



The EXPORT threat

LNG development and
US natural gas exports

“Within the next five years, the US could become a major natural gas exporter in the form of LNG. It already produces a daily 57 billion cubic feet a day of natural gas. Selling a mere 10% of that abroad would make it the largest LNG exporter in the world.”

– Tony D’Altorio, Investment U 10/2010

Monica Vaughan
Friends of Living Oregon Waters
Pacific Environment



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Impacts of exporting via LNG

- Create an even larger market to drive extraction of domestic natural gas
- Raise natural gas rates by forcing us to compete on the global market for US gas
- Encourage more coal: if natural gas price goes up, then we will lean back on “cheap coal”
- LNG undercuts “energy independence” as well as energy efficiency, conservation & renewables

LNG VALUE CHAIN



Gas production



Liquefaction plant



Shipping

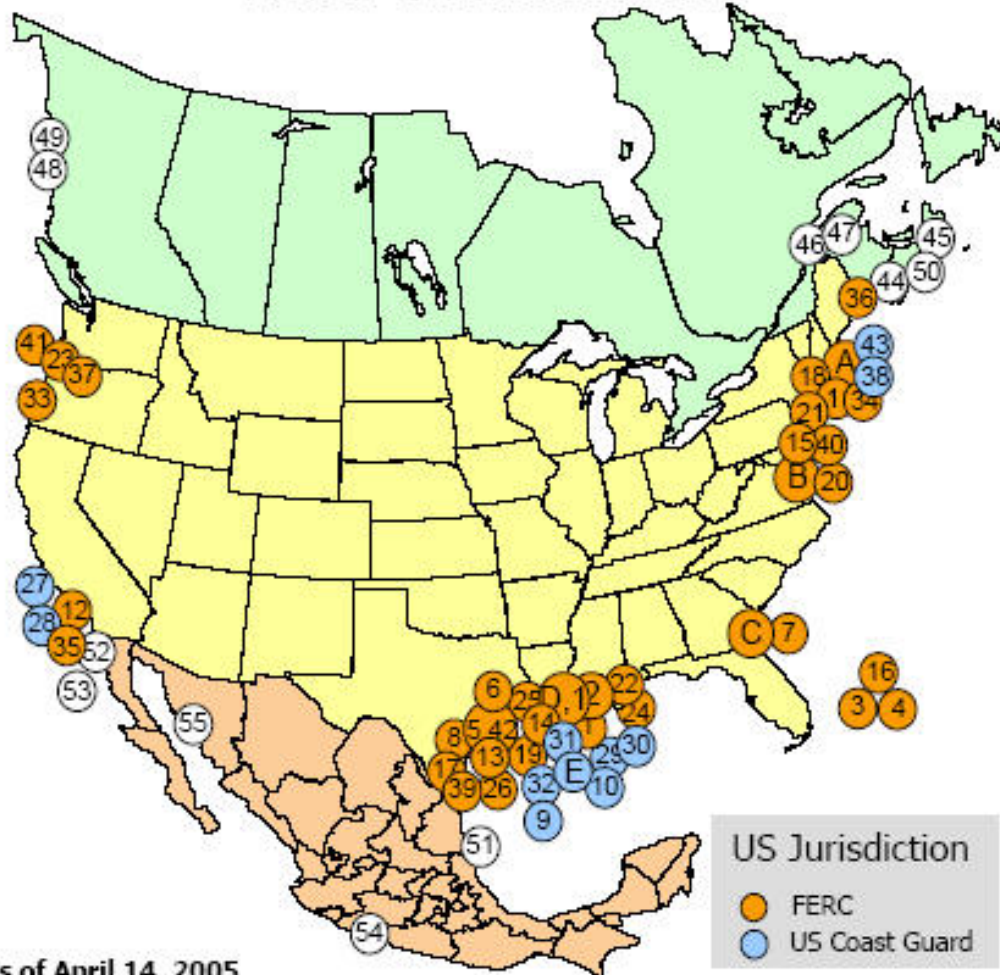


Regasification terminal



Pipeline delivery

Existing, Proposed and Potential North American LNG Terminals



As of April 14, 2005

* US pipeline approved; LNG terminal pending in Bahamas
 ** These projects have been approved by the Mexican and Canadian authorities

Office of Energy Projects

CONSTRUCTED

- A. Everett, MA : 1.035 Bcfd (Tractebel - DOMAC)
- B. Cove Point, MD : 1.0 Bcfd (Dominion - Cove Point LNG)
- C. Elba Island, GA : 0.68 Bcfd (El Paso - Southern LNG)
- D. Lake Charles, LA : 1.0 Bcfd (Southern Union - Trunkline LNG)
- E. Gulf of Mexico: 0.5 Bcfd, (Gulf Gateway Energy Bridge - Excelerate Energy)

APPROVED BY FERC

- 1. Lake Charles, LA: 1.1 Bcfd (Southern Union - Trunkline LNG)
- 2. Hackberry, LA : 1.5 Bcfd, (Sempra Energy)
- 3. Bahamas : 0.84 Bcfd, (AES Ocean Express)*
- 4. Bahamas : 0.83 Bcfd, (Calypto Tractebel)*
- 5. Freeport, TX : 1.5 Bcfd, (Cheniere/Freeport LNG Dev.)
- 6. Sabine, LA : 2.6 Bcfd (Cheniere LNG)
- 7. Elba Island, GA: 0.54 Bcfd (El Paso - Southern LNG)
- 8. Corpus Christi, TX: 2.6 Bcfd, (Cheniere LNG)

