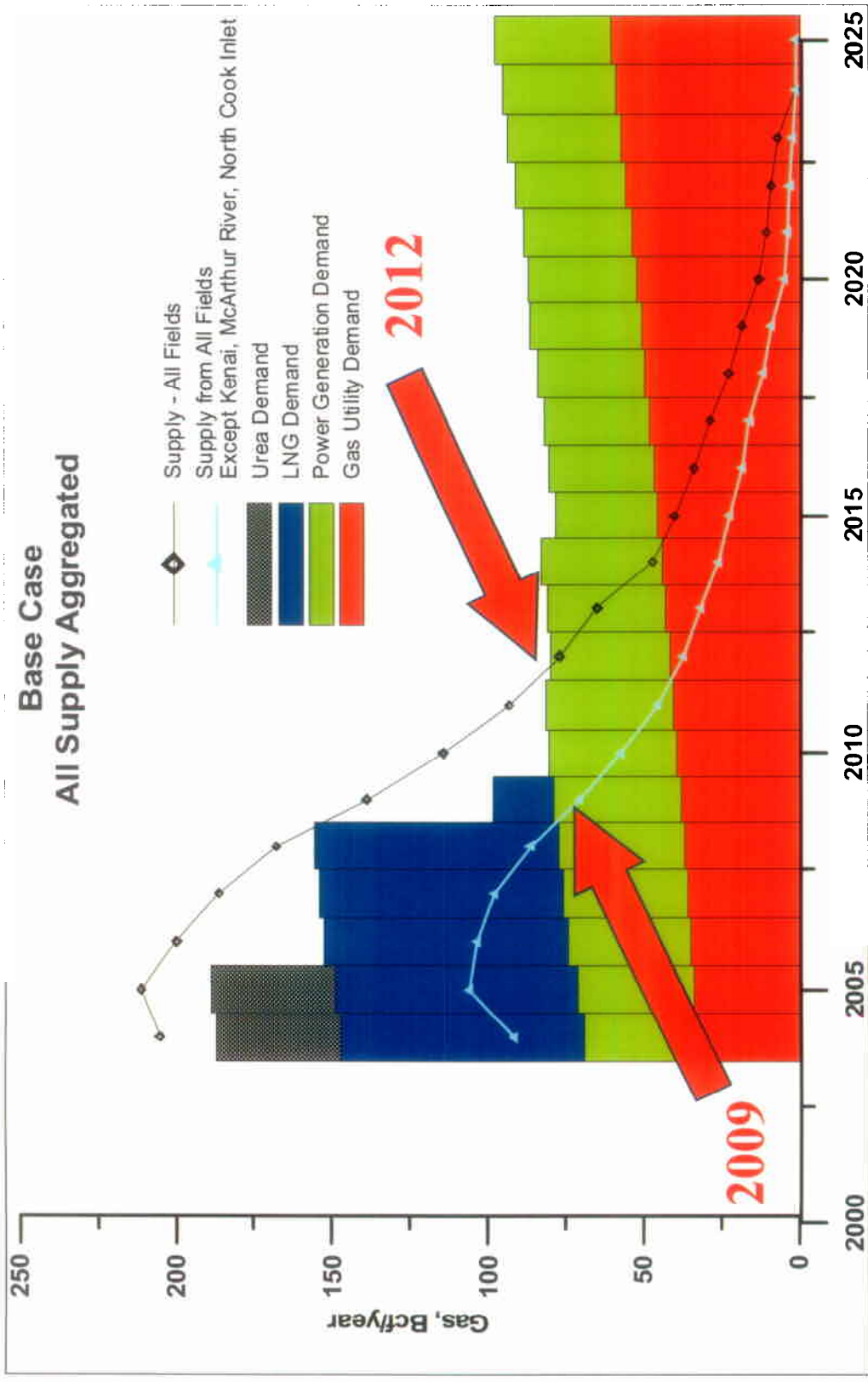


South Central Alaska Natural Gas Study, Prepared for US Dept of Energy, June 2004

