

COMMONWEALTH
NORTH

*Energy for a Sustainable Alaska:
the Railbelt Predicament*

Testimony before House Energy Committee

04/01/10

Study Group Chairs

Mary Ann Pease & David Wight

Study Group Members

Nils Andreassen

Institute of the North

Chris Birch

NANA Development Corp

Hallie Bissett

BP Exploration Alaska

Deborah Brollini

Alaska Native Tribal Health Consortium

Patrick Burden

Northern Economics

Katie Conway

Brian Davies

Davies Consulting

Brit DelMoral

Daniel Dieckgraeff

ENSTAR Natural Gas Company

Pat Doyle

Anchorage Daily News

Jim Egan

Commonwealth North

Carl Ekstrom

Anchorage Community Development

Joe Farrell

ConocoPhillips Alaska

Therese Gramercy

TGML Publications

Joe Griffith

Matanuska Electric Association

Harold Heinze

Alaska Natural Gas Development Authority

James Hemsath

Alaska Industrial Development and Export
Authority

Carolyn Heyman-Layne

Sedor, Wendlandt, Evans & Filippi LLC

Scott Heyworth

Alaska Natural Gas Development Authority

David Hudspeth

Abacus Finance Ltd.,

Grant Hunter

Grant W. Hunter JD MLS

Anthony Izzo

TMi Consulting

Lonnie Jackson

Rural Energy Enterprises

Wilson Justin

Mt. Sanford Tribal Consortium

Brad Keithley

Perkins Coie LP

Elizabeth Kennedy

Meera Kohler

Alaska Village Electric

Co-op, Inc.

Marilyn Leland

Alaska Power Association

David Marquez

NANA Development Corp

Chris Menefee

Hoefler Consulting Group

Andrew Niemiec

Knik Arm Bridge and Toll Authority

Arden Page

James Posey

Municipal Light & Power

Peter Raiskums

Denali Alaska FCU

Ashley Schmiedeskamp

Cook Inlet Region, Inc.

Debra Schnebel

Scott Balice Strategies

Lee Schoen

SeaWolf Consultants

Colleen Soberay

Ch2M HILL, Inc.

Jerry Strang

Nick Szymoniak

Enstar Natural Gas

Tim Wiepking

Richard Wilson

Richard G. Wilson and Associates

Committee Presentations

March 26, 2009 – Initial Meeting

April 10, 2009 – **Harry Noah** (Governor's Director of In-State Gas Pipelines)

April 24, 2009 – **Steve Haagen**son (Executive Director of AIDEA Energy)

May 1, 2009 – **Dan Clark** (ConocoPhillips)

May 8, 2009 – **Debra Schnebal** (Public/Private Partnerships)

May 22, 2009 – **Colleen Starring** (ENSTAR)

June 5, 2009 – **Carri Lockhart** (Marathon)

June 12, 2009 – **Dan Seamount** (Experienced Cook Inlet Exploration geologist)

June 19, 2009 – **Robert Pickett** (Regulatory Commission of Alaska)

June 26, 2009 – **Kurt Gibson** (Department of Natural Resources, Division of Oil and Gas)

July 10, 2009 – **John Lau** (ENSTAR) "Bullet Line" Gas Pipeline

July 17, 2009 – **Steve Gilbert** (Alaska Wind Energy)

August 7, 2009 – **Kate Giard & Tony Price** (Regulatory Commission of Alaska)

August 14, 2009 – **Don Anderson** (nuclear energy alternatives)

August 21, 2009 – **Scott Waterman** (Alaska Housing Finance Corporation)

August 28, 2009 – **Nick Goodman** (TDX Power) & **Bryan Carey** (AEA & AIDEA)

September 4, 2009 – **Daniel Patrick O'Tierney** (Chief Assistant Attorney General RAPA)

October 9, 2009 – **Mary Ann Pease** (MAP Consulting/Propane Project)

October 16, 2009 – **James Strandberg** (Alaska Energy Authority)

October 23, 2009 – **Kevin Banks** (Kevin Banks, Director of the Division of Oil and Gas)

November 11, 2009 – **Gene Therriault** (Governor's Chief Energy Advisor)

November 20, 2009 – **Meera Kohler** (President and CEO Alaska Village Electric Cooperative)

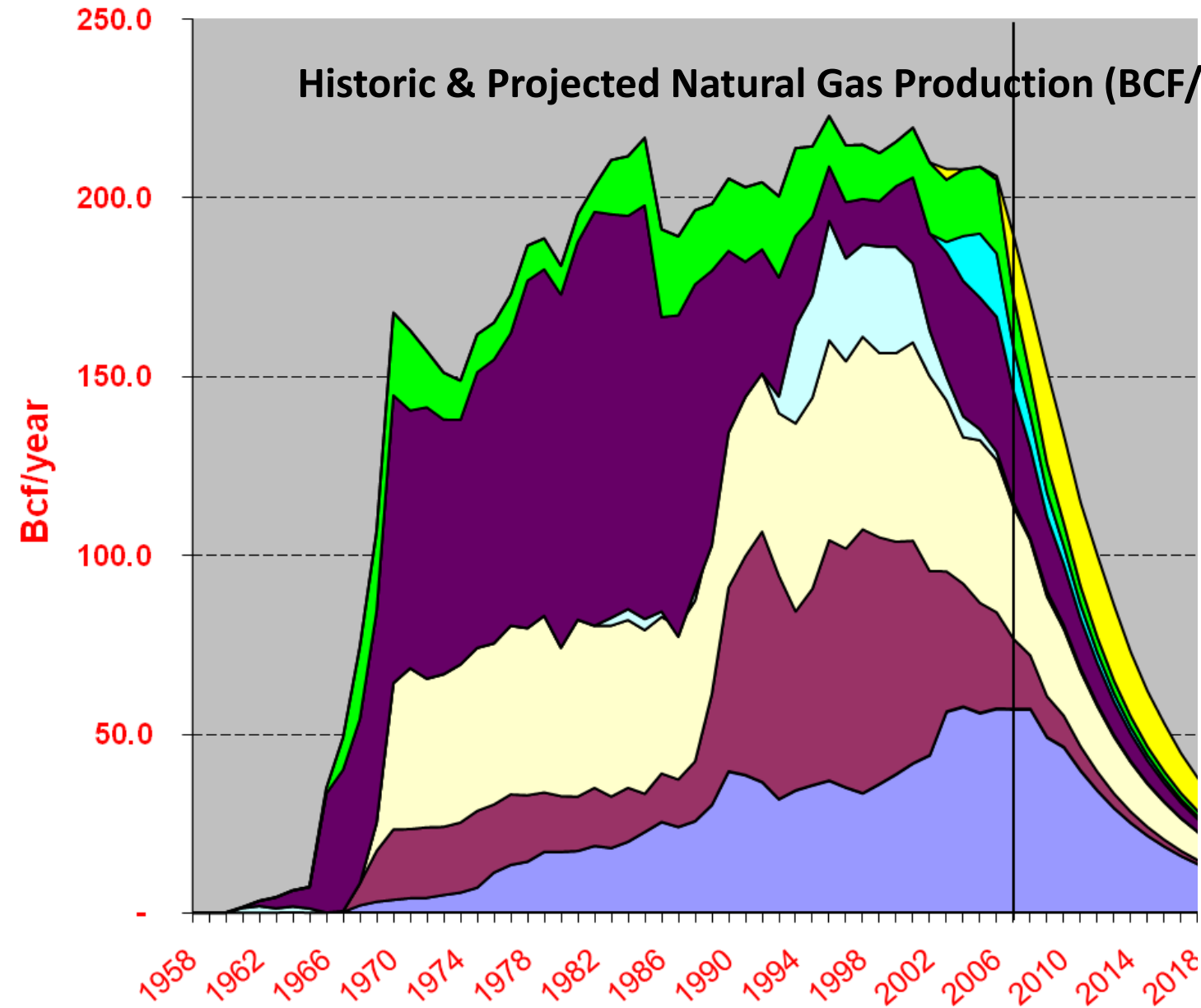
December 4, 2009 – **Roger Marks** (President of the Anchorage Chapter of the US Association for Energy Economics)

December 11, 2009 – **Kevin Harper** (Program Manager, Black & Veatch - GRETC)