APPROVED BY MARAD/COAST GUARD

- 9. Port Pelican: 1.6 Bcfd, (Chevron Texaco)
- 10. Louisiana Offshore : 1.0 Bcfd (Gulf Landing - Shell)

PROPOSED TO FERC

- 11. Fall River, MA : 0.8 Bcfd, (Weaver's Cove Energy/Hess LNG)
- 12. Long Beach, CA : 0.7 Bcfd, (Mitsubishi/ConocoPhillips - Sound Energy Solutions)
- 13. Corpus Christi, TX : 1.0 Bcfd (Vista Del Sol - ExxonMobil)
- 14. Sabine, TX : 1.0 Bcfd (Golden Pass - ExxonMobil)
- 15. Logan Township, NJ : 1.2 Bcfd (Crown Landing LNG - BP)
- 16. Bahamas : 0.5 Bcfd, (Seafarer - El Paso/FPL)
- 17. Corpus Christi, TX: 1.0 Bcfd (Ingleside Energy - Occidental Energy Ventures)
- 18. Providence, RI : 0.5 Bcfd (Keyspan & BG LNG)
- 19. Port Arthur, TX: 1.5 Bcfd (Sempra)
- 20. Cove Point, MD : 0.8 Bcfd (Dominion)
- 21. LI Sound, NY: 1.0 Bcfd (Broadwater Energy - TransCanada/Shell)
- 22. Pascagoula, MS: 1.0 Bcfd (Gulf LNG Energy LLC)
- 23. Bradwood, OR: 1.0 Bcfd (Northern Star LNG - Northern Star Natural Gas LLC)
- 24. Pascagoula, MS: 1.3 Bcfd (Cassette Landing - ChevronTexaco)
- 25. Cameron, LA: 3.3 Bcfd (Creole Trail LNG - Cheniere LNG)
- 26. Port Lavaca, TX: 1.0 Bcfd (Calhoun LNG - Gulf Coast LNG Partners)

PROPOSED TO MARAD/COAST GUARD

- 27. California Offshore: 1.5 Bcfd (Cabrillo Port - BHP Billiton)
- 28. So. California Offshore : 0.5 Bcfd, (Crystal Energy)
- 29. Louisiana Offshore : 1.0 Bcfd (Main Pass McMoran Exp.)
- 30. Gulf of Mexico: 1.0 Bcfd (Compass Port - ConocoPhillips)
- 31. Gulf of Mexico: 2.8 Bcfd (Pearl Crossing - ExxonMobil)
- 32. Gulf of Mexico: 1.5 Bcfd (Beacon Port Clean Energy Terminal - ConocoPhillips)

POTENTIAL SITES IDENTIFIED BY PROJECT SPONSORS

- 33. Coos Bay, OR: 0.13 Bcfd, (Energy Projects Development)
- 34. Somerset, MA: 0.65 Bcfd (Somerset LNG)
- 35. California - Offshore: 0.75 Bcfd, (Chevron Texaco)
- 36. Pleasant Point, ME : 0.5 Bcfd (Quoddy Bay, LLC)
- 37. St. Helens, OR: 0.7 Bcfd (Port Westward LNG LLC)
- 38. Offshore Boston, MA: 0.8 Bcfd (Northeast Gateway - Excelerate Energy)
- 39. Galveston, TX: 1.2 Bcfd (Pelican Island - BP)
- 40. Philadelphia, PA: 0.6 Bcfd (Freedom Energy Center - PGW)
- 41. Astoria, OR: 1.0 Bcfd (Skipanon LNG - Calpine)
- 42. Freeport, TX: 1.5 Bcfd, (Cheniere/Freeport LNG Dev. - Expansion)
- 43. Offshore Boston, MA: 0.4 Bcfd (Neptune LNG - Tractebel)