**All Our Energy Goes Into Our Customers**



# Base Supply & Demand



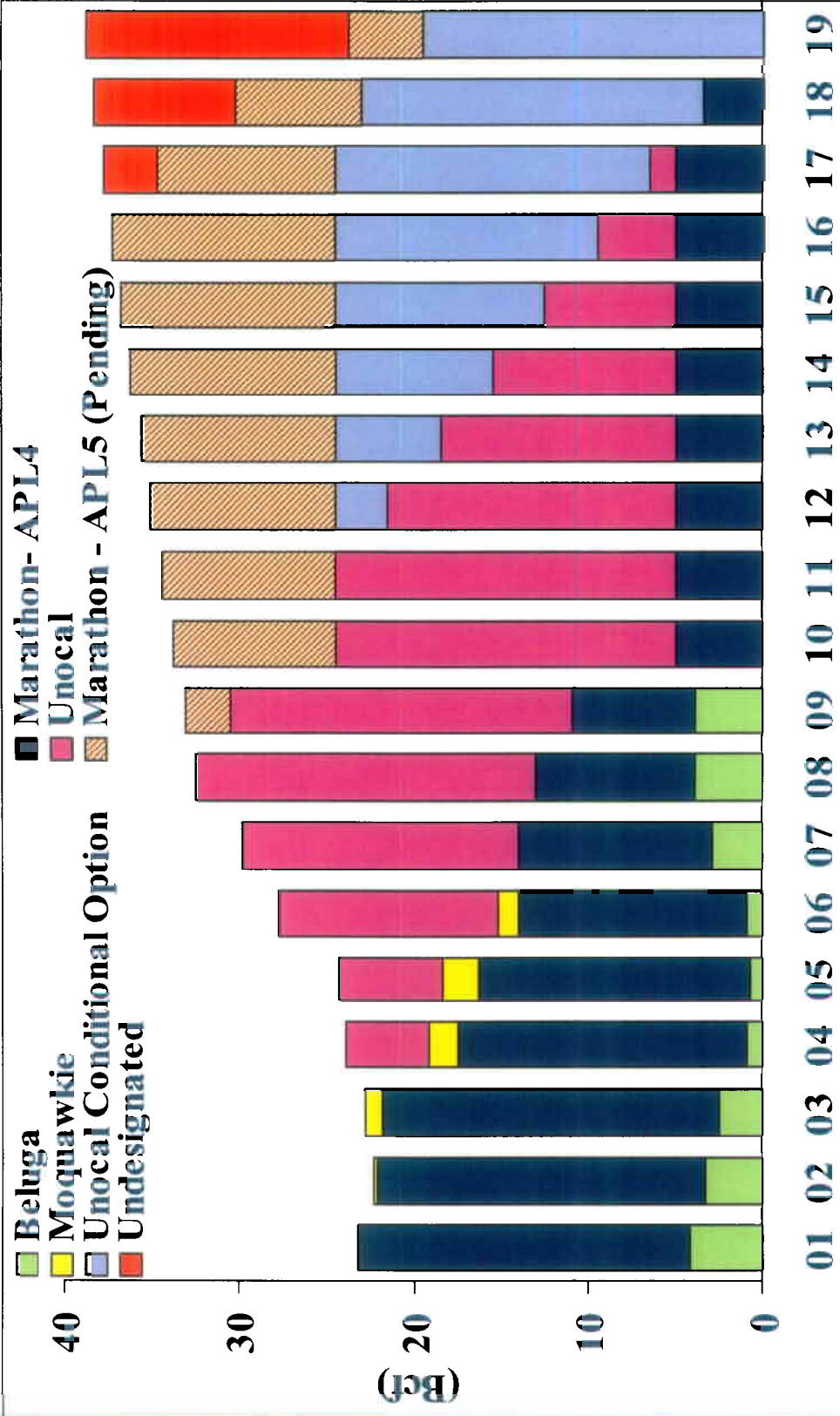
Department of Energy, June 2004

*All Our Energy Goes Into Our Customers*



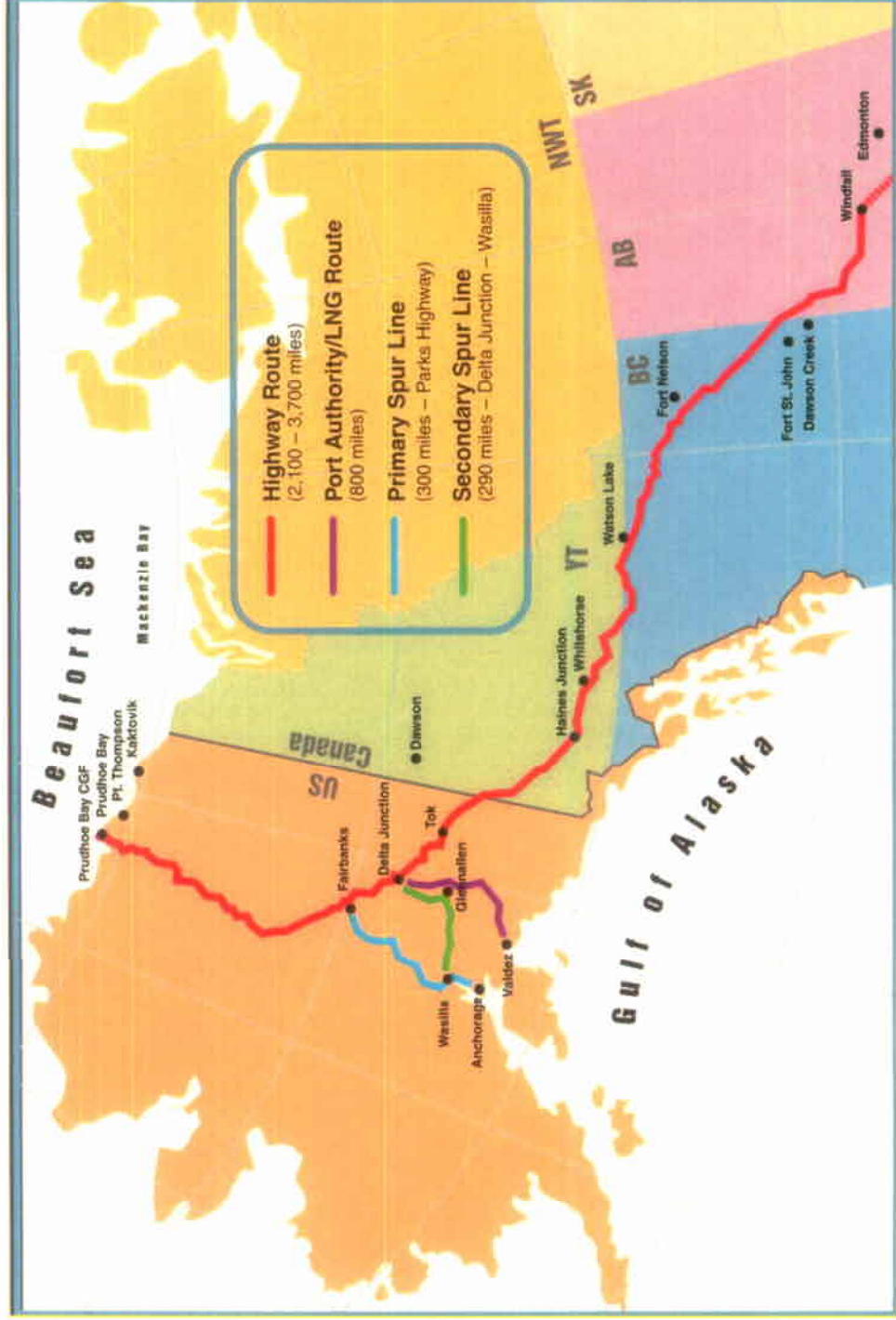


# Gas Supply November 2006 Outlook



*All Our Energy Goes Into Our Customers*

# Possible Natural Gas Pipeline Routes



*All Our Energy Goes Into Our Customers*



# North Slope/Nenana Basin Gas to Cook Inlet via Parks Hwy

- Spur line: cost \$800 million (+/- 30 %).
  - North Slope gas- 35-200 Tcf
  - Nenana Basin – 3-5 Tcf
  - Parks Highway Route
- Opportunities:
  - Create value-added products in Alaska
  - Competitive industrial businesses
  - 100 year life span

*All Our **Energy** Goes Into Our Customers*



# Conceptual Study

- Cost - \$4 million
- Partnership w/ASRC Energy & Michael Baker
- Route Issues
  - Conceptual Engineering
  - Cost Estimate (within 30%)
  - Environment
  - Permitting
  - Potential Resource Development
  - Right of Way ownership
  - Socio/Economic Impact Analysis

*All Our **Energy** Goes Into Our Customers*



# Route Factors to Consider

Overall Length

300 Miles

Archaeological Impact

New Infrastructure (Acres)

Compressor Stations (#), Horsepower (Thousands)

Total CO2 Emissions (Million Tons / Year)

Seismic Zones

Steep Slopes

Water Crossings (#)

Continuous Permafrost

Discontinuous Permafrost

Previously Undisturbed Corridor

Important Wildlife Habitat

Environmentally Managed Areas/Wetlands

Threatened or Endangered Species Along Route (#)

*All Our **Energy** Goes Into Our Customers*





# Time Line

(Best Case Scenario for a North Slope Spur Line)

Task Name	Timeframe	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Conceptual Study *	12 months	█					
Engineering **	12 months		█				
Permitting	18 months			█	█		
Order Equipment	6 months				█		
Construction	24 months				█	█	
RCA Review	12 months					█	

