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- **What the Federal Coordinator’s office is doing these days:**
 - Public and agency review of the office’s draft permit-review policy will start this fall; federal law gives the office the authority to overrule permit conditions if the office determines the condition would “impair the expeditious construction” of the project.
 - Web-based permits matrix (of all federal permits required for the project) will go online in the next couple of weeks.
 - The office released a guide to all Alaska natural gas projects Aug. 15.
 - Posting a constant flow of reports and information on all things gas.
 - Attention Items Update will be issued week of Aug. 22; the office’s semi-annual update on project status, regulatory and routing issues.

- **Limitations of federal assistance:**
 - A big pipe to move Alaska gas to Lower 48 gets federal help.
 - An exclusively in-state or overseas export project is on its own.
 - Congress not likely to tap federal treasury for aid to China.
 - The Alaska line would move gas through Canada, not to Canada.
 - Increase in federal loan guarantee for project not likely at this time.

- **Status of the project at FERC and federal permitting agencies:**
 - FERC issued its notice of intent Aug. 1, formally starting EIS process.
 - No Valdez work contemplated in the notice of intent; applicant has not submitted data for the Valdez LNG option; likely an indication of open season bids for that option (though TransCanada/ExxonMobil is still open to accepting late proposals).
 - Draft resource reports (all 11) due in December 2011 to FERC.
 - FERC public scoping sessions start January 2012.
 - Project developer expected to spend \$209 million this year on field work. \$160 million state and \$50 million TC/Exxon.
 - FY12 heaviest spend so far; \$500 million in state AGIA reimbursement expected to run out FY14.
 - FERC has 12-15 staffers working on project; Exxon has an entire floor in Houston dedicated to the Alaska gas line.
 - Engineering, design, permitting work under way, concurrent with ongoing commercial negotiations between project sponsor and potential shippers.

- **Schedule:**
 - Draft resource reports December 2011.
 - Agency reviews six weeks.
 - Final field work by applicant in 2012.
 - Application to FERC October 2012 (as per AGIA deal with state).
 - If judged a complete application, FERC has 12 months for draft EIS.
 - 6 additional months for final EIS.
 - 2 months for FERC decision.
 - Project sanction 2015, according to APP's current timetable.
 - Start GTP modules, order steel pipe; construction 2016-2020; first gas 2020.

- **Politics and financing:**
 - Environmental work, engineering and design; that's the easy part.
 - Then there is Alaska politics and market economics.
 - AGIA is not a pipeline; never was and never will be. Oversold and mislead, misunderstood, mistaken.
 - AGIA is a way to get the building permit; not financing. Not the only way, but the way the state chose in 2007-2008.
 - AGIA has not failed unless you thought it was all you needed to do to get a gas line.
 - Think of an empty lot and you want to build a home.
 - Need building permit, water and sewer service, driveway and zoning approval.
 - Also need financing.
 - Need it all for a project.
 - Project needs shipping contracts in order to secure financing, and it is the shippers that will be taking the risks of:
 - ✓ Future gas supply sufficient to keep the line full.
 - ✓ Market prices for their product at the end of the line.
 - ✓ Construction cost overruns.

- You need state fiscal terms that recognize the risks and make the project an attractive investment in a capital-constrained world.

- AGIA is simply a path to the engineering and design and permits, which are of great value if you build the pipeline. If not, they are just costly certificates on the wall.

- Investment is a private-sector decision. But the state can help with reasonable fiscal terms.

- Lots of options for the state to discuss with the producers (the likely shippers): Back-end-loaded tax regime, deferrals, property tax considerations during construction, cost overrun backstop (discussed back in the 1980s during an earlier attempt at the project).

- Example: Think of a 50-year project. Could defer or reduce the state take on first 10 or 20 trillion cubic feet of gas, making it up on the next 60 or 70 tcf.

