November 4, 2011

The Honorable Jeff Bingaman
Chairman
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

RE: Testimony on natural gas export for November 8, 2011 Committee hearing.

Chairman Bingaman and members of the Committee,

The United States is faced with a choice today as gas companies are lining up to export inexpensive American gas to foreign markets. We respectfully request that you oppose exporting our natural gas because of the harm to American consumers and our communities.

By choosing to export domestic gas, the United States will:

- Ship huge volumes of U.S. gas to foreign nations. One Liquefied Natural Gas (LNG) tanker can carry away 8.8% of the U.S. daily gas consumption with each shipment.
- Raise energy prices for every American. The U.S. Department of Energy estimated that export from just one Gulf Coast LNG terminal would raise gas prices at Henry Hub in Louisiana by up to 11.6%.[1]
- Undercut U.S. energy independence. While we import expensive OPEC oil, gas companies will make billions sending inexpensive natural gas overseas.
- Condemn land for LNG export. Shockingly, pipelines for LNG export have the power of eminent domain to take private farms and forest lands. Gas companies could condemn private land to send gas overseas, with no public need.
- Increase fracking. Exporting LNG will raise the price of gas, which will make gas companies more aggressive in fracking gas.

Oregon's leading newspaper, the *Oregonian* framed the idea of exporting U.S. natural gas this way:

> It's a jaw-dropping contradiction, a classic bait-and-switch. It's a thumb-in-the-eye of energy independence and the sort of numbing stupidity that, T. Boone Pickens argues, will confirm our legacy as "the dumbest generation."
>
> Yet we continue to stumble along, strung out between Big Oil and a diminished

president, moving inexorably toward the export of this nation's vast reserves of natural gas.[2]

Manufacturers and consumers oppose LNG export

With very little public debate on this important topic, the U.S. Department of Energy recently granted preliminary approval for one of America's first LNG export terminal at Sabine Pass, Louisiana. The *Oregonian* noted:

> Paul Cicio, president of the Industrial Energy Consumers of America (750,000 employees strong), has been raging against the U.S. Department of Energy policy for months.
>
> "They should be champions of energy independence," Cicio said Friday. "They're supposed to be looking out for the interests of the public. What this export policy does, instead, is benefit a small handful of exporters to the potential demise of every American and American-manufacturing competitiveness."[3]

In addition, consumer groups oppose LNG export because export will increase the price we pay to heat our homes. A June 16, 2011 letter to this Committee from the American Public Gas Association (APGA) stated:

> APGA is not anti-free trade, but when important policies collide, nations must make choices. APGA submits that the wise policy choice at this critical time in our history is to limit exports of natural gas so that we may realistically pursue the greater goal of energy independence. Those who argue that this matter is not an either-or situation are wagering our long-term national well-being on short-term profits.

Our organizations are also concerned about the effect on our communities, including the impact of building new gas export pipelines through family farms, forestland, and salmon habitat. Columbia Riverkeeper, Rogue Riverkeeper, Friends of Living Oregon Waters and Bark are conservation groups in Oregon and Washington that collectively have thousands of members adversely impacted by proposed LNG terminals and pipelines.