\* Depends on North Slope Pipeline Progress

\*\* Economic Feasibility

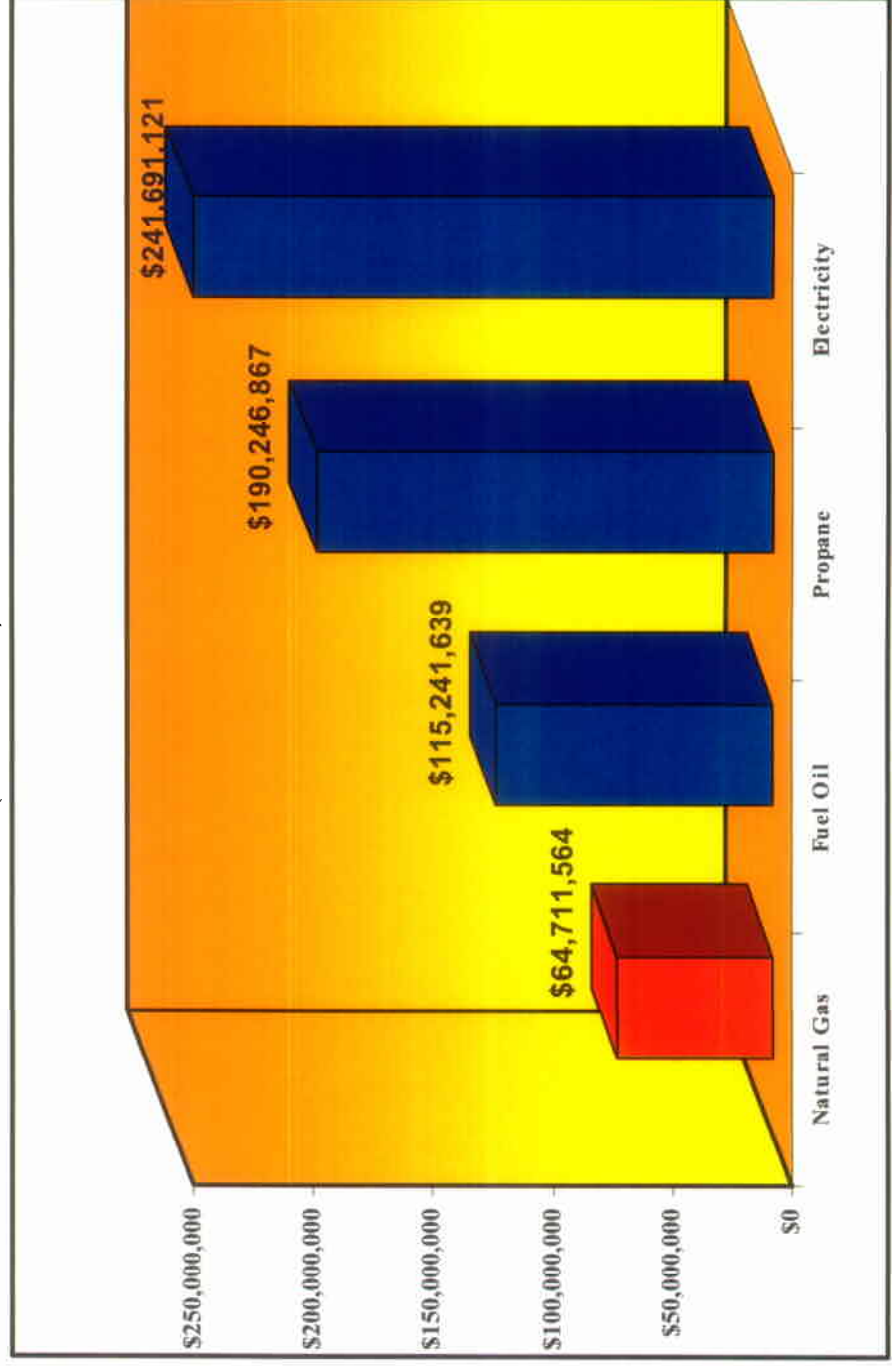
**All Our Energy Goes Into Our Customers**