- The project must have large, long-term shippers under contract, same as the smaller in-state pipeline (500 million cubic feet per day). (As discussed by the in-state gas line team in the Monday, Aug. 15, presentation to the committee).
- For its requested \$400 million in state funding, the in-state project (Alaska Gasline Development Corp.) could end up with a building permit and no project unless it has shippers, just like the big line with its \$500 million in state assistance during development.
- The big line and the in-state line are not business competitors and Alaskans are wrong to play them against each other.
- The best solution for Alaska for the next 50 years is a big line with its economies of scale, state revenues and accompanying boost to oil and gas exploration – and the smaller in-state spur line to serve Fairbanks, Southcentral and as far as it can reach economically. Combining the two projects gives Alaska the best of both.
- Mileage-based tariff in state and federal law means lowest-cost to Alaskans from big line. Let others pay 98% of the cost of GTP and pipe while Alaska piggybacks on the project.
- Getting a gas line would do as much as anything else to put more oil into TAPS (trans-Alaska oil pipeline, which is running two-thirds empty these days after hitting its peak flow in 1988 at 2 million barrels a day).
 - Prudhoe Bay and Point Thomson gas only enough to keep the 4.5 bcf/day pipeline full less than 15 years; much more gas will be needed over the life of the project.
 - It's likely the first shipping contracts will be good for 20 years; pipeline likely to last 50 years or more.
 - Producers will need to look for more gas to keep their pipeline investment running at full capacity.
 - Which means they will find more oil.
 - Oil investment opportunities in Alaska look better if the gas can be sold for gas rather than treated as a liability.
 - This is especially true for costly offshore development; a gas line makes those investments much more attractive.
 - North Slope has been an oil-only play for 35 years, but it cannot continue for the next 35 years that way.
- **Status of natural gas markets:**
 - Utility demand is building; turning from coal to gas. Several bcf/d gain in just the past couple of years.
 - Nation building more storage (4+ tcf) to handle seasonal demand
 - Gas burns cleaner than coal.
 - Utilities nervous about EPA regulations, regardless of Congress.

- Long list of utilities already converting or planning to convert capacity:
 - ✓ Progress Energy, Carolinas, phasing out 11 dirtiest coal plants by 2014.
 - ✓ Wyoming getting first gas-fired power plant ever in 2014.
 - ✓ TVA reached a deal with the EPA to shut down almost 20 of its dirtiest coal plants by 2018.
 - ✓ First quarter 2011; coal share of nation's power generation load was the lowest in 30 years.
 - ✓ Michael Bloomberg has donated \$50 million to Sierra Club to fight coal-powered plants.
- Coal is not dead and never will die; but an opportunity for gas to capture the growth.
- Credit Suisse reports that 168 GW of the 340 GW U.S. coal-fired power plants lack scrubbers. One-third of U.S. coal-fired power plant capacity is more than 40 years old.
- If the trend continues, North America will need a lot more gas.
- Remember the Western Canadian Sedimentary Basin and other mature gas fields are just like Prudhoe Bay; they are in decline. Alberta conventional gas production was 14.2 bcf/d in 2001; province projects just 7.7 bcf/d in 2018.
- Today's \$4 natural gas price just simply does not matter! Think long term.
- Reuters this spring surveyed 27 industry analysts. Consensus was \$5.40 gas by 2013.
- Goldman Sachs sees gas at \$6 by 2015.
- Yes, shale gas production booming; 23% of U.S. supply.
- But hydraulic fracturing and wastewater handling are driving public debate.
- Department of Interior and EPA are reviewing fracking rules.
- States are starting to regulate fracking: New York, Pennsylvania, West Virginia, Arkansas, Texas, even Wyoming, have imposed new rules on fracking, drilling, water disposal.
- Wastewater disposal could become a costly issue.
- A San Francisco-based law firm has set up a special 13-member team just to handle fracking defense cases.
- Are utilities and other customers – and producers – willing to gamble that shale gas will meet all of the nation's needs for decades, all on its own? Or is there a market for other supplies? Is there a value to a diversified domestic supply of natural gas?