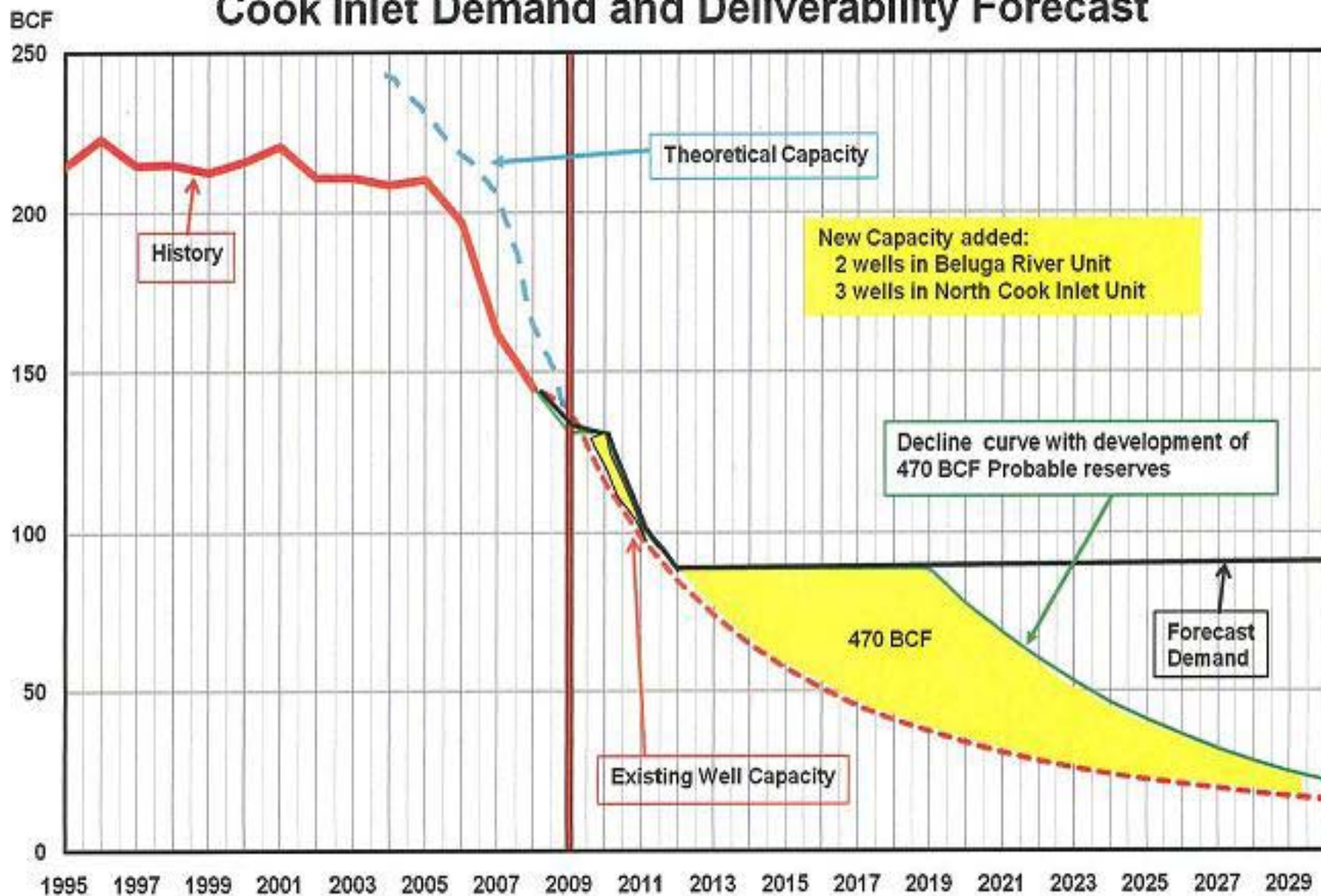
January 8, 2010 – **Rebecca Logan** (Chairman, Chugach Electric Association) & **Representative Charisse Millett**

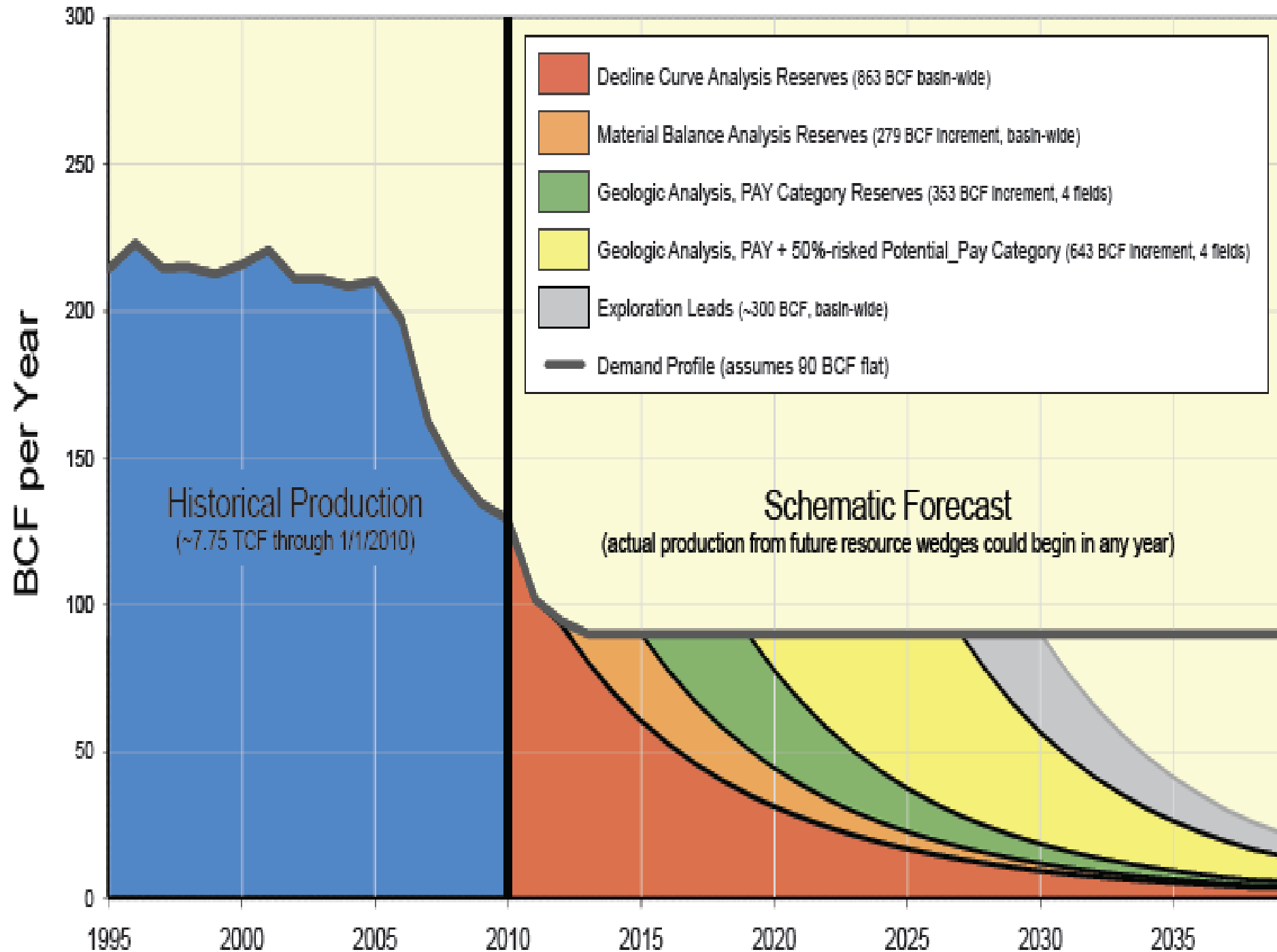
January 28, 2010 – **Harold Heinze** (CEO, Alaska Natural Gas Development Authority)