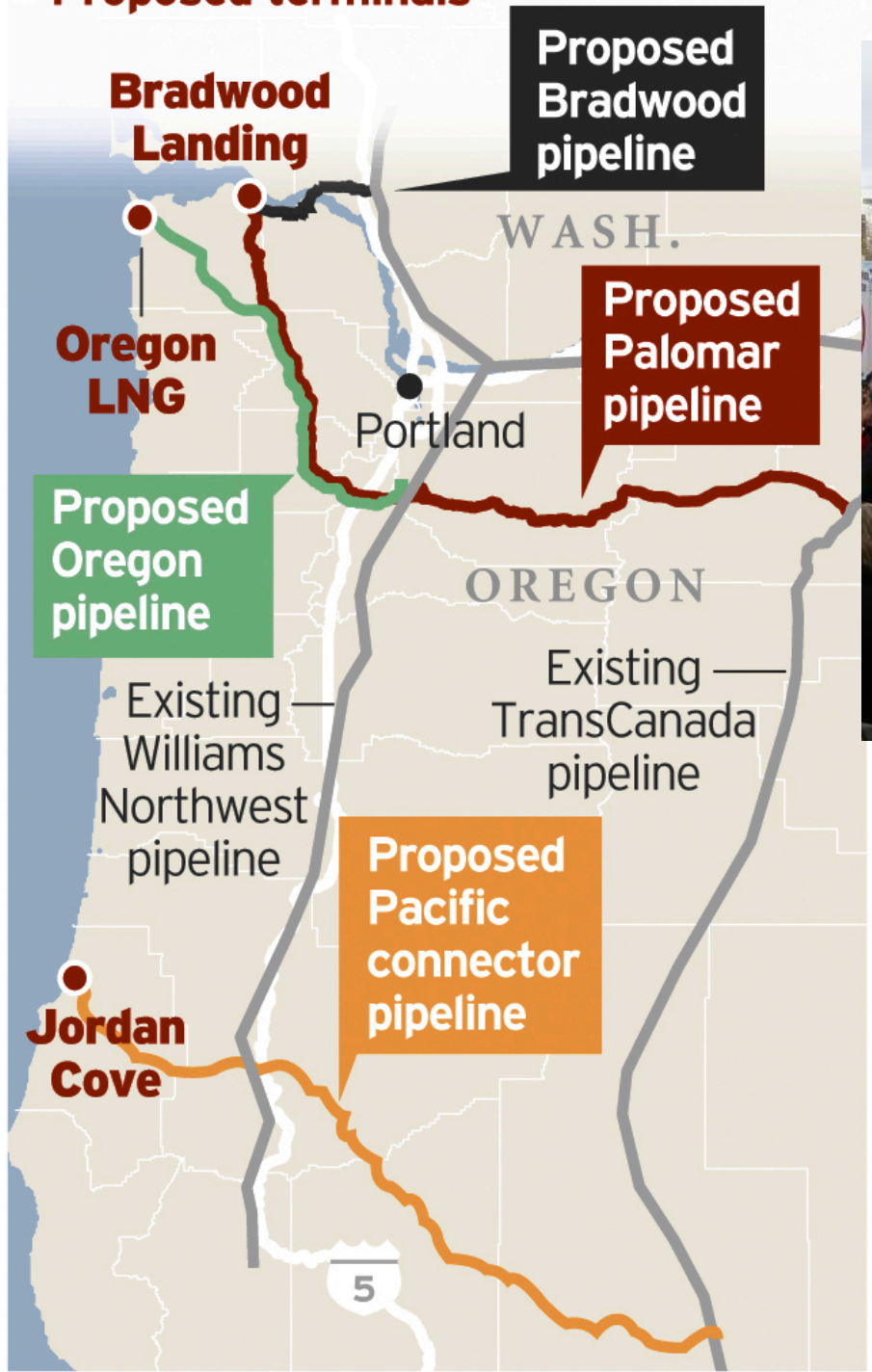
CANADIAN APPROVED AND POTENTIAL TERMINALS

- 44. St. John, NB : 1.0 Bcfd, (Canaport - Irving Oil)
- 45. Point Tupper, NS 1.0 Bcfd (Bear Head LNG - Anadarko)
- 46. Quebec City, QC : 0.5 Bcfd (Project Rabaska - Enbridge/Gaz Met/Gaz de France)
- 47. Rivière-du-Loup, QC: 0.5 Bcfd (Cacouna Energy - TransCanada/PetroCanada)
- 48. Kitimat, BC: 0.61 Bcfd (Galveston LNG)
- 49. Prince Rupert, BC: 0.30 Bcfd (WestPac Terminals)
- 50. Goldboro, NS 1.0 Bcfd (Keltic Petrochemicals)

MEXICAN APPROVED AND POTENTIAL TERMINALS

- 51. Altamira, Tamulipas : 0.7 Bcfd, (Shell/Total/Mitsui)**
- 52. Baja California, MX : 1.0 Bcfd, (Sempra & Shell)**
- 53. Baja California - Offshore : 1.4 Bcfd, (Chevron Texaco)
- 54. Lázaro Cárdenas, MX : 0.5 Bcfd (Tractebel/Repsol)
- 55. Puerto Libertad, MX: 1.3 Bcfd (Sonora Pacific LNG)

● Proposed terminals



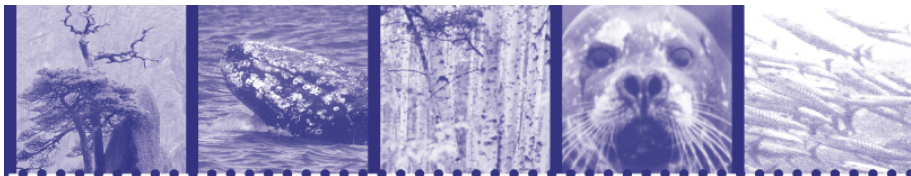
STEVE COWDEN/THE OREGONIAN



We knew there was NO NEED for LNG.

“Natural gas sources in North America, mainly from western Canada and the Rocky Mountains, are likely to provide natural gas at less cost than natural gas from any of the LNG terminals currently proposed in Oregon.”

(Oregon Department of Energy report to the Governor, July 2008)

