Coal Moratorium May Be Obama's Climate Swan Song: Policy Watch

Analysts: Rob Barnett & Cheryl Wilson

Jan 27, 2016

SUMMARY: President Barack Obama's most significant climate-change policy is generally considered the Clean Power Plan. But his moratorium on new federal coal leases may have a bigger impact. About 40% of U.S. coal production is on federal land. Obama's Jan. 15 announcement lays the groundwork for an eventual halt to that production -- almost 400 million tons a year, far exceeding the Clean Power Plan's expected cut. The three-year moratorium likely will be reversed unless a Democrat wins the White House in 2016.

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Regulatory Review:
* Comprehensive Federal Coal Program Review

Upcoming Action:
* Preliminary Report Due in 4Q16

Risk:
* U.S. Coal Producers

Opportunity:
* Natural Gas Producers, Wind and Solar Project Developers

Odds of Enactment:
* Medium; 2016 presidential election probably will affect outcome.

Congress, 2016 Election Threaten to Disrupt Anti-Coal Measure

Analysts: Rob Barnett & Cheryl Wilson
Jan 27, 2016

UPCOMING ACTION: Senator John Barrasso, a Republican from the top coal-producing state of Wyoming, plans to offer legislative amendments as early as Jan. 27 that would block a review of requirements for coal leases on federal land. Under a best-case scenario, the Interior Department review will take three years. But Congress or the next president could derail the process. Depending on the agency's findings, which aren't due till 2019, the Obama administration's coal moratorium may be extended beyond that year.

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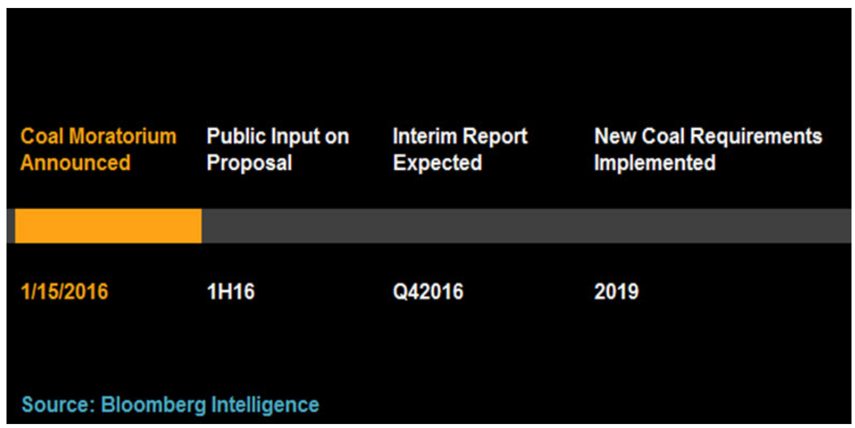
Interior Department's Coal Review Timeline



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Western Coal Producers May Be Most Affected by U.S. Moratorium

Analysts: Rob Barnett & Bernard Chen
Jan 27, 2016

RISK: Powder River Basin coal producers in Wyoming and Montana may be most affected by the U.S.'s decision to halt new coal leasing on federal land for at least three years. Unless the decision is overturned by Congress, the next president or a court, the Interior Department won't issue leases during the comprehensive review of its leasing procedures. The vast majority of the coal leases are in western states. Producers there eventually may be subject to higher royalties and new environmental requirements.

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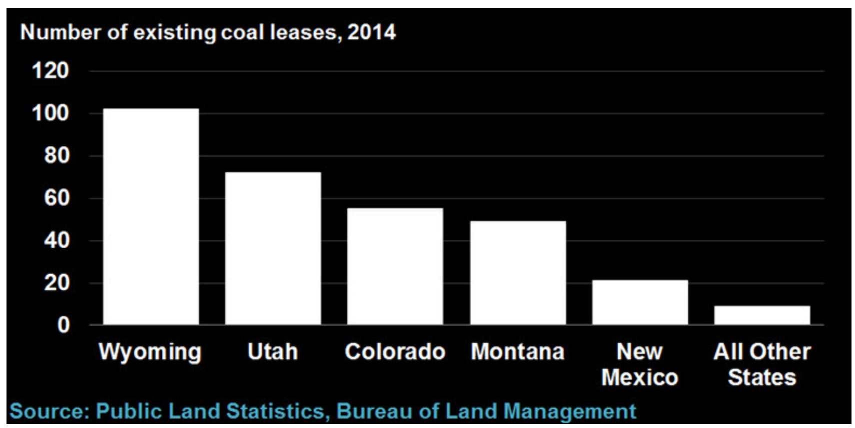
Number of Existing Federal Coal Leases