The Southcentral Gas Predicament



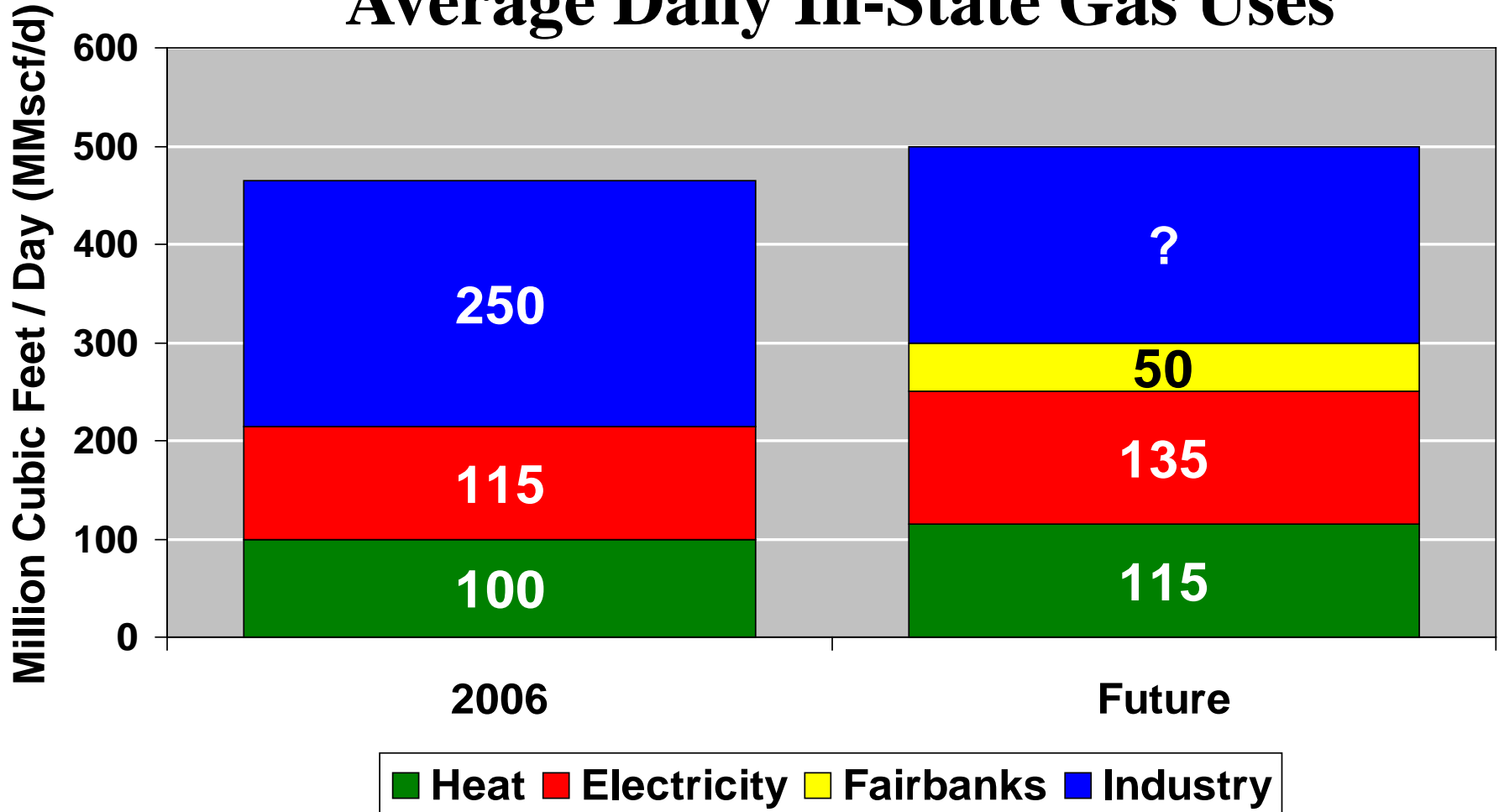
Cook Inlet Demand and Deliverability Forecast