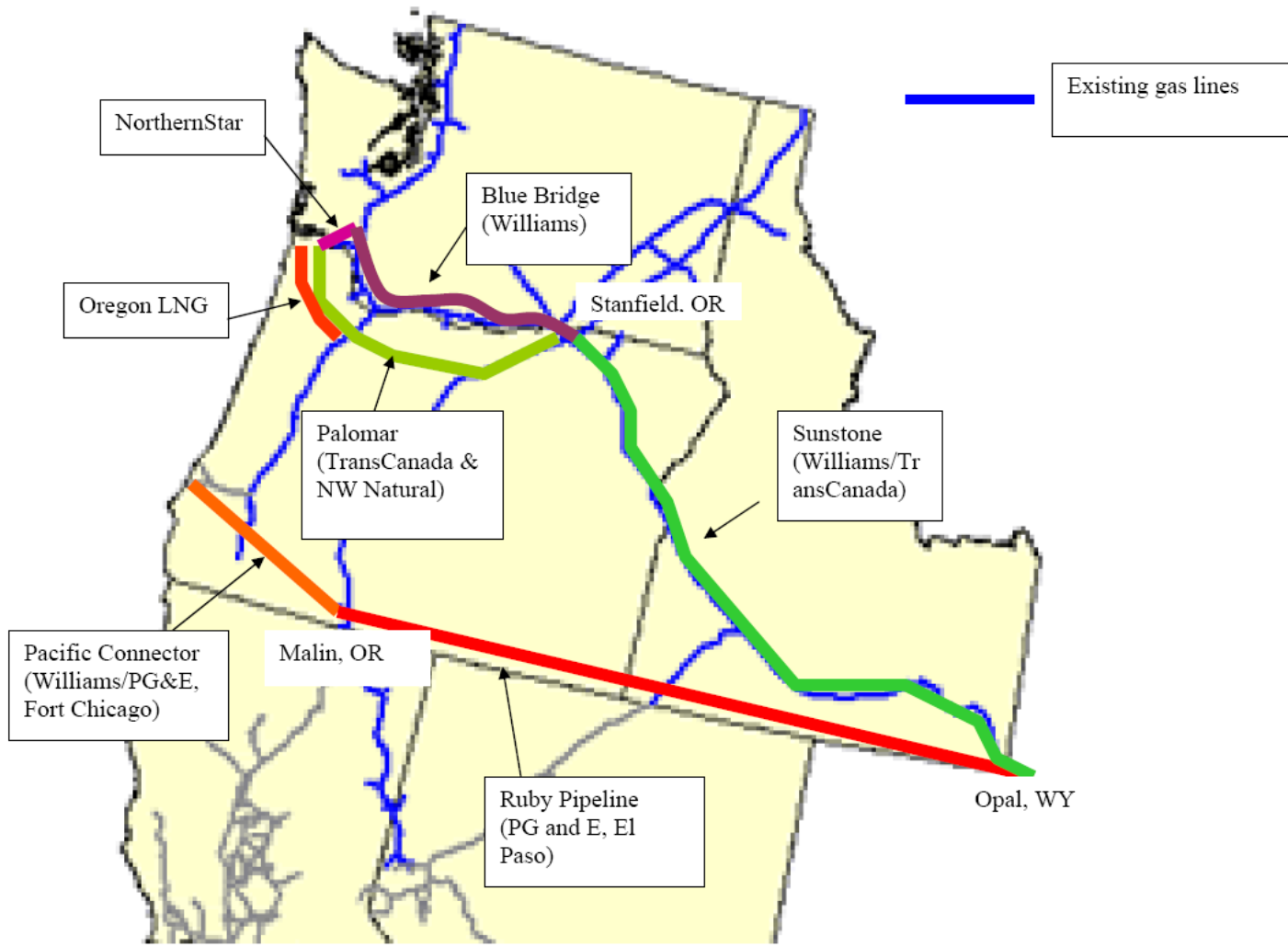


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Oregon Gas Pipelines in planning



