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Pacific Northwest Offshore Oil and Gas Potential: At Best About A Month's National Supply; At Worse An Unnatural Disaster

by Andy Kerr¹

Abstract

The most substantial threat to the living resources of the Oregon Coast is offshore oil and gas development. \$4+/gallon gasoline make consumers/citizens/voters more likely to want to “drill baby drill,” perhaps even the offshore Pacific Northwest. Yet, the estimated amounts of oil and gas “recoverable” offshore of Oregon and Washington would satisfy current United States oil and gas consumption for 21 and 34 days respectively.

\$4+/Gallon Gasoline and \$110+/Barrel Oil

As was shown in the last run-up of gasoline prices during the 2008 presidential election, the American consumer/voter is susceptible to the “drill baby drill” mantra/bumper sticker/sound bite as they filled their tanks with \$4/gallon gasoline. Gasoline prices are up again and could go even higher in the short-term. Crude oil was trading for as high as \$116/barrel in May 2011.² In the long-term, continued burgeoning demand from China, India and other developing countries means that a barrel of oil will very likely continue to increase in cost. Yes, there will undoubtedly be continued ups and downs, but the general trend will be upward.

“America is addicted to oil,” said George Bush.³ Notice that the former oilman didn’t limit our addiction to just foreign oil, which is where most of our motor fuels that we consume comes from. This addiction has attendant economic, social and environmental consequences. The solution is not more drilling in the United States for more oil, but of drilling less everywhere.

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² USDOE Energy Information Administration. World Crude Oil Prices (http://www.eia.doe.gov/dnav/pet/pet_pri_wco_k_w.htm, accessed May 16, 2011.)

³ Bush, George W. January 31, 2006. State of the Union Address to Congress.

This paper makes no attempt to survey the global and national environmental, economic, social and climatic consequences of our oil addition. Rather it examines one potential source of supply—the offshore Pacific Northwest—and argues that it’s just not worth it.

Potential Offshore Pacific Northwest Production Versus US Consumption

Table 1 says it all. The offshore Pacific Northwest holds very little oil and gas, even if it were “recoverable” at today’s prices (it’s probably not, and the fossil fuel industry is certainly more interested in other areas of the US Outer Continental Shelf, US land mass and the world. The potential amount of oil and gas would meet US consumption for 21 and 34 days respectively.

Table 1. Offshore Pacific Northwest Oil and Gas Potential Versus United States Consumption		
	Oil	Gas (Methane)
Projected 2011 United States <i>Daily</i> Consumption	19.36 million barrels ⁴	66.75 billion cubic feet ⁵
Projected <i>Total</i> Exploitable Supplies from Offshore US Pacific Northwest	400 million barrels ⁶	2,280 billion cubic feet ⁷
Total Number of <i>Days</i> of Total US Consumption that Offshore US Pacific Northwest Production Could Meet	21 days	34 days

Refining capacity in Washington is 625,000 barrels per day, much of it Alaskan crude.⁸ Oregon has no oil refineries. The estimated quantity of oil offshore Oregon and Washington might supply Washington refinery capacity for 656 day (less than 2 years).

Pacific Northwest Offshore Drilling History

In 1964 the federal government leased tracts totaling 581,000 acres (2,400 km²) in offshore Oregon and Washington. Oil companies drilled six tests offshore Washington (three in state waters and three in federal waters) and seven tests in federal waters offshore Oregon. The OCS P-0130 well drilled offshore Oregon by Union Oil in 1966 was described as having "potential for commercial gas production", [13] but none of the wells were completed as producers, and the federal leases expired in 1969. [14][15]⁹

⁴ Energy Information Administration. 2011. Short-Term Energy Outlook. U.S. Dept. Energy. (Table 4a; U.S. Petroleum Supply, Consumption and Inventories) (April 2011). Available at <http://www.eia.doe.gov/emeu/steo/pub/4atab.pdf>.

⁵ Energy Information Administration. 2011. Short-Term Energy Outlook. U.S. Dept. Energy. (Table 5a; U.S. Natural Gas Supply, Consumption and Inventories) (July 8 2008). Available at <http://www.eia.doe.gov/emeu/steo/pub/5atab.pdf>.

