

# ***Gas line facts, reality — and a little politics***



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# Project update

- Open seasons closed 6 months and 4 months ago
- Bids were conditional (and confidential)
  - *Possible conditions: Construction delays, overruns, service interruptions, additional revenues, Alberta terminus, back-out deadline — it's not only the state*
- Complex commercial negotiations are under way
- No FERC deadline to conclude open seasons
  - *Terms become public when 'precedent agreements' ready*
- Full precedent agreements may not be public

# People are working

- APP sent 19 employees and contractors to recent meeting with FERC and federal permit agencies
- APP planning three dozen open houses in 2011; its first resource reports due to FERC in 2011
- FERC has a 14-member team assigned to project
- Federal pipeline safety office, BLM, Army Corps and other agencies fully engaged in project
- Applicants are cautious about overspending until they see some results from open seasons

# Shippers pay the bills

- Missed ‘deadlines’ for precedent agreements are not surprising, considering issues at stake
- Shippers generally take on project development financial risk with signed precedent agreements
- Alaskans need to remember producers take the commodity risk, pay the taxes and royalties
- Project needs creditworthy, ship-or-pay, long-term shippers more than it needs pipeline partners

# Managing risk

- ❑ LNG import terminal developers spent \$9 billion on new or expanded terminals for U.S. markets
- ❑ Long-term capacity contracts shield them from risk
- ❑ Shippers pay if they don't use contracted capacity
- ❑ Terminal owners still on the hook for some of the risk
- ❑ Several are seeking federal approval to add LNG export capacity — to play both markets
- ❑ Alaska line can't reverse course like an LNG terminal

# The unknowns

- How much will economy recover and demand build?
- How much will EPA limit greenhouse gas emissions?
- How much will utilities switch from coal to gas?
- How much will the federal government, states and municipalities constrain shale production?
- Will shale production costs rise (water handling)?
- Can Alaska gas compete on price with shale?
- What will be the price for gas 2020, 2030, 2040?

# What it will take for Alaska

- Greenhouse gas restrictions, new air quality rules must continue driving utilities from coal to gas
- Gas prices rebound as demand builds
- Community resistance makes life harder on shale; water quality issues drive up shale drilling costs
- Producers see market opportunity after 2020
- Alaska gas must be competitively priced to win market share; not a penny more than others

# The economics are tight

- Oil transportation costs (pipeline and tanker) eat up less than 10% of value of \$80/barrel
- Gas treatment and pipeline costs could consume two-thirds — or more — of \$6/mcf gas
- Gas shippers have to sign \$100+ billion in binding contracts (tariff) to underpin pipeline financing
- Less risk: 10 \$4 billion projects vs. 1 \$40 billion line
- State fiscal demands must take into account project risks; competition for investment dollars

# U.S. gas markets

- Most forecasts see \$6 - \$7 gas, but when?
- Credit Suisse forecasts \$6.50 gas in 2015
- Higher prices 2005-2008 prompted drilling activity
- Today's "\$4 gas" pre-sold (hedged) at higher prices
- Companies (Chesapeake) loaded up on debt
- Shale boom, recession, reduced demand collided to drive down demand and drive down prices
- Companies sell gas plays to cut debt, go after oil

# Loan guarantee politics

- Increase in federal guarantee will be difficult; Congress (and the public) skeptical of helping big borrowers, bigger business, biggest banks
- Guarantee authorization easier than appropriation
- Treasury and Department of Energy will 'score' the risk of loan default and assign percentage
- Congress may be asked to pay the risk fee
- \$30 billion guarantee: 1% risk = \$300 million fee, but if the risk is judged at 5% = \$1.5 billion fee

# Getting the most for Alaska

- Growing interest in a state-subsidized, small line from Prudhoe Bay to Fairbanks to Southcentral
- Hypothetical: For a multibillion-dollar state subsidy in a small in-state gas line, Alaska could get:
  - ***Gas to Fairbanks, and also gas to Southcentral  
(but with a state subsidy just to match today's prices)***
  - ***Few hundred million dollars a year in taxes & royalties***
  - ***Too small of a gas volume to justify new North Slope development that could stem decline in oil production***