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Headlines

Chesapeake Energy wants to export LNG

By Oil & Gas Financial Journal staff

Sabine Pass LNG Gets Approval To Export US Natural Gas

By Isabel Ordonez

Published September 09, 2010 | Dow Jones Newswires

Liquefied Natural Gas: U.S. Could Soon Become a Major Exporter

By Benzinga Staff

October 19, 2010 14:19 PM

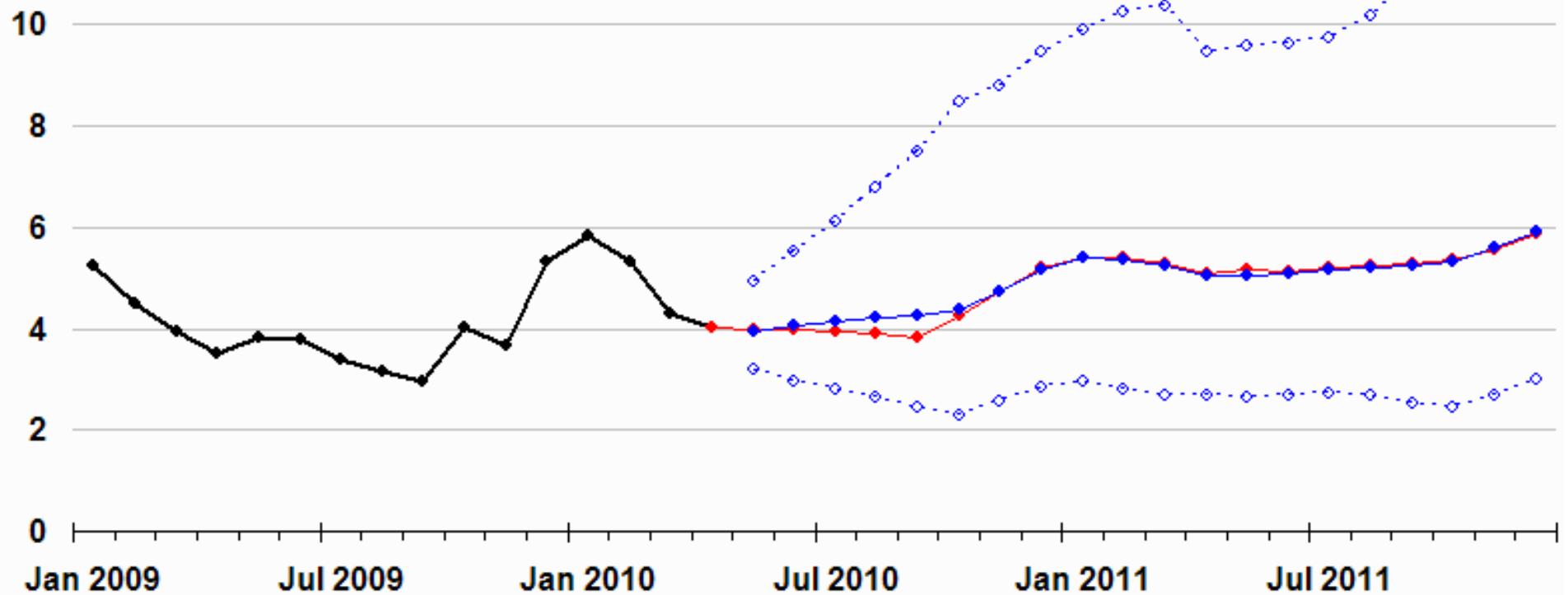
The market

- The price difference between US gas and other markets only needs to be \$2-3 btu for export to be profitable.
- US is currently between 3-4, while Japan, China and European markets are between \$11-14.

Henry Hub Natural Gas Price

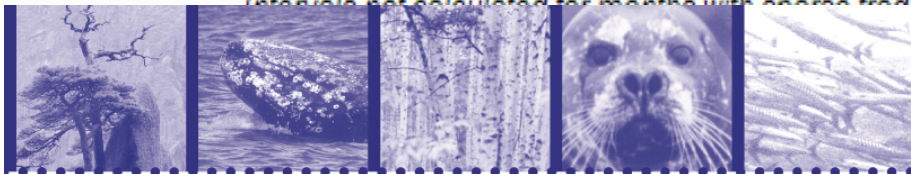
dollars per million btu

- 14 — Historical spot price
- STEO price forecast
- ◆— NYMEX futures price
- ◇--- 95% NYMEX futures price confidence interval



Note: Confidence interval derived from options market information from 5 trading days ending April 1, 2010

Intervals not calculated for months with sparse trading in "close to the money" options contracts