⁶ Humphries, Marc, Robert Pirog and Gene Whitney. 2010. U.S. Offshore Oil and Gas Resources: Prospects and Processes. Page 16.

⁷ *Ibid.*

⁸ Culverwell, Wendy. 2011, April 1. No oil in Oregon, but senators oppose drilling. Business Journal. <http://www.sustainablebusinessoregon.com/articles/2011/04/no-oil-in-oregon-but-senators-oppose.html> (accessed April 29, 2011).

⁹ Wikipedia. http://en.wikipedia.org/wiki/Offshore_oil_and_gas_in_the_United_States (accessed on April 29, 2011), citing these original sources: [13] Vernon C. Newton Jr., (1980) Prospects for Oil and gas in the Coos Basin, Western Coos, Douglas, and Lane Counties, Oregon, Oregon Dept. of Geology and Mineral Industries, Oil and gas Investigation 6, p.58; [14] Dana B. Braislin and others (1971) “Petroleum potential of Western Oregon and Washington and Adjacent continental margin,” in Future Petroleum Provinces of the United States - Their Geology and Potential, American Association of Petroleum Geologists, Memoir 15, v.1, p.230; [15] P.D. Snaveley Jr., J.E.

While there has never been offshore Oregon oil and gas development (though there has been some holes drilled, see Map 2), there is onshore Oregon gas (methane) production centered in the Northern Oregon Coast Range (near Mist which is ~33 miles inland of the Pacific Ocean). Production in 2009 was 821 million cubic feet (mmcf). Production began in 1984 at 2,790 mmcf, peaked at 4,600 in 1986 and has generally declined since then. There is no commercial gas production in Washington.¹⁰



Map 1. The graphic is proportionally challenged for this publication. As of early 2012, the outlined areas are the planning areas in the lower 48 states. The light gray is to be leased (along with several areas off Alaska). The dark gray cannot be leased due to a Congressional moratorium. Sanctuaries (Source: http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf, (accessed 5 February 2012).

Pacific Northwest Offshore Drilling Threats

No leasing of the Washington/Oregon Outer Continental Shelf Planning Area is scheduled before 2022 (Map 1). However, with rising oil prices, interest may increase.

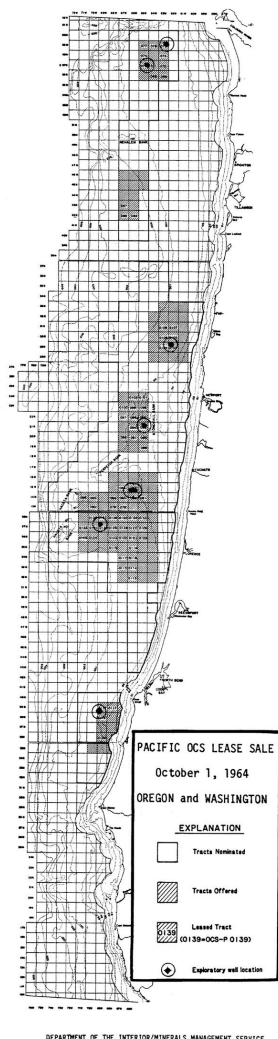
Environmental Impacts

Pearl, and D.L. Lander (1977) Interim Report on Petroleum Resources Potential and Geologic Hazards in the Outer Continental Shelf - Oregon and Washington Tertiary Province, US Geological Survey, Open-File Report 77-282.

¹⁰ USDOE Energy Information Administration. Natural Gas Gross Withdrawals and Production. http://www.eia.doe.gov/dnav/ng/ng_prod_sum_dc_u_sor_a.htm (accessed 29 April 2011).

Mitigating the environmental impact of mineral development in the rough seas and unpredictable weather of offshore Oregon and Washington is impossible. Even using the "best available practices," offshore oil and gas exploitation involves routine discharges of "produced waters" into marine environments that include toxic compounds such as cadmium, lead, mercury, zinc, polycyclic aromatic hydrocarbons and sometimes radium.¹¹

Most of the "recoverable" oil offshore Oregon and Washington is at the more shallow depths, meaning it is closer to shore (Map 3). If an oil spill occurs, all bets are off. No clean-up technology is effective for the high seas that can also contend with the weather conditions typically found off the Pacific Northwest coast. Abstaining from oil and gas development is the only way to protect the marine environment and the renewable resources that depend upon it.