# Comparative Fuels in Fairbanks

## Potential Economic Boom

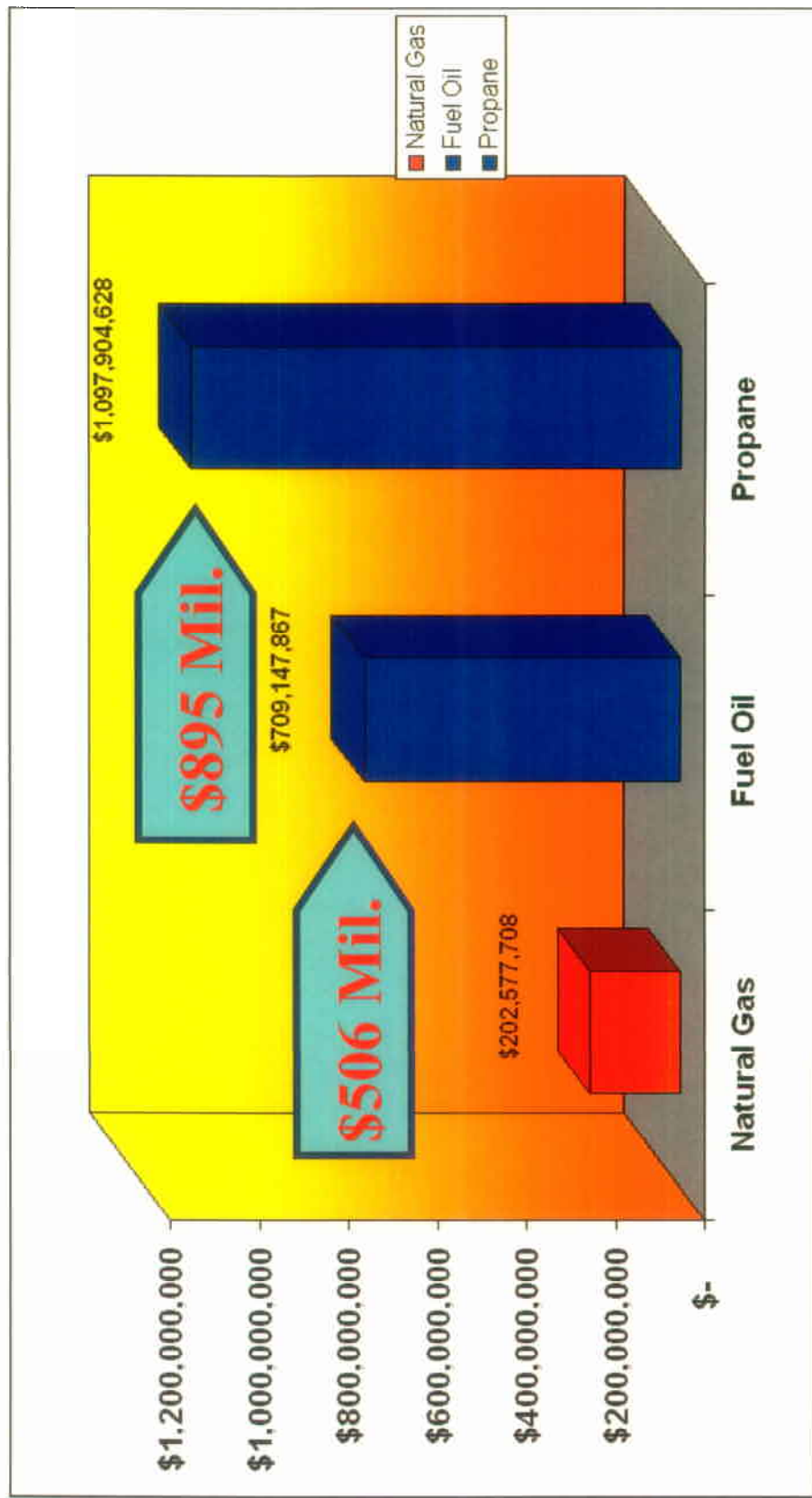
(2006 Costs)



*All Our Energy Goes Into Our Customers*

# Cost to Consumer

Switching to Alternative Fuels in South Central Alaska  
(2006 costs)



# What is ENSTAR doing?

- Partnering with Department of Energy, ML & P & Chugach Electric, ASRC Energy, Michael Baker and all concerned parties
- Provide a detailed conceptual analysis to define the cost and benefits of a spur pipeline
- Measure benefits, costs and challenges of developing gas storage facilities in South Central Alaska
- LNG
  - Currently partners in a study to determine the feasibility of importing LNG beginning in year 2014.
- Bullet Line Concept
- Analyzing the optimum mix of energy supply options to ensure continued economic growth in Alaska

*All Our **Energy** Goes Into Our Customers*



# In Conclusion

- ENSTAR represents the needs of the consumer
  - Keep prices low
  - Provide good customer service
- Near-term supply shortage
- Natural gas will be available at market price
- Spur Line
  - Achieved federal funding (\$4 million), working with DOE and State DOT towards a feasibility study.
  - ENSTAR would like invest and build spurline w/ partnership from Alaskan companies for the benefit of all Alaskans.
- Develop long-term supply strategy with the State of Alaska
  - All entities working towards a common solution.