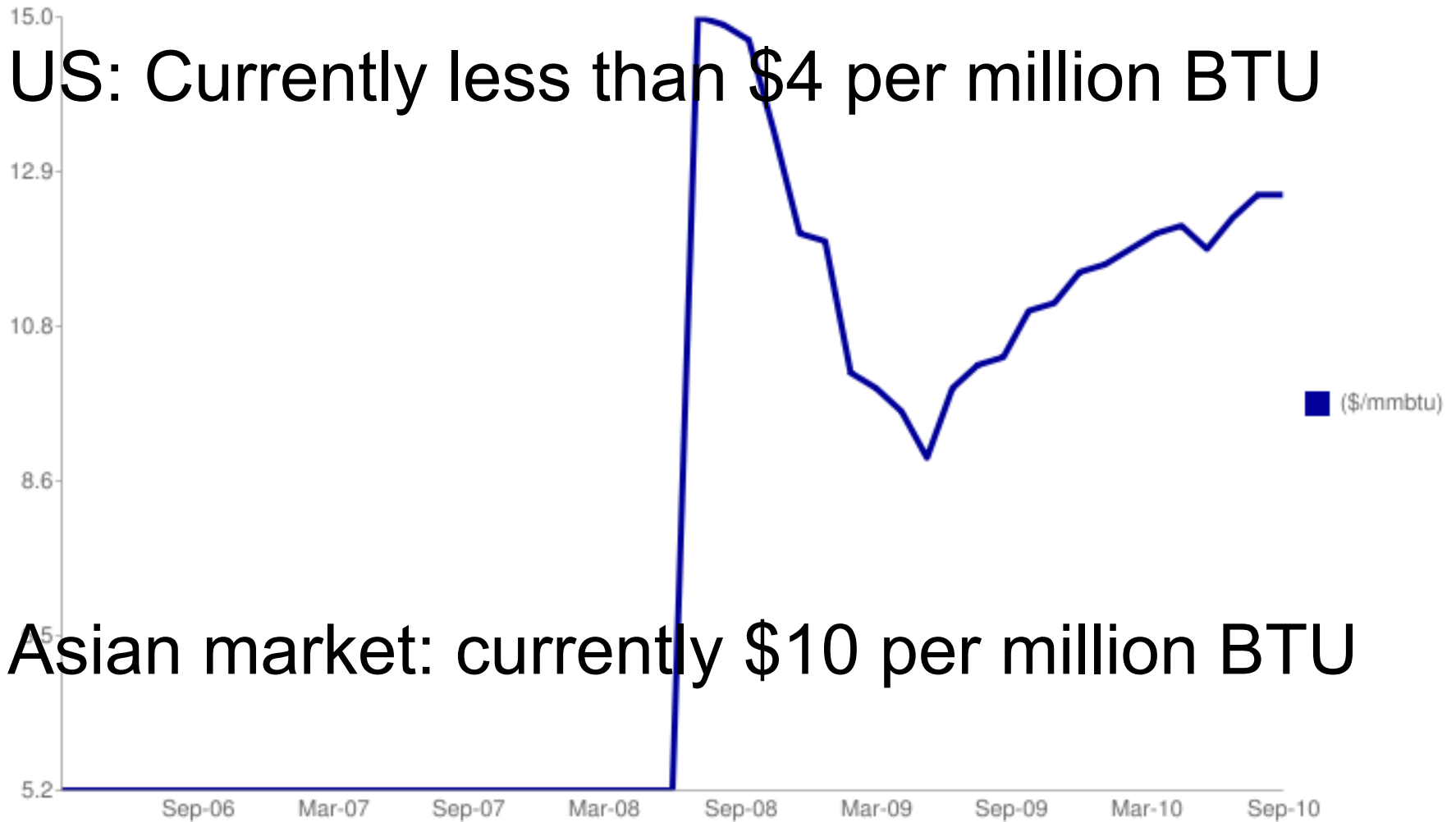


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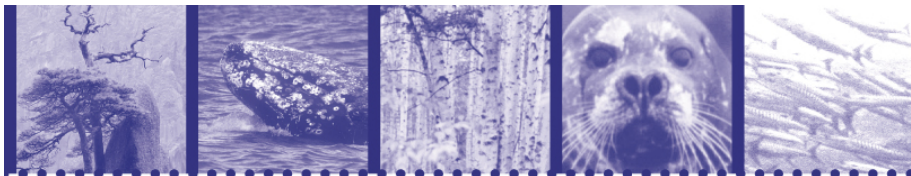


Natural gas LNG, Japan price chart



US: Currently less than \$4 per million BTU

Asian market: currently \$10 per million BTU

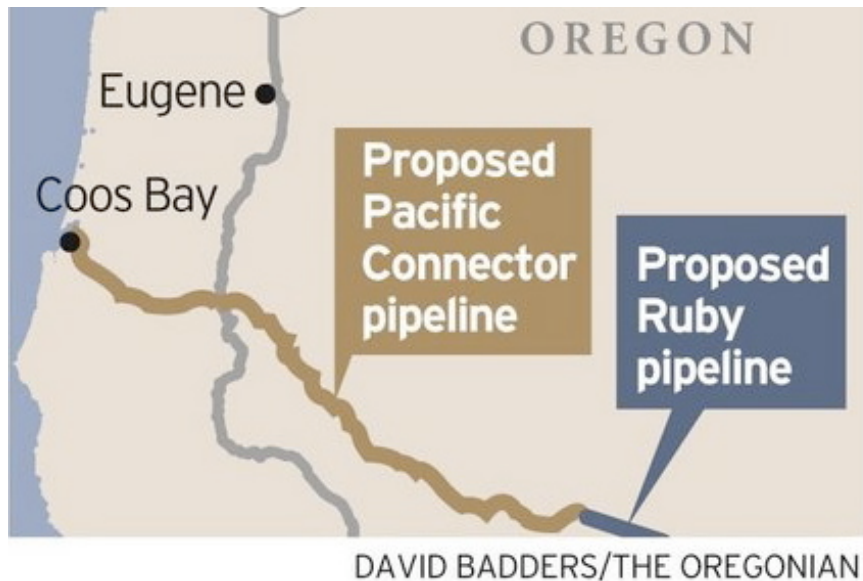


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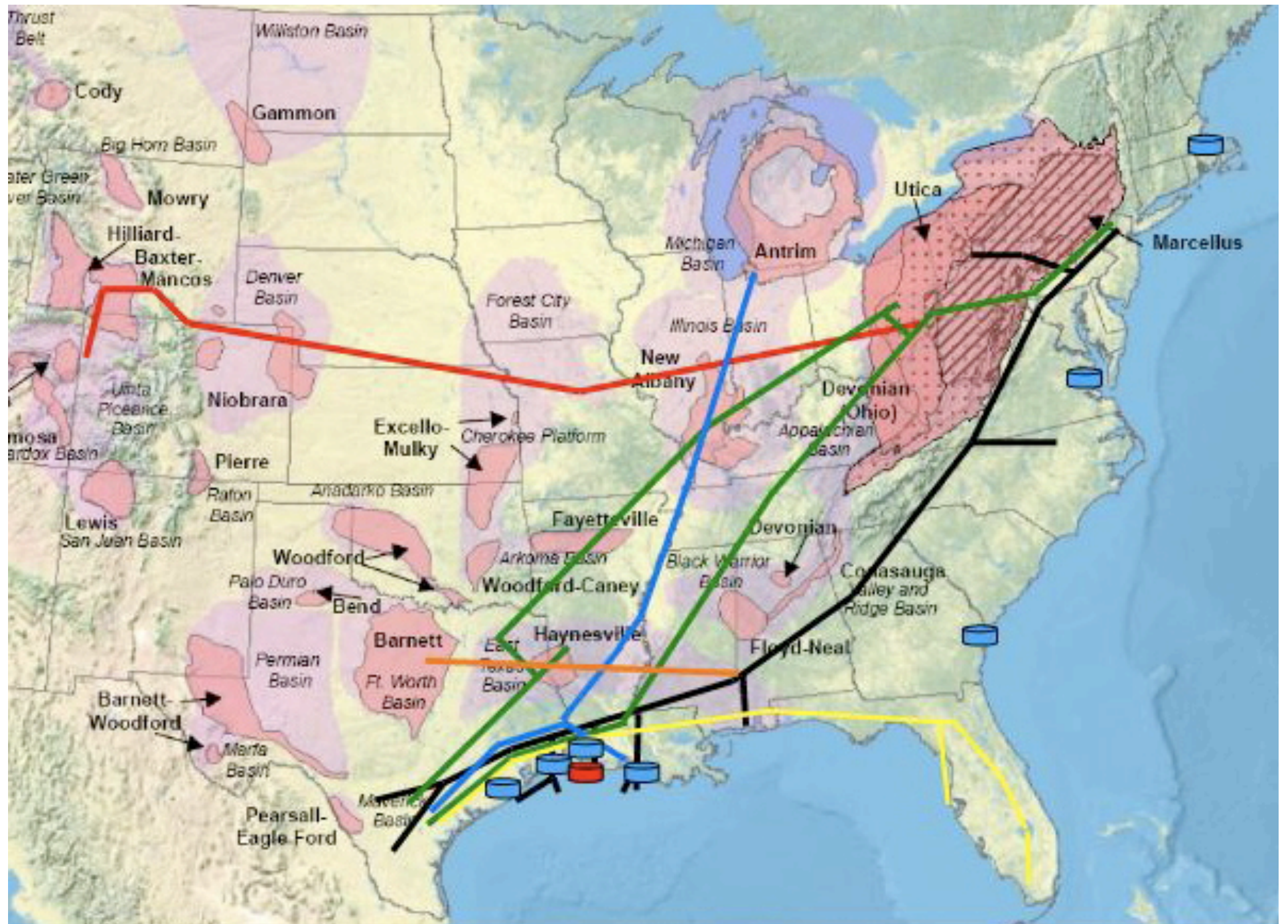