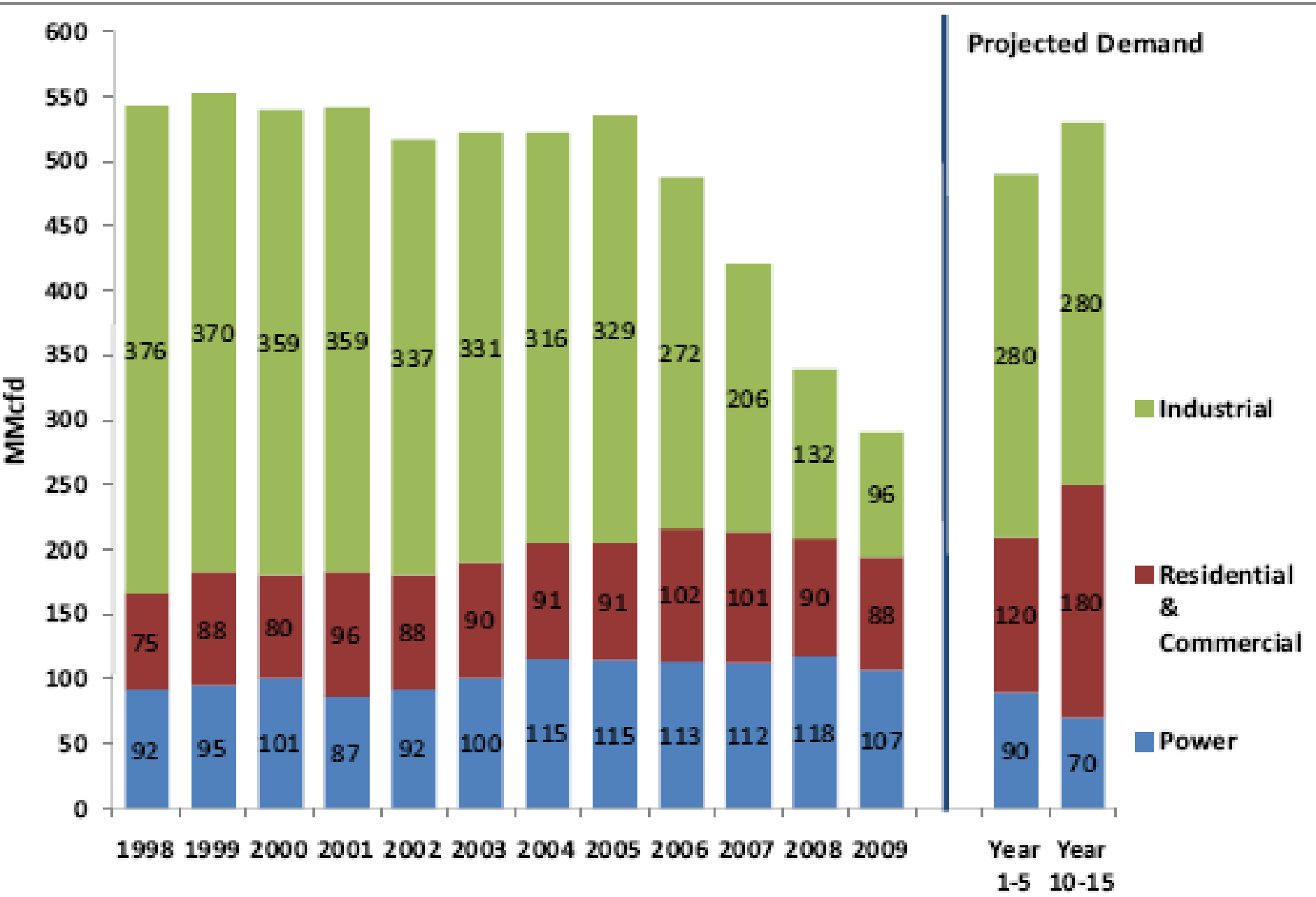
Deliverability

Average Daily In-State Gas Uses



$$(250 \text{ mmscfpd}) / (4.5 \text{ BCFPD}) = 5 \%$$

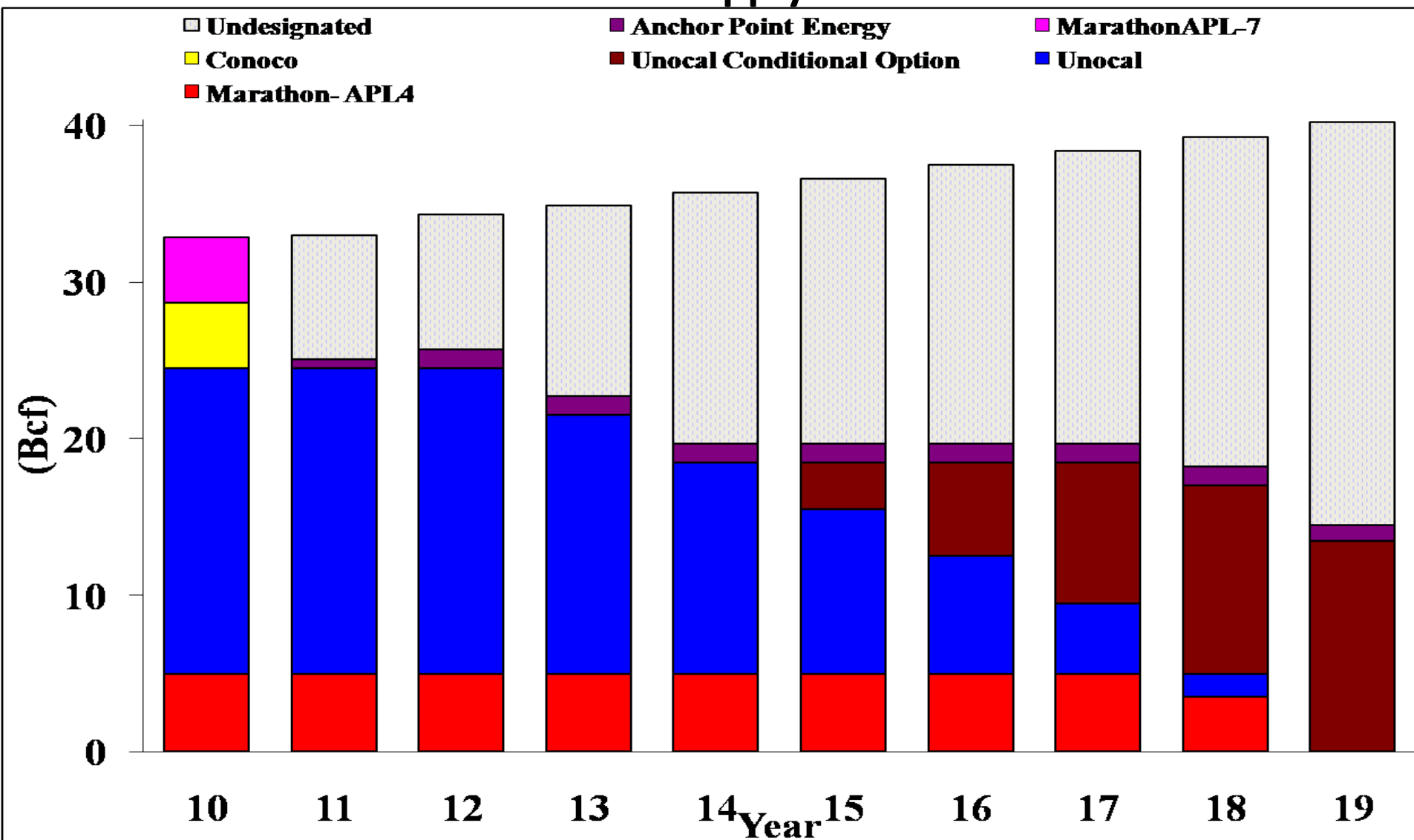
Historic and Projected Total Annual Average Daily Demand for Natural Gas



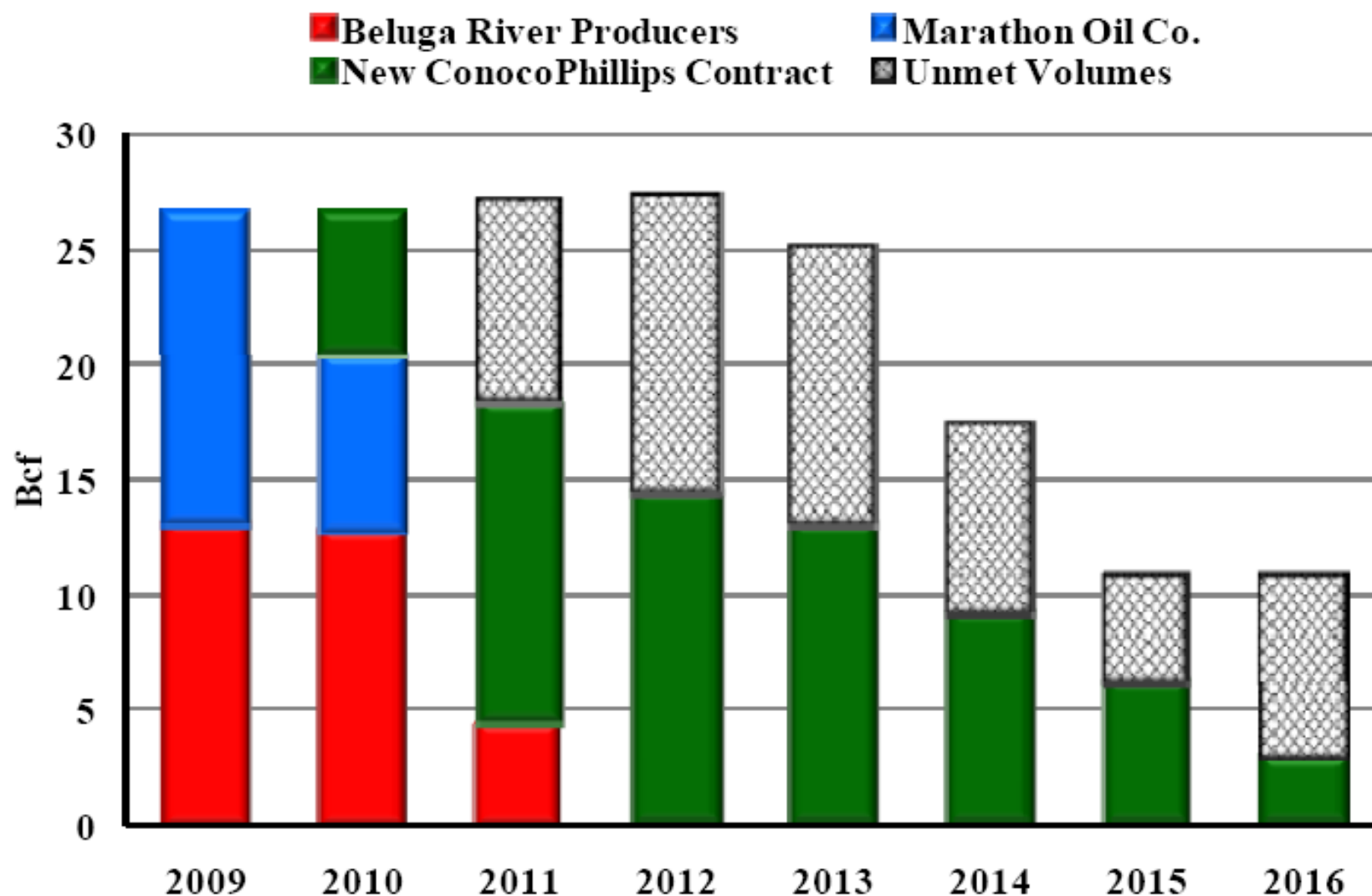
The Current Southcentral Energy Supply Scenario