# Thank You!

Please visit us online for more information.

[www.enstarnaturalgas.com](http://www.enstarnaturalgas.com)

*All Our **Energy** Goes Into Our Customers*



## **APPENDIX F**

# 2006-2007 Winter Update to RCA

Presentation by:

ENSTAR Natural Gas Company

**Daniel M. Dieckgraeff**  
**Manager, Regulatory & Gas Supply**



# Who We Are – ENSTAR Facts

- Established 1961
- Number of Meters – **125,000+**
- Number of Alaskans Served\* - **340,000**
- Miles of Distribution Mains and Transmission Mains – **3,000+**
- Direct Impact on Alaska's Economy - **\$302 mil**
- Number of ENSTAR Employees – **168**
- Rank among Alaskan energy Utilities – **1**
- New Customers in 2006 – **3,479**

\* 125,000 Meters x 2.7 Alaskan Consumers per Meter

*All Our **Energy** Goes Into Our Customers*



# System Record Set Jan. 9, 2007

- ENSTAR Throughput (Record): 292.4 Mmcf/d
- ENSTAR Gas Purchases (Record): 227.2 Mmcf/d
  - Residential & Commercial Customers
- Commercial Transport: 16.5 Mmcf/d
- Power Transport: 43.8 Mmcf/d
- Industrial Transport: 4.9 Mmcf/d
- Average Temp. for Day: – 10°F

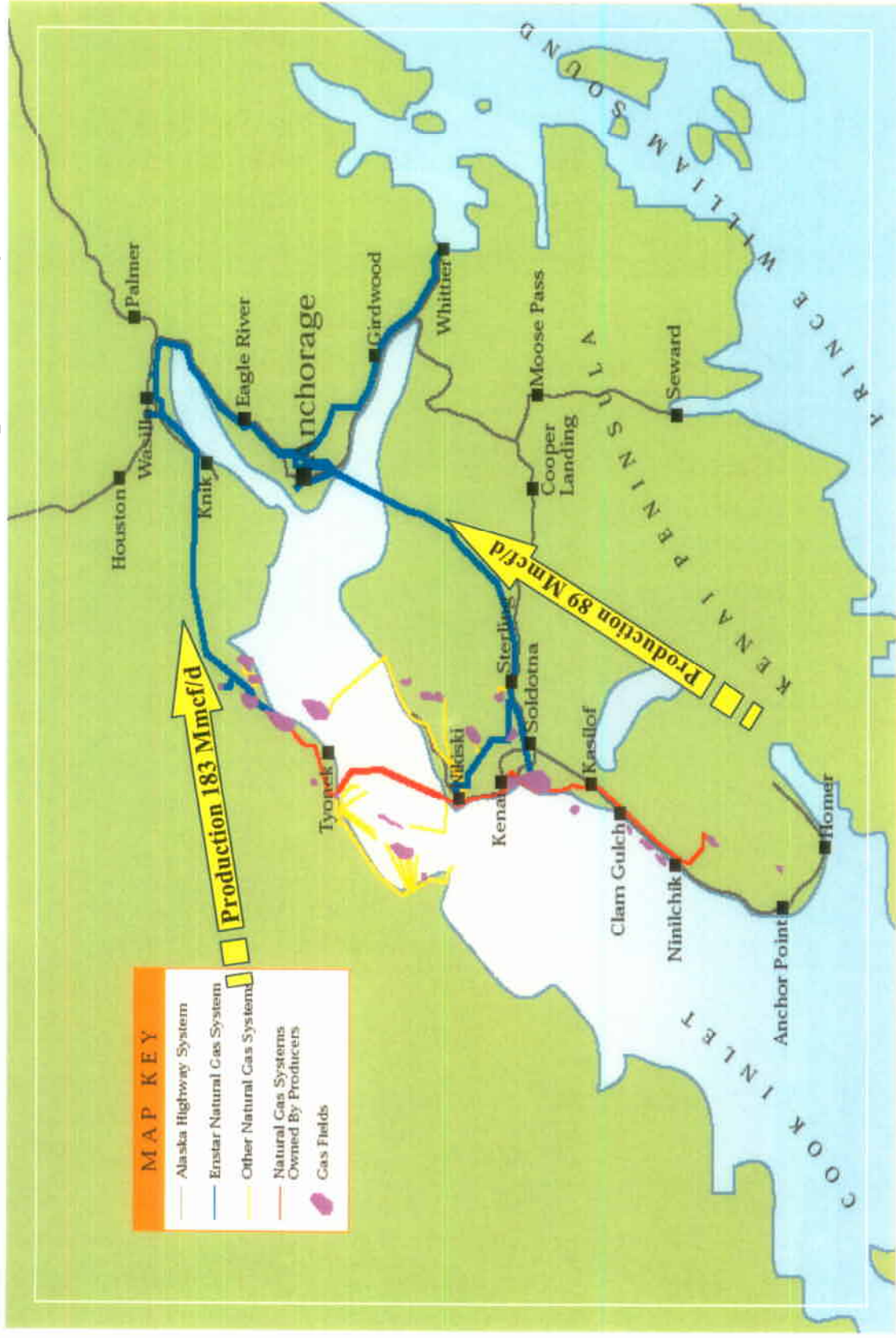
*All Our **Energy** Goes Into Our Customers*