Ruby → Pacific Connector → Jordan Cove LNG at Coos Bay

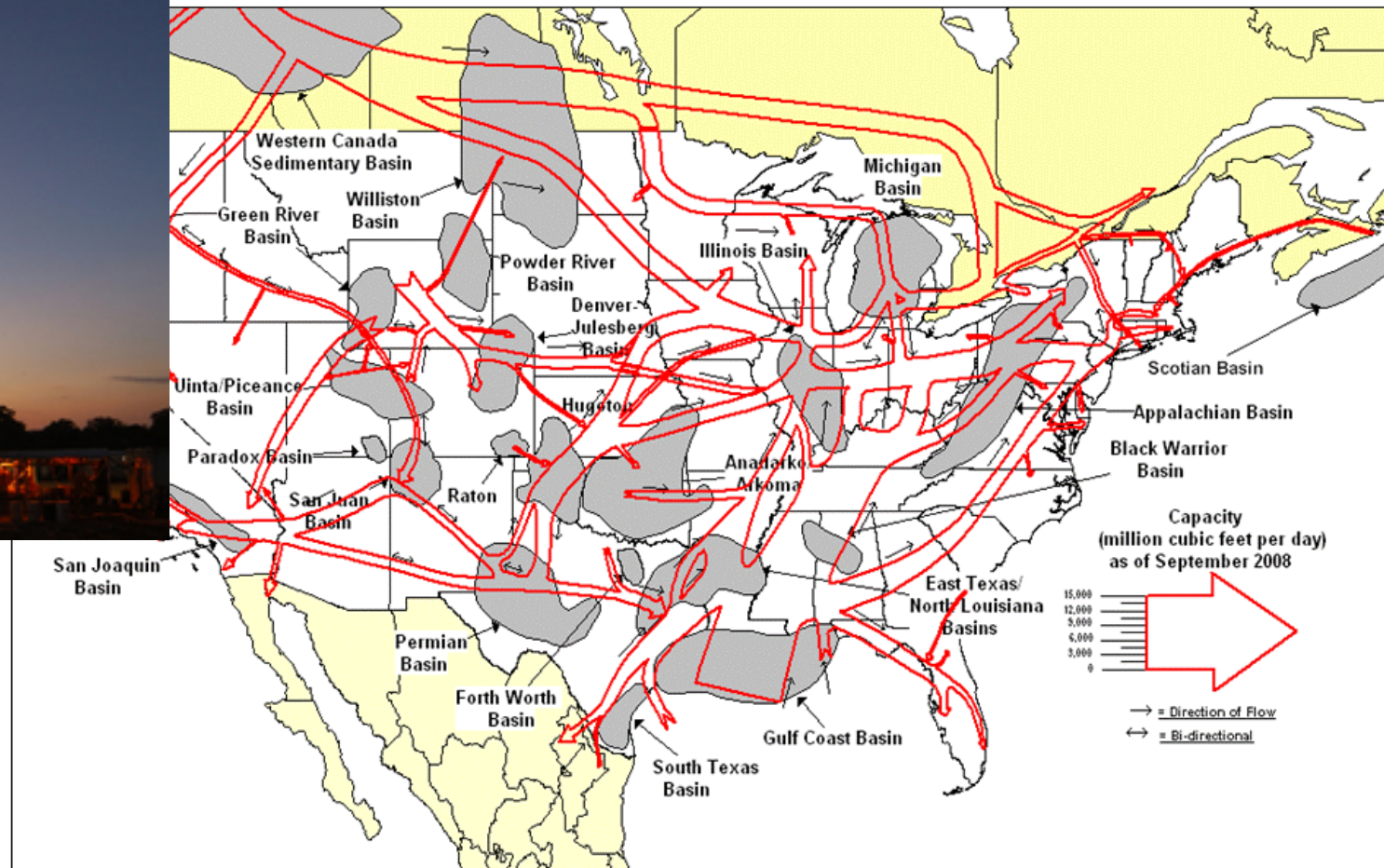


LNG terminals already exporting

- Sabine Pass in LA: signed an agreement with Chinese firm to export 1.5 million tons per year from domestic natural gas
- Freeport LNG in Quintana Island south of Houston could serve to export gas from Eagle Ford Shale in South Central Texas
- Sempra LNG in LA is already re-exporting



Think there is a lot of drilling now?



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division, GasTran Gas Transportation Information System.

The EIA has determined that the informational map displays here do not raise security concerns, based on the application of the Federal Geographic Data Committee's *Guidelines for Providing Appropriate Access to Geospatial Data in Response to Security Concerns*.

They won't admit to export, because there is NO PUBLIC BENEFIT, and they therefore would not have right to eminent domain.