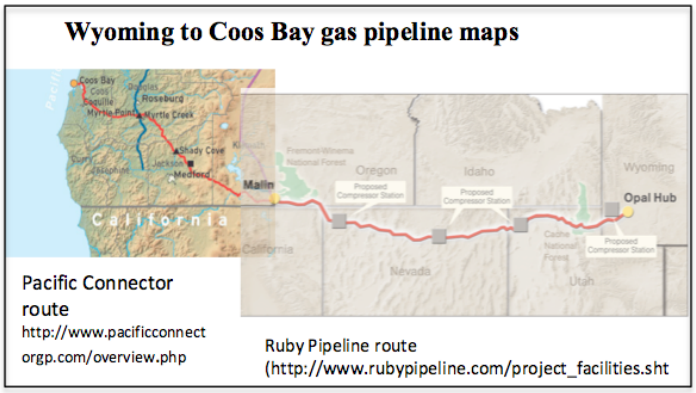
Facts on LNG export

1. LNG terminals were marketed and approved to import gas

All active LNG terminals were approved to import gas. Only in the last year, have the gas companies acknowledged that they intend to export gas. The low price of natural gas in the United States has triggered a wave of recent proposals to export U.S. gas in the form of Liquefied Natural Gas (LNG) into the high-priced Asian and European gas markets. In those markets, gas currently sells for 200% to 300% above U.S. prices.[4] Five of the existing ten LNG import terminals in the United States have publicly announced plans to start exporting LNG. The U.S. Department of Energy (USDOE) recently approved the first export proposal from Cheniere Energy's Sabine Pass LNG terminal in Louisiana.[5] Two LNG export projects have also been proposed in British Columbia[6] and Sempra is considering converting its Baja LNG import terminal to export.[7] All of these terminals were originally permitted to bring gas into the United States. Export proposals represent a major change in the U.S. gas market.

2. LNG companies repeatedly denied plans to export U.S. gas

Exporting U.S. gas as LNG is controversial. Companies behind two proposed LNG import terminals in Oregon have repeatedly denied that they intended to export U.S. gas. The companies told the public and regulators that LNG was needed to increase local gas supplies and therefore decrease consumer prices. As recently as March 17, 2011, the *World* newspaper in Coos Bay, Oregon, newspaper stated, "the project manager of the proposed Jordan Cove LNG terminal hastened Wednesday to disclaim a report that his company was considering changing the terminal into an export facility."[8] The Jordan Cove manager, Bob Braddock, stated that they have had never considered exporting LNG because export "is a stupid idea." [9] Just a few months later, Jordan Cove and other LNG companies now acknowledge plans to export shale gas from the Rockies to the high-priced Asian market. Mr. Braddock stated that their project "provides the most cost effective method for delivering LNG from North America to the Pacific Basin …"[10] Just months after calling LNG export "stupid," Mr. Braddock stated, "there is currently no need for import into North America… We acknowledge that if anything makes sense, its export."[11] Jordan Cove recently applied for a license to export LNG.



The price of gas in southern Oregon, for example, has averaged $3.9 per million btu (MMbtu) over the last year[12] while the price of LNG in Japan has risen above $14/MMbtu.[13] With China's recent announcement that it plans to increase natural gas use by 300% in the next five years, as well as Japan's increased reliance on LNG following the Fukushima nuclear crisis, Asian LNG prices are only expected to increase.[14]

3. LNG exports would increase consumer natural gas prices and reduce gas supplies

Currently, the U.S. does not have any LNG export terminals. There was an export terminal in Kenai, Alaska, but the plant recently closed after facing strong opposition from industrial and residential gas users who fought re-licensing of the terminal because it was threatening local gas supplies and causing high-gas prices. [15] [16] [17] Other than a fairly small volume of pipeline exports to Mexico and Canada, U.S. consumers alone determine the price for U.S. natural gas. This isolated market for U.S. gas provides U.S. consumers some of the world's lowest natural gas prices.

Opening the door to the export of U.S. gas as LNG, however, could significantly increase the price of natural gas that residential, commercial and industrial customers pay by forcing U.S. consumers to compete in the high-priced Asian and European gas market where LNG prices are often tied to the price of oil.

A recent price impact study relied on by the U.S. Department of Energy estimated that a proposed LNG export terminal in Sabine Pass, LA could increase Henry Hub gas prices (generally used as the U.S. benchmark) by as much as 11.6%.[18] An 11.6% increase in gas prices nationally could hit residential consumers already reeling from the economic downturn with an additional $10 billion a year in natural gas costs,[19] further reducing discretional spending and job growth. The potential for $10 billion in new profits for gas producers if just one export terminal is opened highlights the unprecedented new profits for gas producers if multiple terminals are opened. Exporting LNG will

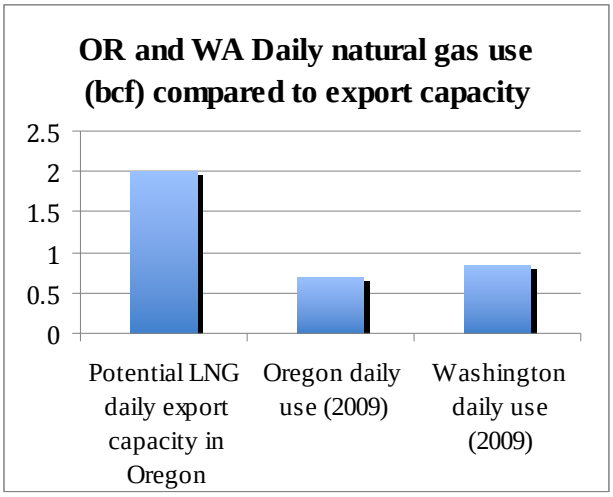
decrease U.S. gas supplies and force U.S. consumers into a bidding war with Asian and European buyers.