# February 3, 1999

## 272 Mmcf/d (-19 Degrees F)

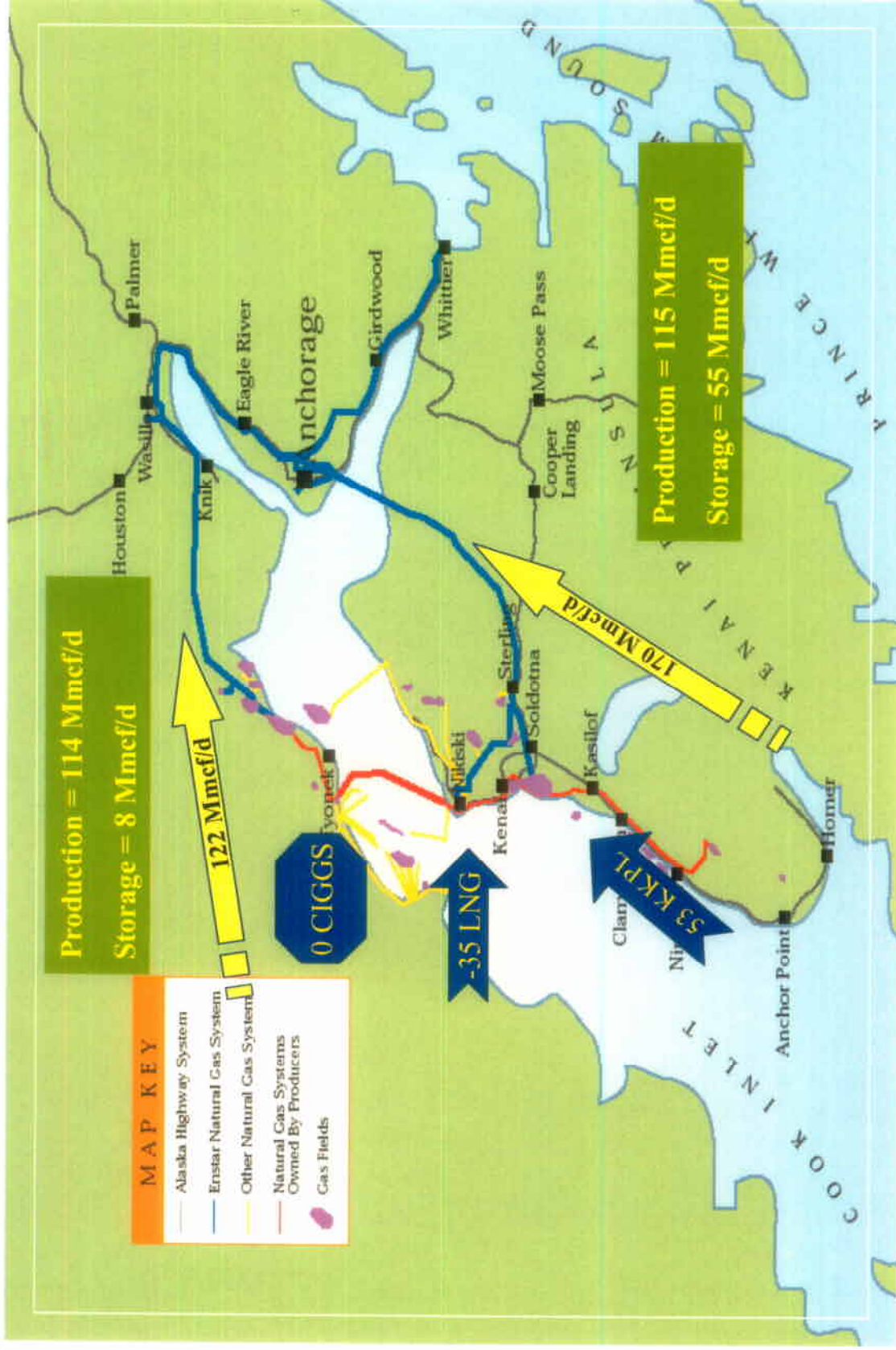


*All Our Energy Goes Into Our Customers*



# January 9, 2007

## 292 Mmcf/d (-10 degrees F)



*All Our Energy Goes into Our Customers*



# ENSTAR System Peak Day Comparison

	2/3/99	1/9/07
Average Temp	-19 degrees	-10 degrees
ENSTAR Throughput	272	292
ENSTAR Gas Sales	187	227
Commercial Transport	29	16
Power Transport	56	44
Industrial Transport	0	5

*All Our **Energy** Goes Into Our Customers*



# Cook Inlet Peak Day Comparison

	2/3/99	1/9/07
Average Temp	-19 degrees	-10 degrees
ENSTAR System	272	292
CEA Beluga	78	83
Nikiski LNG	224	150
Fertilizer Plant	157	0
Tesoro	13	6
Cook Inlet Deliverability	744	531



*All Our **Energy** Goes Into Our Customers*



# 2007 Infrastructure Changes



*All Our Energy Goes Into Our Customers*





# In conclusion....

- Cook Inlet Deliverability has dropped significantly.
- Natural Gas has to move differently than in the past.
- Demand is not being met on peak days.
- Additional work will need to be done to stem deliverability decline.
- Infrastructure investments are needed to transport natural gas to residential, commercial & industrial customers.

*All Our **Energy** Goes Into Our Customers*



# Thank You!

Please visit us online for more information.

[www.enstarnaturalgas.com](http://www.enstarnaturalgas.com)

*All Our **Energy** Goes Into Our Customers*



## **APPENDIX G**

SUBSTITUTE  
Suggested by: Mayor Porter

**CITY OF KENAI**

**RESOLUTION NO. 2007-11**

A RESOLUTION OF THE COUNCIL OF THE CITY OF KENAI, ALASKA, SUPPORTING THE CONTINUED OPERATION OF NATURAL GAS INDUSTRIAL FACILITIES ON THE KENAI PENINSULA.

WHEREAS, the Kenai Peninsula has three major industrial facilities that are dependent upon natural gas - the Kenai Liquefied Natural Gas (LNG) facility; Agrium; and Tesoro Alaska; and,