The Not So Convenient Truth

Enstar Gas Supply Outlook

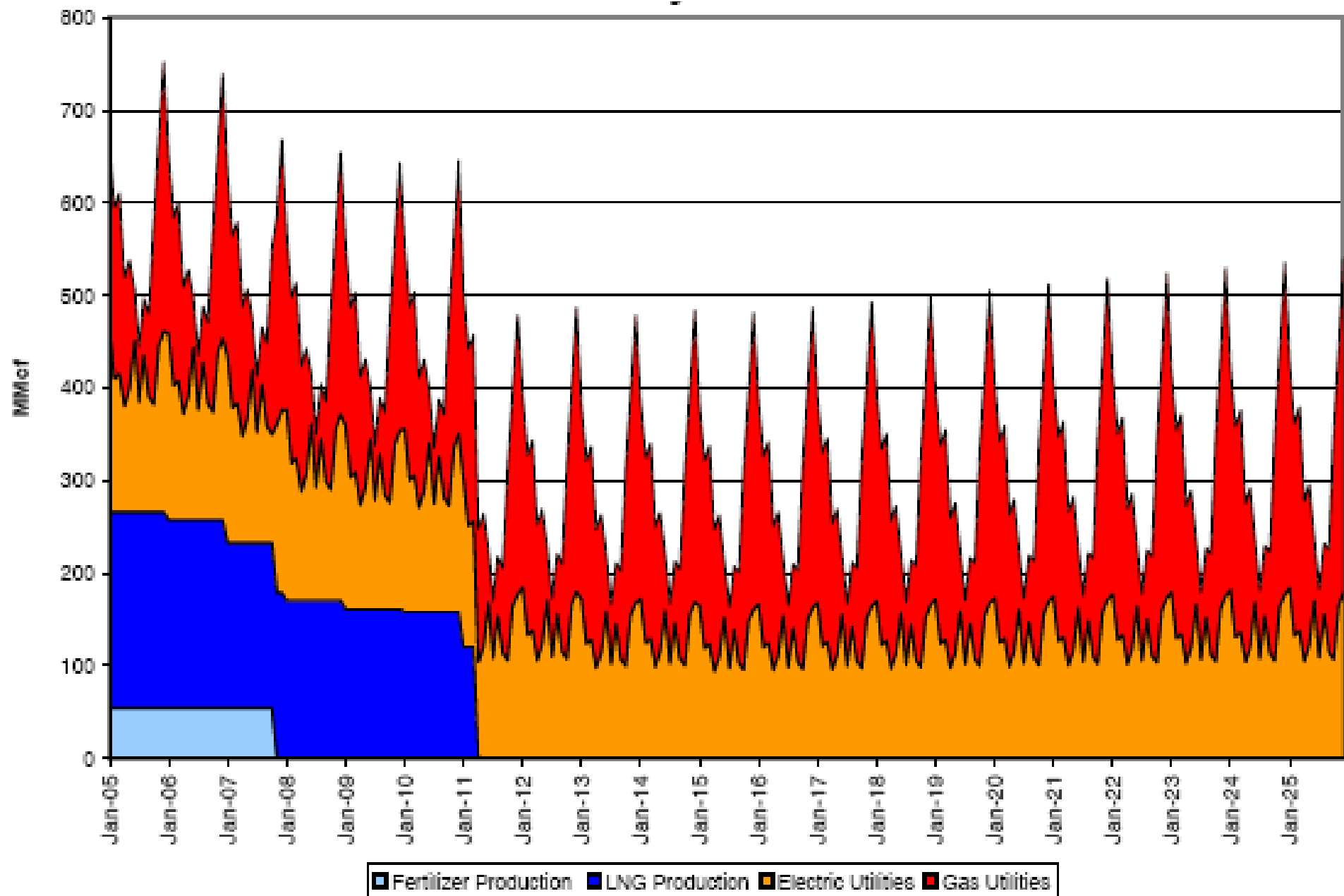


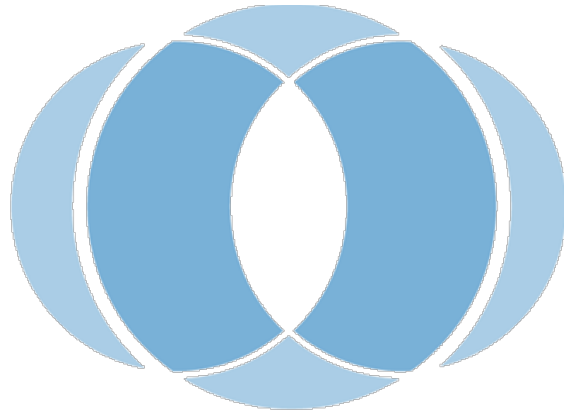
Chugach Electric Association Gas Supply



Source: Chugach Long-Term Natural Gas Volume Forecast, April 2009 Update

Natural Gas Demand Forecast Peak Daily Demand





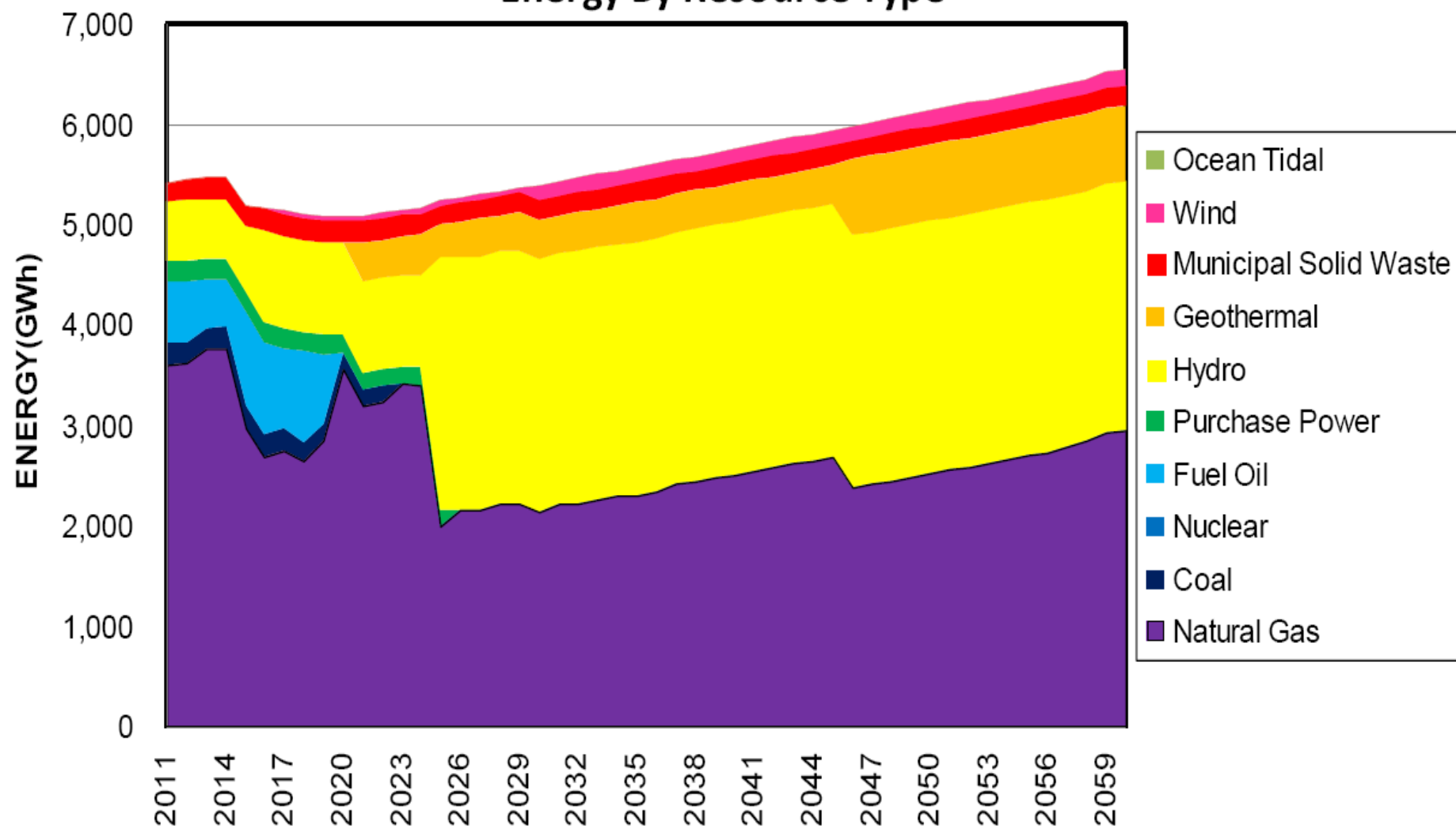
COMMONWEALTH
NORTH

***With Great Energy Opportunity Comes
Great Responsibility and Leadership***

Alaska has significant energy potential and a vast natural resource base. Many energy alternatives could play a critical role in the diversification of Alaska's energy portfolio in an economic and sustainable model. We must move forward to protect Alaska from the economic drag associated with continued volatility of world, national and local fuel prices, and offer stable opportunities for citizens and business to invest in the future.