Map 2. *Pacific Outer Continental Shelf Lease Sale, October 1, 1964 with drill holes circled.*
USDI Minerals Management Service

Economic Impacts

According to Oregon Business magazine, "[Senator Barbara] Boxer, a California Democrat, said prohibiting new offshore drilling along the Pacific Coast will protect 570,000 jobs and \$34 billion of economic activity in the three states and that "Oregon's coastal economy is worth about \$5 billion, about \$200 million of it directly associated with the fishing industry."¹² Abstaining from oil and gas development is the only way to protect the coastal economy and the renewable resources upon which much of it depends.

Legislative Threats and Opportunities

Legislation is also pending in the 112th Congress (2011-2012) that would facilitate the commercial leasing and development of offshore Oregon and Washington, as well as much of the rest of the nation's outer continental shelf.

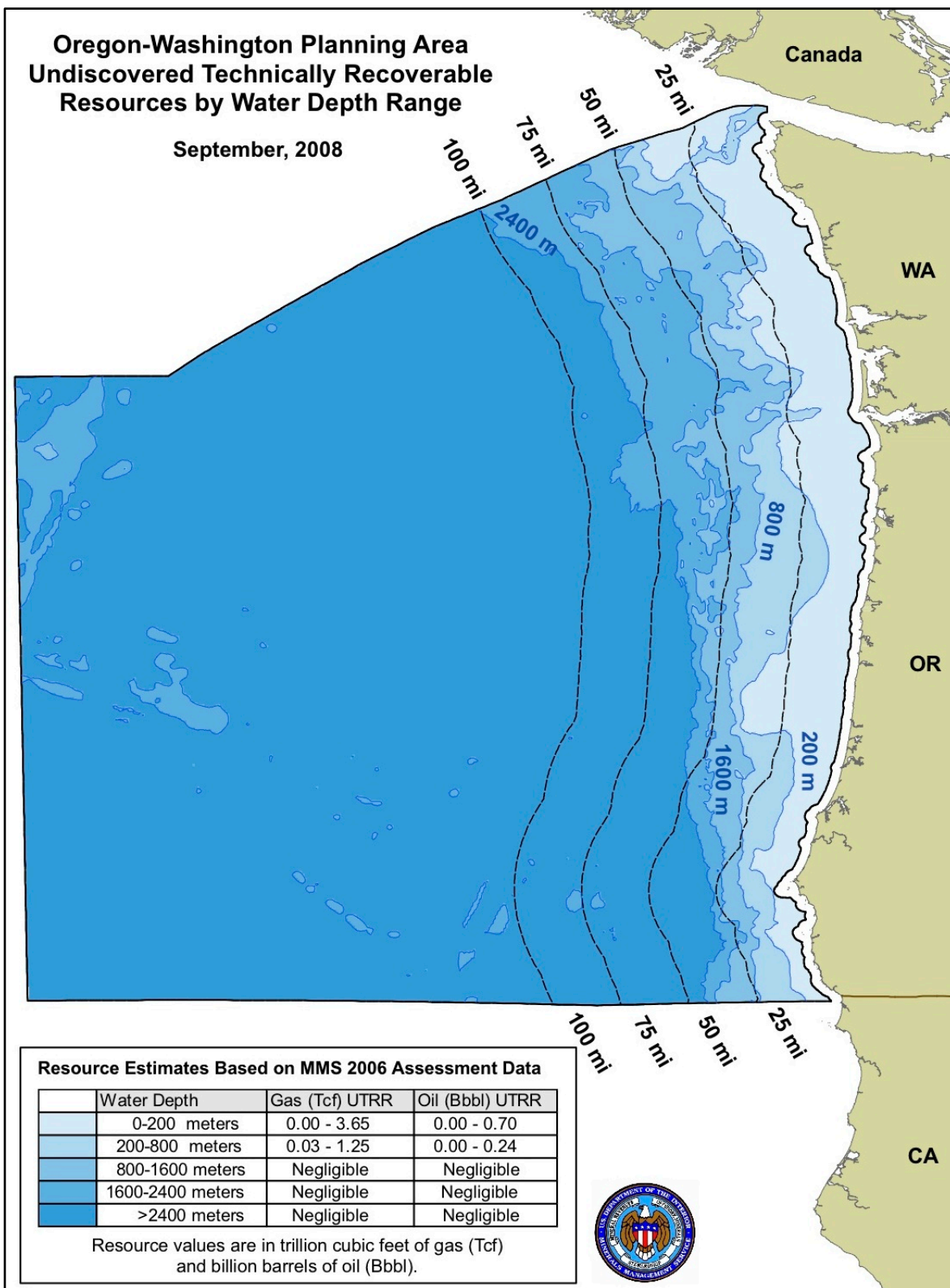
H.R. 1230, the Restart American Offshore Leasing Now Act, and H.R. 1231, the Reversing President Obama's Offshore Moratorium Act both passed the House of Representatives on May 2011 and are now awaiting action in the Senate. The House vote was strict party-line vote for the Oregon and Washington delegations, with all Republicans voting yes and all Democrats voting no. These bills truly suck.¹³