Major energy consumers are waking up to the reality of how LNG exports would drive a major increase in U.S. gas prices. The Industrial Energy Consumers of America, which represents American manufacturers with annual sales of $800 billion and 750,000 employees, is now fighting Cheniere's Sabine Pass LNG export plans. The industrial group stated that the price impact of exporting LNG would be "absolutely frightening."[20] T. Boone Pickens has similarly opposed LNG export plans saying, "We're truly going to go down as the dumbest generation…. It's bad public policy to export natural gas — a cleaner, cheaper domestic resource — and import more expensive, dirtier OPEC oil."[21]

It is important to recognize that the 11.6% increased price estimate for Cheniere's export proposal was prepared by Cheniere's own consultants as the company was seeking permission to export LNG. Cheniere likely underestimated the price impact to U.S. gas markets by ignoring the cumulative effect of the other LNG export terminals being planned.[22] Despite the potential for LNG export terminals to drive major prices increases, neither the U.S. Department of Energy nor the Federal Energy Regulatory Commission (FERC) nor any other agency has evaluated the cumulative impacts on gas price and lost jobs from globalizing the price of natural gas in the United States.

4. LNG export terminals could export a significant portion of U.S. gas production

A modern LNG tanker, called a QMAX (266,000 cubic meters[23]), can export more than 8.8 % of total U.S. daily gas production in a single tanker shipment.[24] A recent review by the Pittsburgh Times on the potential for LNG export to increase gas prices, found that if the five already proposed export terminals were approved they would collectively export 13.9% of total U.S. gas production.[25] This, however, did not include either of the potential Oregon terminals or other likely export terminals.



From a Northwest regional price perspective, a single LNG export tanker shipment could export up to 348% more gas than Oregon and Washington collectively use in a single day.[26] The newly opened Ruby Pipeline has just started sending gas from the Rockies Opal Hub in Wyoming to Malin, OR. This would create a direct connection between the proposed Jordan Cove LNG terminal in Coos Bay and the Wyoming gas hub.[27]

The daily capacity of the two proposed Oregon LNG terminals (1.2 bcf/day for Jordan Cove[28]; 1 bcf/day Oregon LNG)[29] would exceed Oregon's current daily gas use by 293% and combined gas consumption of both Oregon and Washington by 130%.[30] Two additional export terminals planned in Kitimat British Columbia, would further add to the Northwest price pressure by exporting gas currently supplied to Oregon and Washington, into the Asian LNG market.[31] Because Sempra has also acknowledged considering LNG export from its Costa Azul LNG terminal in Baja, Mexico, there is a very real potential for five west coast LNG export terminals in the near future. [32]

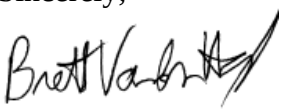
As a result, if even one LNG export terminal were opened in Oregon, those purchasing LNG from the terminal would quickly become the dominant gas purchasers and price setters in the Northwest. Given the high price of the Pacific Rim LNG market, gas suppliers would presumably only sell gas to Northwest consumers if they paid a price equal to or greater than the Pacific Rim buyers after subtracting the costs of export, thus leading to significantly increased domestic prices. While this price has not been calculated, there is little question that it would be significantly higher than the current prices being paid by Northwest consumers.

Exporting LNG to higher-priced foreign markets may increase natural gas fracking in the United States. Gas companies will have incentive to drill in more locations using unconventional methods to reach gas that is currently uneconomical.

Conclusion

Exporting domestic natural gas to foreign nations will raise gas prices, harm manufacturers and consumers, and degrade our communities by increasing natural gas pipelines and fracking. We respectfully request that this Committee call for an investigation on the price impact of LNG export to American consumers. The U.S. Department of Energy or FERC should not approve any LNG export licenses until a full evaluation is complete.