# There is a better option

- Take those billions, negotiate and look at what could be done to help a large line to North America
- Merge the mainline and in-state pipeline projects
- The state could get for its money:
  - ***The lowest-cost gas for in-state consumers***
  - ***Tens of billions in taxes and royalties over life of project***
  - ***Moving so much gas would start an immediate push for new exploration to keep the line full for decades***

# In-state gas line report

- Customers for 500 mmcf/d in-state line; \$2 gas at wellhead; state construction subsidy to deliver \$7 gas to Southcentral utilities = \$4.2 billion
  - *Annual state revenues \$326 million*
- 4.5 bcf/d pipeline to Alberta; \$2 gas at wellhead
  - *Annual state revenues \$2.3 billion*
- Assumes no change in state tax structure
- Assumes state could affect big pipeline economics

# The LNG competition

- Qatar in December celebrated reaching its goal: 11 bcf/d of LNG capacity — world's largest
- \$100 billion of Australian LNG projects are under construction or under development
- Papua New Guinea to join LNG club in 2014
- Shell looking to bring first all-in-one production and liquefaction vessel online 2016 Australia
- Russia: Can't sell communism, so it's selling LNG

# LNG economics

- Supply and demand imbalance; a buyers' market
- Too many new projects in search of buyers
- All targeting same markets; looking for growth
- LNG competes with pipeline gas in China and India
- China looking to develop its own shale reserves
- Asian buyers want equity stake in new LNG projects
- Alaska's pipeline, liquefaction and shipping costs will be higher than competition for Asia markets

# Competition back home

- ❑ Fracking becoming about as popular as an oil spill
- ❑ More questions as it moves closer to urban areas
- ❑ Hydraulic fracturing for shale gas requires  
2 million to 5 million gallons of water per well
- ❑ Produced water disposal is the biggest issue
- ❑ Utilities official: “Environmental costs always go up.”
- ❑ Interior Department looking at new rules for  
hydraulic fracturing for gas on public lands

# More shale headlines

- New York State, Pittsburgh, Buffalo, Dallas suburb, Fort Worth school board, Ohio townships and Pennsylvania communities have delayed, banned or are considering bans on shale gas drilling
- Poll: 79% Pennsylvanians concerned about fracking
- Marcellus Environmental Fund gets \$1 million
- Pennsylvania may allow local impact fees on drilling
- West Virginia looking at big boost in drilling fees

# Shale costs

- Drilling, production costs from \$2 to \$6/mcf
- Does not include land acquisition, exploration, debt
- Higher production costs than Prudhoe Bay, but closer to market with much lower pipeline tariffs
- Water costs could add 25 cents to \$1/mcf
- Community opposition could restrict acreage
- State/local drilling rules could drive up expenses
- Liquids-rich shale plays drawing more investment

# Shale could help Alaska

- Shale could help by eliminating price spikes and getting utilities to think gas for the long term
- Worldwatch Institute report: “Price volatility remains the Achilles’ heel of natural gas.”
- No utility can afford repeat of \$14 price spikes
- Utility president: “Building a 1,000-megawatt, gas-fired plant doesn't make sense if you can't be sure what your fuel costs will be.”
- Stable gas supply encourages more consumption

# Utilities are thinking gas

- Clean Air Act is pushing utilities toward gas;  
EPA issued new regulations Jan. 2, more to come
- President's clean-energy initiative includes gas
- Interstate Natural Gas Association of America:  
Replacing half of oldest, least-efficient coal plants would boost demand 5.5 bcf per day
- Denver to go coal-free; TVA, Calpine, Xcel Energy, Constellation, Duke planning gas-fired plants

# Coal may not be king forever

- Half of the nation's coal-fired electrical generating plants are more than 40 years old
- Coal-fired capacity unchanged 1997 to 2008
- No new coal-fired power plants started 2009-2010
- Credit Suisse: Just 25% of coal-fired capacity fully scrubbed; \$40 billion to scrub half of the rest
- Utilities see more federal air quality regulations, but don't know what or when — they're nervous

# Local reality

- ❑ Alaska really needs the big gas pipeline project
- ❑ For the public revenues, for the jobs, for the gas, but mostly to bring in oil and gas investments
- ❑ Alaska isn't as attractive as an oil-only investment
- ❑ It's hard to justify investment dollars without a way to convert natural gas into profits
- ❑ It would be a mistake to count the 'fairness' of any gas line fiscal structure in tax dollars only

# Thank you

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