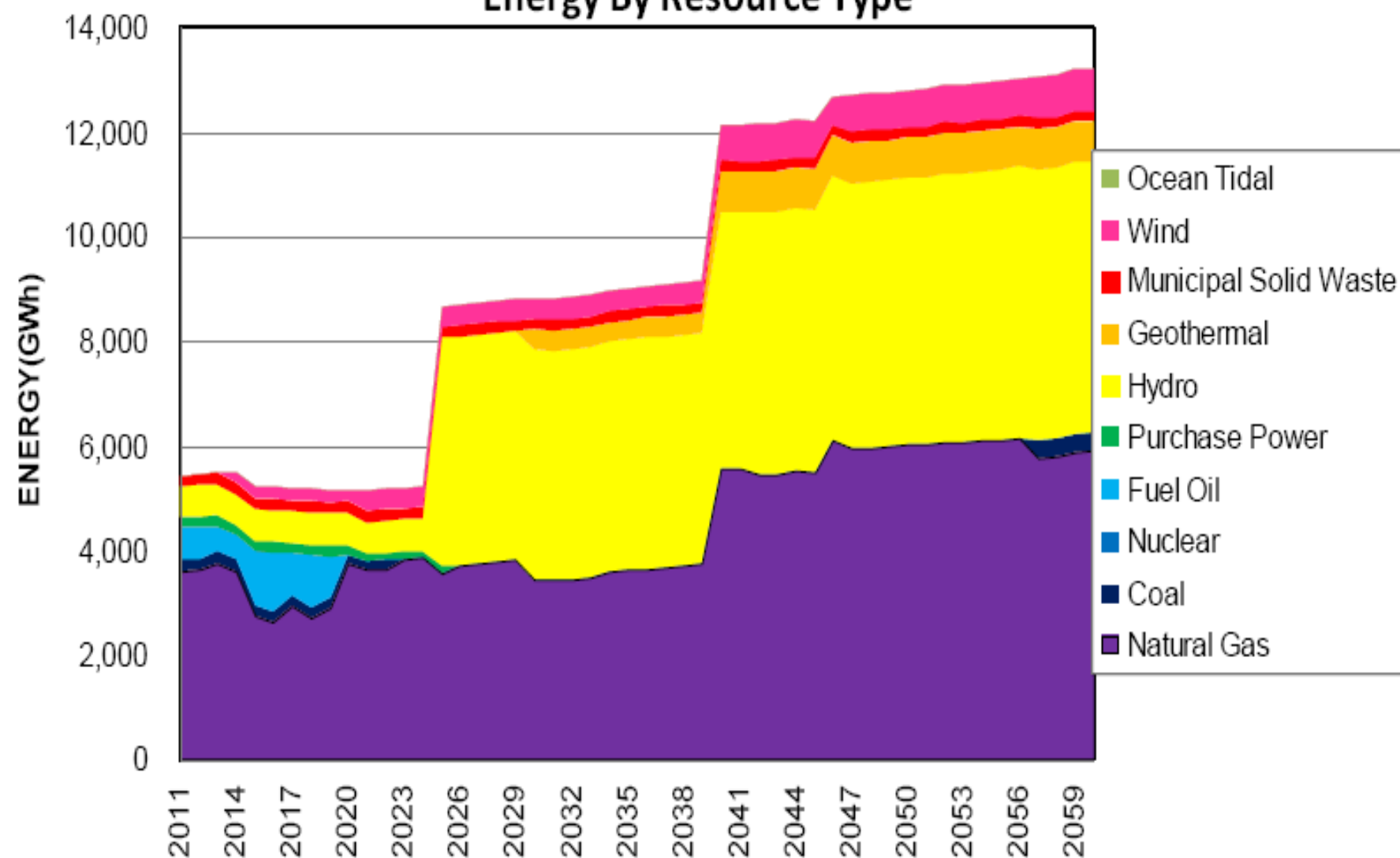
Results – Scenario 1B

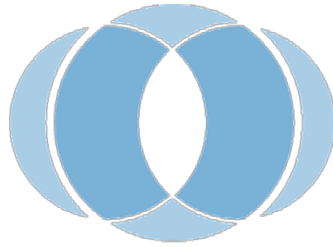
Energy By Resource Type



Results – Scenario 2B

Energy By Resource Type

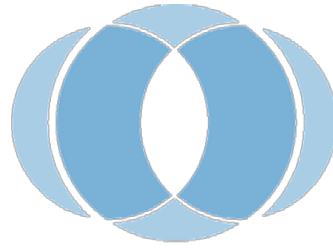




COMMONWEALTH
NORTH

Framing the Energy Issues Timeframe for Policy Decisions

- Now
- Transition
- Longer term



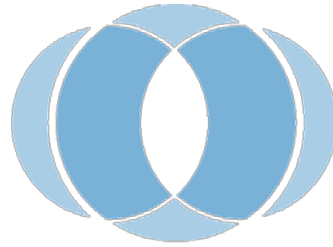
COMMONWEALTH
NORTH

Now - Deliverability Response

- Mayor's tri-color preparedness grid
 - Being prepared
 - Having a plan
 - Conservation
- Real savior – ML&P's ability to switch to all diesel generation – saving the natural gas for the rest of the heating grid

Energy Efficiency





COMMONWEALTH
NORTH

Intermediate Term Transitional Solutions

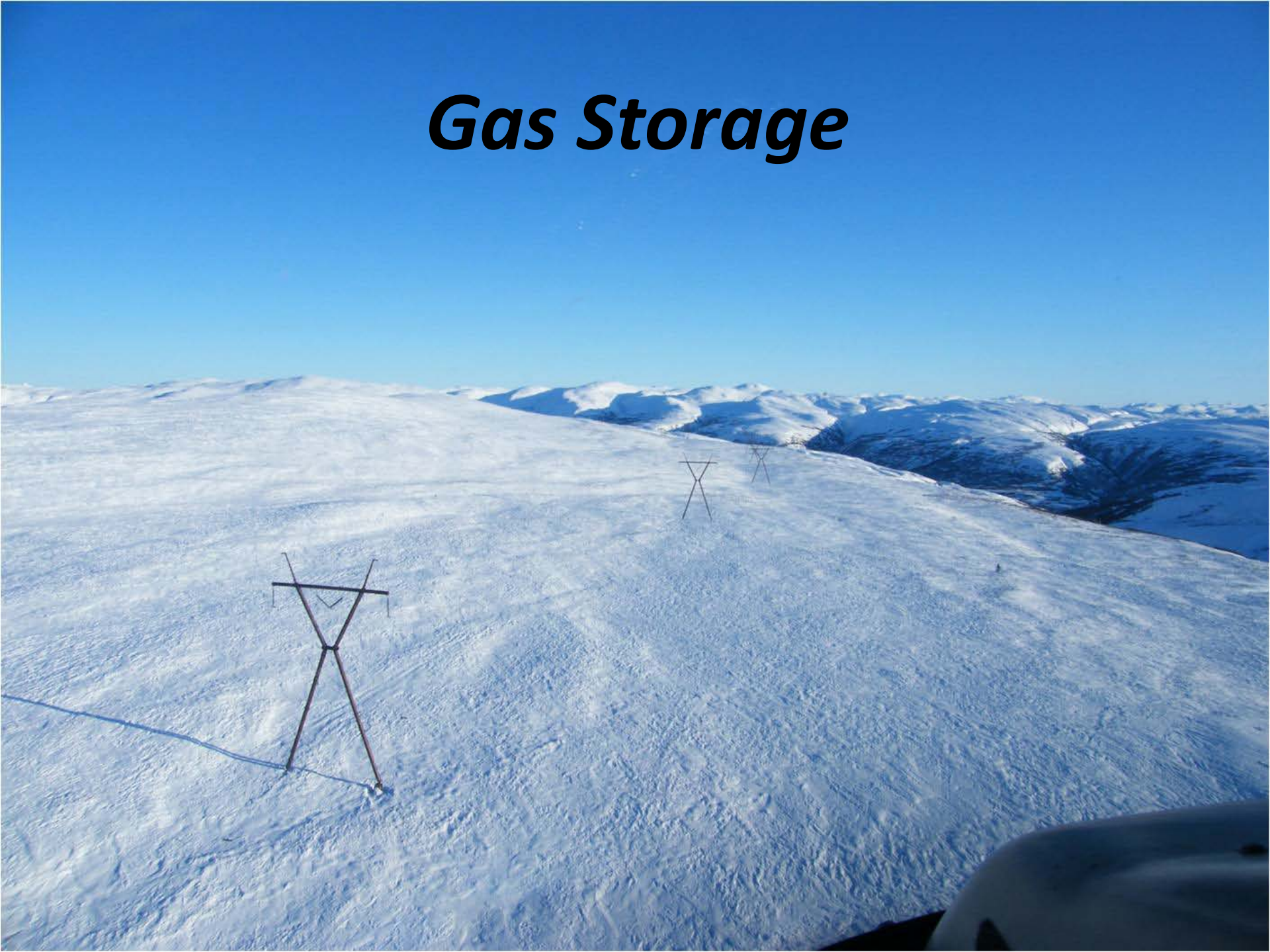
- Gas Storage
- Import LNG
- Drill more wells – Cook Inlet and elsewhere
- In-state gas line
- Renewables – Fire Island wind