From 1982 until 2009, Congress had routinely enacted annual moratoria on offshore oil and gas development in the Pacific Northwest and other regions. Presently, there is no statutory provision to stop oil and gas development off the Pacific Northwest.

¹¹ Charter, R. 2004. Response to the U.S. Commission's preliminary report and its statements on the proposed future exploitation of potential energy resources from seafloor methane hydrates. Environmental Defense.

¹² *Ibid* at 8.

¹³ Natural Resources Defense Council. 2011. "Reject BP Oil Disaster Amnesia Bills: H.R. 1229, H.R. 1230 and H.R. 1231 (<http://www.nrdc.org/legislation/files/rejecthastingsbills.pdf>)



Map 3. *Most of the potential oil and gas offshore Oregon and Washington is at shallow depth, which also means closer to shore.* (Source: Bureau of Energy Management, Regulation and Enforcement, <http://www.boemre.gov/revaldiv/Maps/WashingtonOregon.pdf>)

Legislation is also pending in the 112th Congress that would permanently ban oil and gas development offshore of Oregon, Washington and California.

- S. 171, the West Coast Ocean Protection Act as introduced all six senators from the three states (Sens. Barbara Boxer, Dianne Feinstein, Jeff Merkley, Patty Murray, Maria Cantwell and Ron Wyden. The bill is awaiting action in the Senate Committee on Energy and Natural Resources.
- H.R. 612, West Coast Ocean Protection Act introduced by Reps. Peter DeFazio, David Wu, Kurt Schrader and Earl Blumenauer from Oregon; as well as 15 members of the California delegation to the House of Representatives and as well as individual Members from New Jersey, Maryland, and Hawaii. Surprisingly, no member of the Washington House delegation is a sponsor. The bill is awaiting action in the House Committee on Natural Resources.

In February 2010, the Oregon Legislature bucked the national trend and enacted a 10-year moratorium on near-shore (inner continental shelf: 0-3 miles offshore).¹⁴

Conclusion

The best time to address a crisis is before it is a crisis. While the risk of oil and gas development in the Pacific Ocean offshore Oregon and Washington is low, so is the political opposition to banning it. Congress should enact the West Coast Ocean Protection Act now.

Acknowledgements

The author is greatly indebted to the contributions of information, wisdom and reviews from Richard Charter, Senior Policy Advisor for Marine Programs for Defenders of Wildlife.

Additional Resources

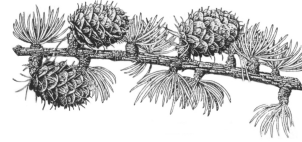
- Defenders of Wildlife Offshore Drilling Program (http://www.defenders.org/programs_and_policy/offshore_drilling/index.php.)
- Bureau of Ocean Energy Management, Regulation and Enforcement (<http://www.boemre.gov/>).

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¹⁴ *Ibid.*

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