WHEREAS, Marathon Oil Company and ConocoPhillips Company have filed with U.S. Department of Energy for a two-year extension of the export license for the Kenai LNG facility; and,

WHEREAS, Kenai LNG facility, Agrium and Tesoro Alaska provide jobs for the Kenai Peninsula and substantial tax and royalty revenues to the State of Alaska and to borough governments; and,

WHEREAS, the continued operation of these three natural gas industrial facilities is vital to the economy of the City of Kenai and the Kenai Peninsula Borough; and,

WHEREAS, the continued operation of all industrial plants in the Kenai Peninsula helps preserve vital markets for Cook Inlet natural gas producers, helps assure the continued economic viability of new gas development, and provides an operational source of gas deliverability for residential and commercial consumers; and,

WHEREAS, preserving the industrial gas markets in the Cook Inlet spreads the cost of gas delivery facilities over a larger economic base, thereby reducing the per unit gas cost to all consumers; and,

WHEREAS, it is fitting and proper to preserve all of the industrial demands for natural gas in Cook Inlet for the aforementioned reasons.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF KENAI, ALASKA, strongly supports the continued operation of Kenai Liquefied Natural Gas facility, Agrium; and Tesoro Alaska.


BE IT FURTHER RESOLVED THAT THE COUNCIL OF THE CITY OF KENAI, ALASKA also endorses the two year extension application for an LNG export license extension submitted to the U.S. Department of Energy by Marathon and ConocoPhillips providing that Department of Energy review confirms that the gas being exported is in excess to that needed to meet local commercial, industrial and residential needs.

Resolution No. 2007-11 (SUBSTITUTE)  
Page Two

PASSED BY THE COUNCIL OF THE CITY OF KENAI, ALASKA, this 21st day of March,  
2007.

  
PAT PORTER, MAYOR

ATTEST:

  
Jennifer C. Lockwood, Deputy City Clerk