- Shale gas production has continued to recover sunk costs of land acquisition, exploration and drilling. But new plays will need higher prices than \$4 to attract investment.
- Which brings us back to the economics of the Alaska project and the need for long-term shipper contracts to secure financing.
- No one will build a \$40 billion project on spec.
- But Alaskans' expectations of never ending wealth and the heavy burden it places on the project are harmful.
- Never going to get filthy stikin' rich off gas like we did oil. But we can be wealthy.
- An anonymous reader posted a comment on the Anchorage Daily News website last week. The reader had calculated that the state could make just under \$1 billion a year from the gas line, calling it "chump change for Alaska."
- If I were governor, and I had a deal that provided jobs for Alaskans, affordable gas for Alaskans for decades, promoted tens of billions of dollars in investment in new oil and gas exploration, and still deposited almost \$1 billion a year in the state treasury – I'd sign it in a heartbeat.
- Alaskans need to count the benefits not JUST in tax dollars but in more oil, plentiful and affordable natural gas for in-state customers, overall economic development.
- So what about the much talked about LNG export possibilities?
- Yes, there are higher prices in Asia, prices linked to oil. But customers are talking about getting out of the price-linked handcuffs to \$110 oil; China especially.
- Price volatility exists in Asia, too, just like U.S. Spot LNG prices in Asia are \$14+ this summer but South Korea last July paid \$11.40.
- And remember there are significantly higher production costs for LNG. Wood Mackenzie report for the Alaska Gasline Port Authority estimates \$4.40 for liquefaction and gas losses during process.
- Valdez liquefaction plant capital costs estimated at \$24 billion by Wood Mackenzie.
- 20-year shipping commitments on 4.5 bcf/d line to Alberta = \$115 billion (gas treatment plant and pipeline tariffs).
- 20-year shipping commitments on 2.7 bcf/d LNG project to Valdez = \$168 billion (gas treatment plant and pipeline tariffs, plus liquefaction costs).

- Fiscal terms for producers an issue for LNG, the same as a pipeline to North American markets.
- Wood Mackenzie scenario puts net present value of a Valdez LNG project to the state 2021-2050 at \$124 billion vs. \$24 billion for producers. Is that fair? Producers take all the risk and the state makes five times as much money? This is an indication that the state's current fiscal regime for gas probably will not work.
- So where is the best market for Alaska gas? North America market on average day consumes almost three times as much natural gas as Japan, China, South Korea, India and Taiwan combined.
- North America market consumes five times as much gas as Asia Pacific nations import.
- Yes, Japan is buying 1 bcf/d additional LNG to cover loss of nuclear power. But Japanese electrical demand was down 8.6% last month from a year ago. It's not all about burning more gas; conservation will carry much of the load.
- China's domestic gas production has held steady with domestic decade for the past decade – and they haven't even started on their shale gas reserves
- China doubled its gas imports from July 2010 to July 2011, but twice as much of that increase came by pipe (Turkmenistan) as from LNG.
- Turkmenistan line to China cost \$22 billion; fully operational this year; 3 bcf/d capacity.
- And China has shale gas; just starting to explore and learn.
- Korea Gas (Kogas) yesterday signed a 26-year deal with Shell for 500 mmcf/d of Australia LNG, starting 2014, and an 18-year deal with Total for LNG 250 mmcf/d from Australia, Egypt and Norway starting 2013.
- That represents almost 20% of South Korea's 2010 demand.
- More than 18 bcf/d of new LNG export projects opened since 2009, under construction or ready to start building. All looking to serve Asia Pacific. A lot of competition for Alaska.
- Russia, Indonesia, Yemen, Qatar, Peru, Australia, Angola, Papua New Guinea and floating LNG are in the Asia Pacific market; more on the way.
- As for North America LNG export projects (Gulf Coast and British Columbia), none have all the permits, export licenses, customers and financing in place, and none have started construction.
- Closing: The market will decide, but the state can help get the best project for Alaska.