Encourage Increased, Near Term Exploration and Drilling

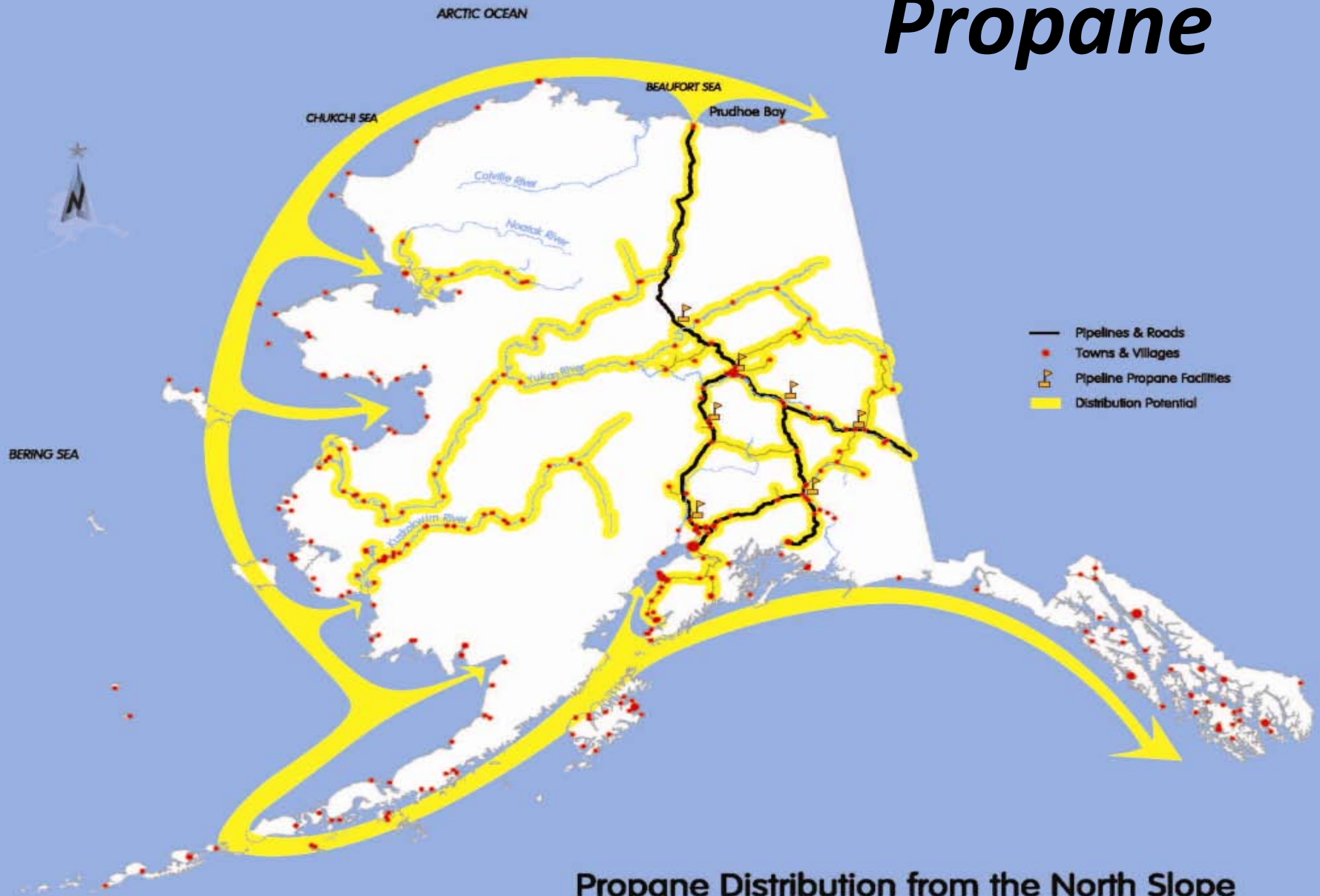


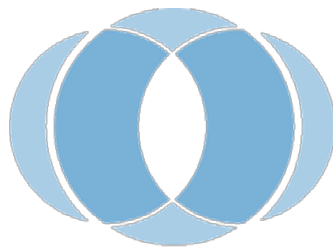
Photo by L. Grimaldi

Gas Storage



Propane

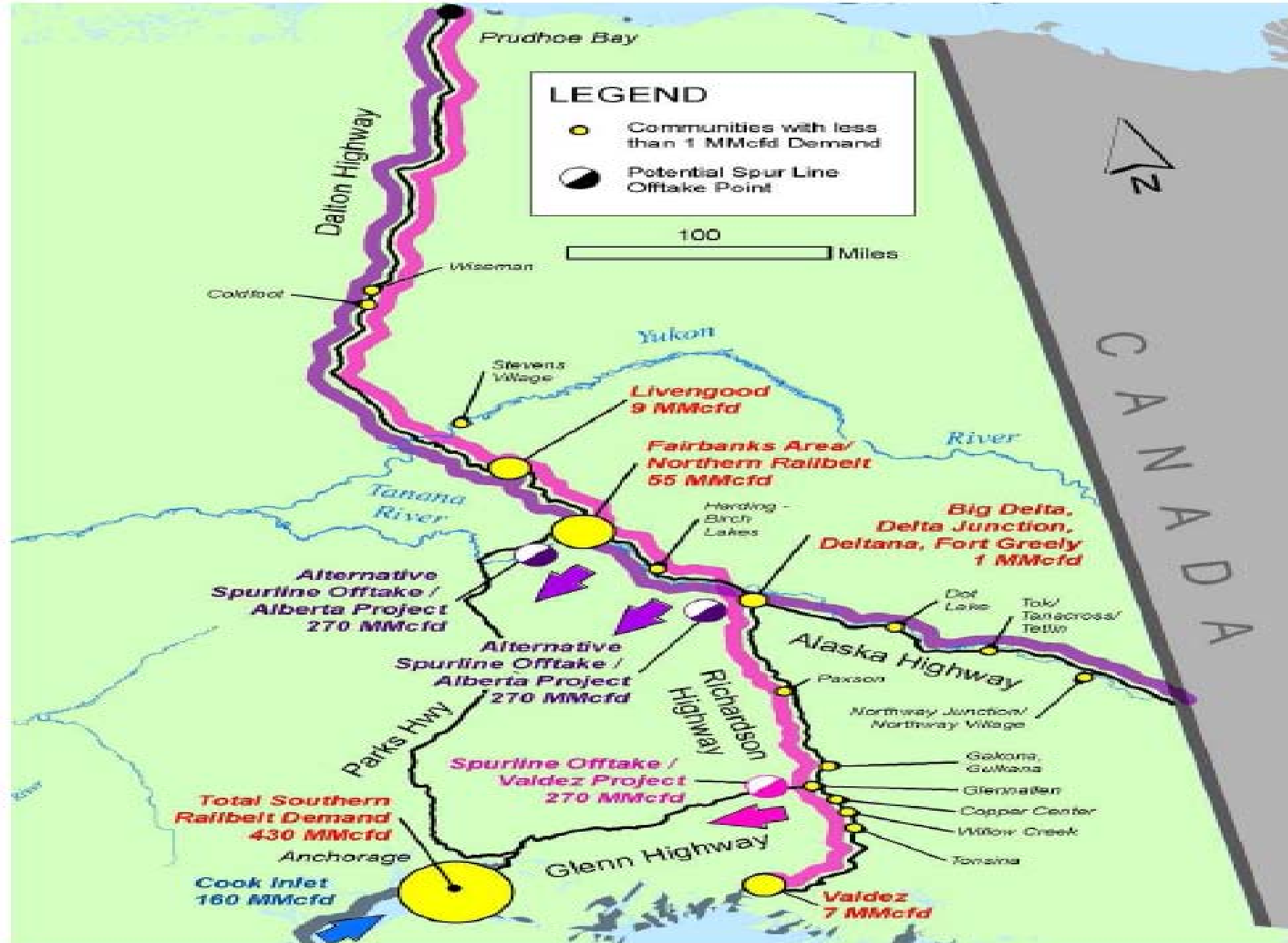




COMMONWEALTH
NORTH

Long Term Future Solutions

- Most options/Most time/Richness of Solutions
- Main line
- North Slope gas into Southcentral
- Susitna and other large scale renewable projects
- All have a *Big \$\$\$ price tag*