Sincerely,



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Ashland, OR

[1] U.S. DOE Order approving LNG export from Sabine Pass LNG terminal at p. 11, citing Navigant Consulting's Market Analysis for Sabine Pass LNG Export Project (NCI Report) at p. 14. See also Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[2] The Oregonian, September 17, 2011, http://www.oregonlive.com/news/oregonian/steve_duin/index.ssf/2011/09/so_much_for_energy_independenc.html

[3] U.S. DOE Order approving LNG export from Sabine Pass LNG terminal at p. 11, citing Navigant Consulting's Market Analysis for Sabine Pass LNG Export Project (NCI Report) at p. 14. See also Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[4] Henry Hub price of June 15, 2011 of $4.52/mmbtu. http://www.neo.ne.gov/statshtml/124.htm; Japanese pre-earthquake LNG prices from January 2011 were $11.96/mmbtu[4] and as of June 2011 had risen to nearly $ 14 mmbtu. Japan's December LNG Import Bill Rises 3.9% on Crude, Bloomberg News By Dinakar Sethuraman - Jan 30, 2011

http://www.bloomberg.com/news/2010-12-29/japan-s-november-lng-import-bill-increases-6-after-crude-oil-prices-gain.html; http://www.asahi.com/english/TKY201106220170.html.

[5] Sabine Pass terminal, LA (http://www.bloomberg.com/news/2011-05-20/cheniere-surges-45-after-u-s-expands-its-lng-export-approval.html); Freeport terminal, TX (http://www.platts.com/RSSFeedDetailedNews/RSSFeed/NaturalGas/6617360); Cameron terminal, TX(http://www.lngworldnews.com/usa-cameron-lng-asks-ferc-for-export-authorization/); Lake Charles terminal, LA (http://www.chron.com/business/energy/article/Energy-companies-seek-export-license-for-LNG-1693487.php); Cove Point terminal, MD (http://www.reuters.com/article/2011/02/01/lng-dominion-export-idUSN0122810220110201)

[6] a100.gov.bc.ca/.../1226700475492_8e248a8d30d89bba23feaf7f461ca741d9738f8be453.pdf; http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/another-bc-company-jumps-on-lng-bandwagon/article1955836/

[7] http://www.reuters.com/article/2011/06/07/lng-export-sempra-idUSN079630320110607

[8] http://theworldlink.com/news/local/article_c6798042-a186-5472-b8bb-c7bf7df57754.html

[9] http://theworldlink.com/news/local/article_c6798042-a186-5472-b8bb-c7bf7df57754.html

[10] Jordan Cove press release Aug. 18, 2011: http://www.oilvoice.com/post/Company_News_Release/Jordan_Cove_Confirms_Support_for_World_LNG_Series_Asia_Pacific_Summit_2011/4b35f2759d.aspx

[11] http://www.oregonlive.com/business/index.ssf/2011/09/el_paso_corp_launches_680-mile.html

[12] Platts LNG Daily, March 15, 2011.

[13] Japanese pre-earthquake LNG prices from January 2011 were $11.96/mmbtu[13] and as of June 2011 had risen to nearly $ 14 mmbtu. Japan's December LNG Import Bill Rises 3.9% on Crude, Bloomberg News By Dinakar Sethuraman - Jan 30, 2011 http://www.bloomberg.com/news/2010-12-29/japan-s-november-lng-import-bill-increases-6-after-crude-oil-prices-gain.html; http://www.asahi.com/english/TKY201106220170.html.

[14] http://gulfnews.com/business/markets/china-s-natural-gas-push-will-affect-energy-prices-1.829199

[15] http://www.adn.com/2008/11/09/583470/utility-petitions-to-block-gas.html

[16] http://www.adn.com/2010/07/08/1359592/give-southcentral-priority-on.html; http://www.adn.com/2010/08/14/1410315/parnell-backs-liquefied-natural.html

[17] http://www.adn.com/2011/02/09/1692895/ap-newsbreak-alaska-lng-plant.html

[18] U.S. DOE Order approving LNG export from Sabine Pass LNG terminal at p. 11, citing Navigant Consulting's Market Analysis for Sabine Pass LNG Export Project (NCI Report) at p. 14. See also Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[19] Estimate is based on a U.S. EIA 2010 reported marketed NG price of 4.16/ thousand cubic feet and total marketed production of 22,568,863 million cubic feet. http://www.eia.gov/dnav/ng/ng_prod_whv_dcu_nus_a.htm

[20] Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[21] Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[22] Market Analysis for Sabine Pass LNG Export Project. Prepared by Navigant Consulting. Aug. 23, 2010. On file with author.