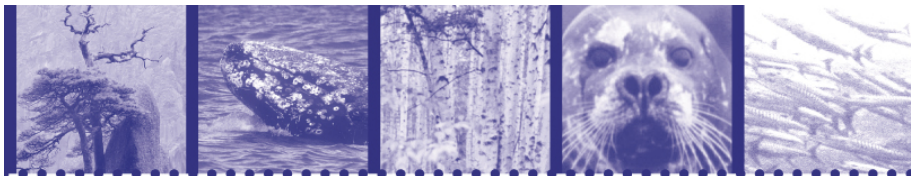
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If we begin to export natural gas, gas rates will go up because we will be competing on the global market for domestic gas.

"LNG supplies from the United States can help lower gas prices in Europe and Asia and **ultimately help lift prices in the States,**"
- Mikhail Korchemkin from Pennsylvania-based East European Gas Analysis.



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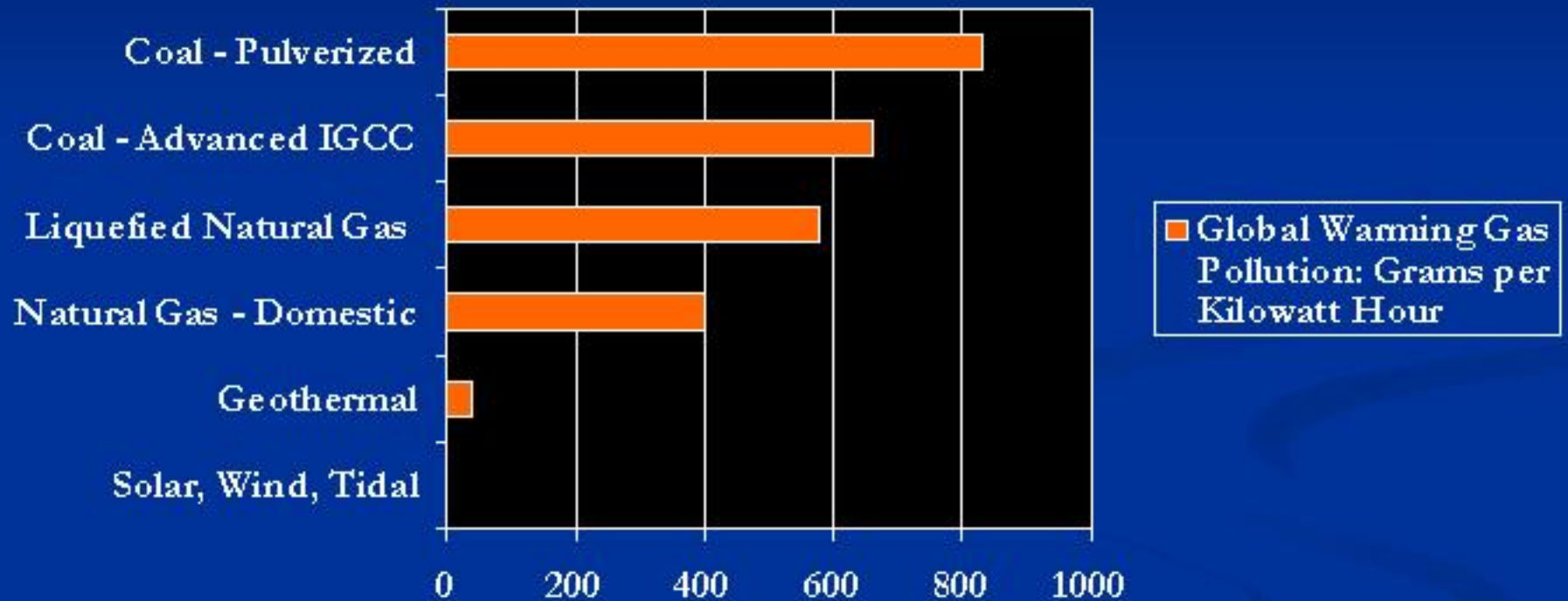


Energy Independence?

I'm not saying domestic natural gas = energy independence. But, that is the company's message.

Export argument allows you to fight that!

LNG Not A Clean Fuel



Sources: Richard Heede, Orkustofnun, IAE Greenhouse Gas R&D Program

What can be done?

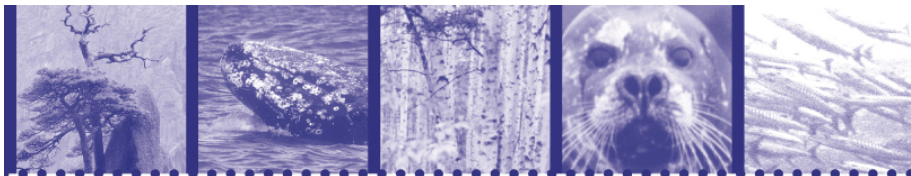
Use the export potential in your messaging as part of your fight:

Challenge the notion that this is good for the public, challenge the idea that your land, safety and health could be put in jeopardy for corporate profit and no public good.

Link up with communities fighting new LNG terminals to combat export, or if not permitted or built yet, to oppose the entire terminal.

Pass legislation banning export.

Senator Merkley (Oregon) proposed an amendment to a budget bill in summer 2009 that would have restricted LNG exports out of concern that LNG proponents were planning to turn their terminals into export facilities.



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WeAgreeNoLNG.org/Export
PacificEnvironment.org

PROPOSED LOCATION

WE WON!!

(OF A 30")
NATURAL GAS PIPELINE

STOP BRADWOOD
LANDING