North Slope Gas Pipeline to Lower '48



Spur Line: Beluga to Fairbanks Natural Gas Pipeline System



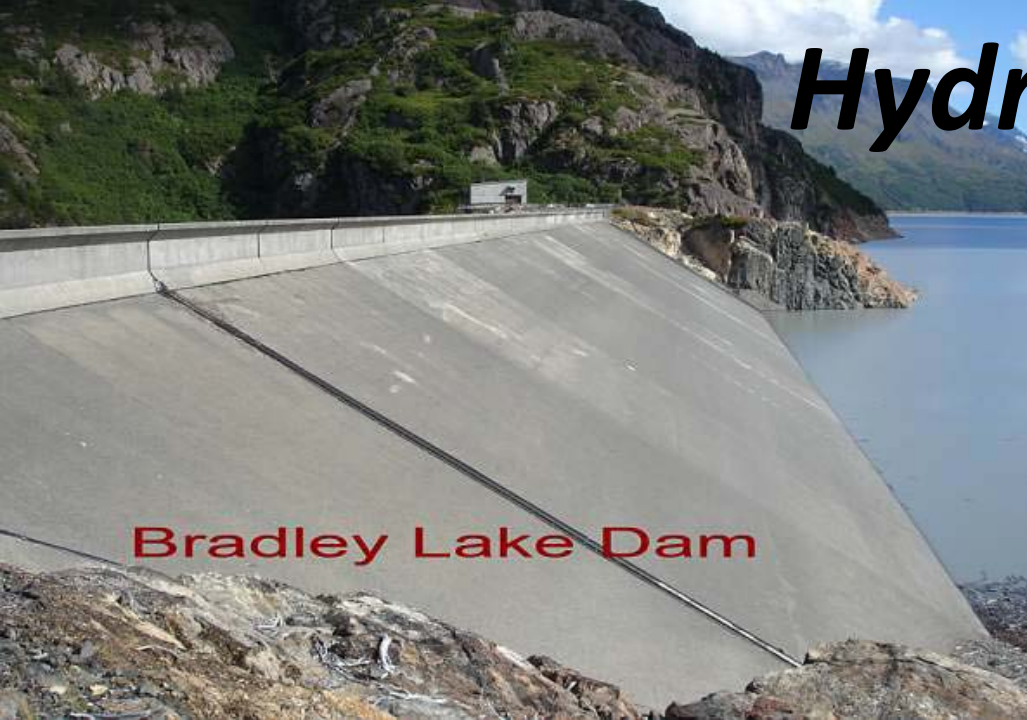
Bullet Line

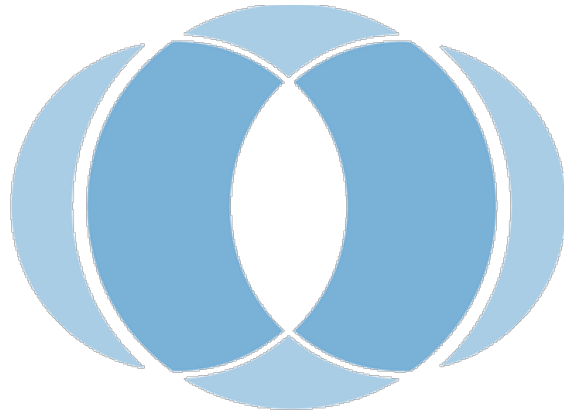
Bullet Line Service Tariffs for 24-inch

◆ 10-year COS
■ 20-year COS



Hydroelectric Energy



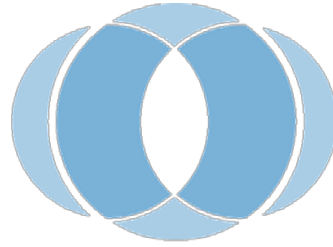


COMMONWEALTH
NORTH

Recommendations

Alaska is rich in natural energy sources and yet many Alaskans struggle to meet rising energy costs. Commonwealth North commissioned this study to evaluate solutions and facilitate dialogue relevant to energy policy throughout

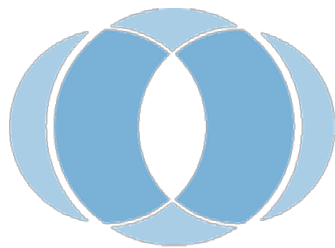
Alaska and develop guidelines and recommendations for a secure energy future. After extensive discussion and debate with involved and knowledgeable citizens, Commonwealth North formulated the following findings and actions items as a means for addressing the current energy issues along the Railbelt.



COMMONWEALTH
NORTH

Recommendation 1

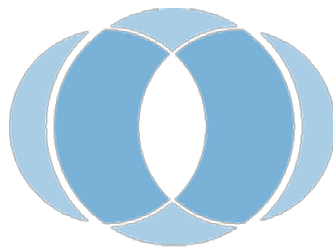
Assess the potential of a gas deliverability disruption in the near future due to the extreme load on the system coupled with potential deliverability constraints.



COMMONWEALTH
NORTH

Recommendation 2

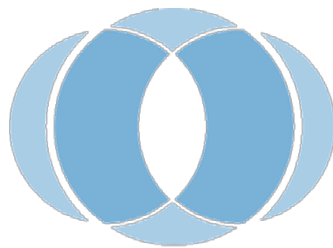
Address immediate deliverability and cost issues in both Railbelt and rural areas by leading implementation of stop-gap measures to encourage conservation, alternative energy and efficiency.



COMMONWEALTH
NORTH

Recommendation 3

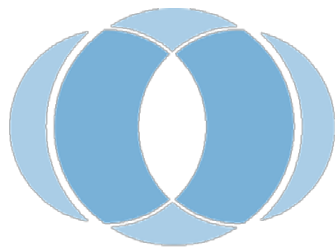
Make gas storage available as soon as possible to help utilities meet deliverability challenges.



COMMONWEALTH
NORTH

Recommendation 4

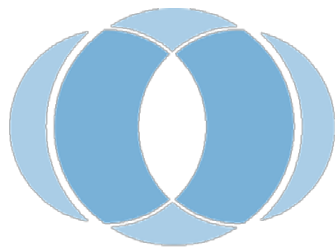
Establish a clear regulatory standard
for review of gas supply contracts.



COMMONWEALTH
NORTH

Recommendation 5

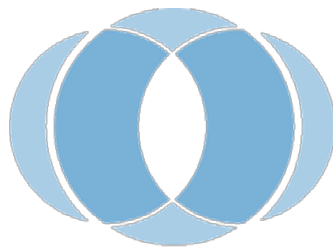
Implement a policy of fuel diversification with the long term goal of reduced dependence on diesel for much of rural Alaska.



COMMONWEALTH
NORTH

Recommendation 6

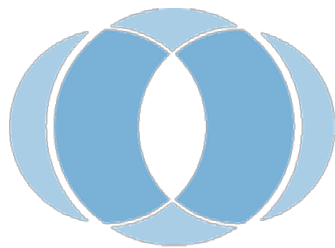
Adopt a strategy to diversify Alaska's energy portfolio within the next 15 years to include other viable energy alternatives including hydro, coal, propane, wind, geo-thermal, and other renewable energy projects.



COMMONWEALTH
NORTH

Recommendation 7

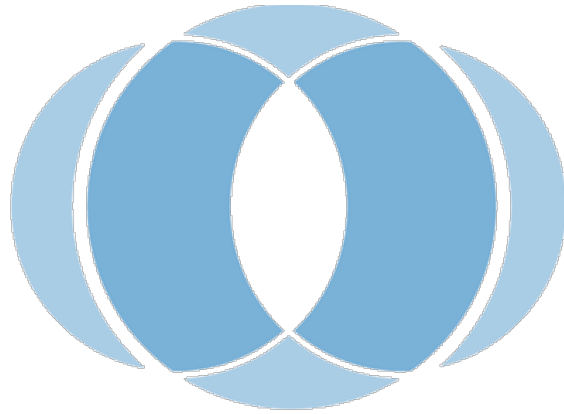
Encourage development of oil and natural gas potential and the construction of a natural gas pipeline.



COMMONWEALTH
NORTH

What Can be Done Now

Continue the energy dialogue and establish
a pro-active approach and reasoned
policy action on energy issues in Alaska.



COMMONWEALTH
NORTH

*Energy for a
Sustainable Alaska*

A Commonwealth North Energy Study