[23] http://gcaptain.com/q-max-lng-tankers?4690

[24] **Tanker volume**: 1 cubic meter of LNG = 20,631 cubic feet of natural gas. See http://www.chemlink.com.au/conversions.htm One 266,000 cubic meter LNG tanker (a QMAX tanker) can carry the equivalent of 5,487,846,000 cubic feet of natural gas. (266,000 cubic meters x 20,631 cubic feet/cubic meter = 5,487,846,000 cubic feet of natural gas per tanker; equivalent of 5.487 bcf of natural gas. **Total U.S. natural gas production in 2010**. U.S. Energy Information Agency (U.S. EIA) reports 2010 annual U.S. marketed production at 22,568,863,000,000 cubic feet. http://205.254.135.24/dnav/ng/ng_prod_sum_dcu_NUS_a.htm 22,568,863,000,000 cubic feet per year is the equivalent daily marketed production of 61,832,501,370. (22,568,863,000,000 cubic feet per year x 1 year/365 days= 61,832,501,370 cubic feet/day.) **Tanker size compared to average daily U.S. marketed production.** 5,487,846,000 cubic feet in a single LNG tanker is 8.8% of average daily U.S. marketed natural gas production in 2010 of

61,832,501,370 cubic feet. (5,487,846,000 cubic feet per tanker/ average U.S. marketed production 61,832,501,370 = 0.08875 = 8.8 % of average daily U.S. marketed natural gas production in 2010).

[25] Natural gas prices set to jump with exports - Pittsburgh Tribune-Review http://www.pittsburghlive.com/x/pittsburghtrib/s_741745.html#ixzz1QOd1TrPm

[26] **Current OR, WA gas usage.** Total annual consumption for Oregon: 248,779 mcf (US EIA, 2009 at http://205.254.135.24/dnav/ng/ng_prod_sum_dcu_sor_a.htm); Washington: 310,112 mcf (US EIS 2009 http://205.254.135.24/dnav/ng/ng_cons_sum_dcu_SWA_a.htm). Equivalent average consumption Oregon: 248,779 mcf/year x (1 year/365 days)= 681 mcf= 0.681 bcf; Washington: 310,112 mcf/year x (1 year/365 days)= 849 mcf = 0.849 bcf. Combined Oregon and Washington average daily gas consumption of 1.531 billion cubic feet(bcf) (OR average daily use of 0.681bcf + WA average daily use of 0.849 bcf= 1.531 bcf combined OR and WA use. **LNG tanker volume**: 1 cubic meter of LNG = 20,631 cubic feet of natural gas. See http://www.chemlink.com.au/conversions.htm One 266,000 cubic meter LNG tanker (a QMAX tanker) can carry the equivalent of 5,487,846,000 cubic feet of natural gas. (266,000 cubic meters x 20,631 cubic feet/cubic meter = 5,487,846,000 cubic feet of natural gas per tanker; equivalent of 5.487 bcf of natural gas. **Total U.S. natural gas production in 2010**.

[27] http://www.oregonlive.com/business/index.ssf/2011/09/el_paso_corp_launches_680-mile.html

[28] www.ferc.gov/industries/gas/indus-act/lng/LNG-approved.pdf

[29] www.oregonlng.com/pdfs/olng_fercfiling_rls_10-10-08.pdf

[30] **Current OR, WA gas usage**. 2009 US EIA data gas usage: OR average daily gas usage of 0.681 bcf/day; WA average daily gas usage of 0.849 bcf/day, compared to 2 bcf/day of initial export capacity (1 bcf/day for Jordan Cove approved by FERC; 1 bcf/day Oregon LNG proposed for approval.)

[31] a100.gov.bc.ca/.../1226700475492_8e248a8d30d89bba23feaf7f461ca741d9738f8be453.pdf; http://www.lngworldnews.com/canada-jv-proposes-second-kitimat-lng-terminal/

[32] http://www.reuters.com/article/2011/06/07/lng-export-sempra-idUSN079630320110607