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Coal-Lease Moratorium Not a Big Deal for Production Through 2020

Analysts: Rob Barnett & Andrew Cosgrove
Jan 27, 2016

RISK: The moratorium on new federal coal leases probably won't affect production through 2020. If coal-market conditions were stronger, most producers operating on federal land could boost production without renegotiating lease terms. For example, Arch Coal's Black Thunder mine in Wyoming has a permitted capacity of 190 million tons a year yet produced about 100 million tons in 2014. If the moratorium drags beyond 2019 or if requirements become more onerous, production may be severely affected in the long term.

Permitted vs. 2014 Production

Mine	Company	Permitted Production (in millions of tons)	2014 Production (in millions of tons)	% of Permitted Production
Antelope	Cloud Peak Energy	52	33.6	64.6%
Belle Ayr	Alpha Natural Resources	45	15.7	34.9%
Black Thunder	Arch Coal	190	101.0	53.2%
Buckskin	Kiewit Corp	42	15.3	36.4%
Caballo	Peabody	50	7.9	15.8%
Coal Creek	Arch Coal	50	9.4	18.8%
Cordero-Rojo	Cloud Peak Energy	65	34.8	53.5%
Dry Fork	Western Fuels	15	5.3	35.3%
Eagle Butte	Alpha Natural Resources	35	20.6	58.9%
North Antelope Rochelle	Peabody	180	117.9	65.5%
Rawhide	Peabody	24	15.4	64.2%
Wyodak	Black Hills Corp	12	4.3	35.8%

Source: Mine Safety and Health Administration, Wyoming Department of Environmental Quality

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Social Cost of Carbon Requirement Could Doom Coal After 2020

Analysts: Rob Barnett & Kit Konolige
Jan 27, 2016

RISK: The moratorium on new federal coal leases isn't that significant if the Interior Department increases royalty rates after its three-year review of leasing practices. But if coal developers are required to account for the so-called social cost of carbon, intended to gauge carbon emissions' damage, all new projects would likely be halted. Based on the U.S.'s current estimate, this cost would add almost $90 to each ton of coal produced, or about nine times more than Powder River Basin prices of about $10 a ton.

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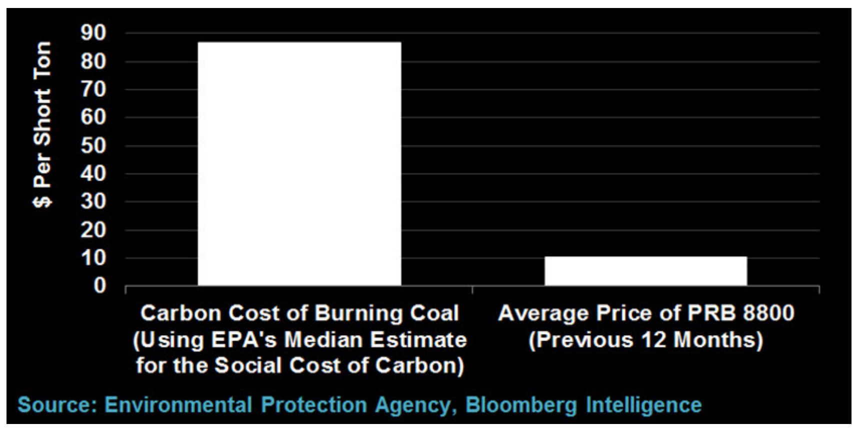
Social Cost of Carbon vs. Coal Price



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Lease Provisions Could Sink 400 Million Tons of Coal Production

Analysts: Rob Barnett & Andrew Cosgrove
Jan 27, 2016

RISK: The Interior Department's review of federal coal leasing may have a bigger impact on the coal business than the EPA's Clean Power Plan, which would reduce carbon pollution from power plants. If the Interior Department requires coal developers to consider the so-called social cost of carbon emissions when negotiating leases, it may eventually shutter the almost 400 million tons of coal produced on federal land each year. By contrast, the Clean Power Plan is expected to reduce demand by about 240 million tons.

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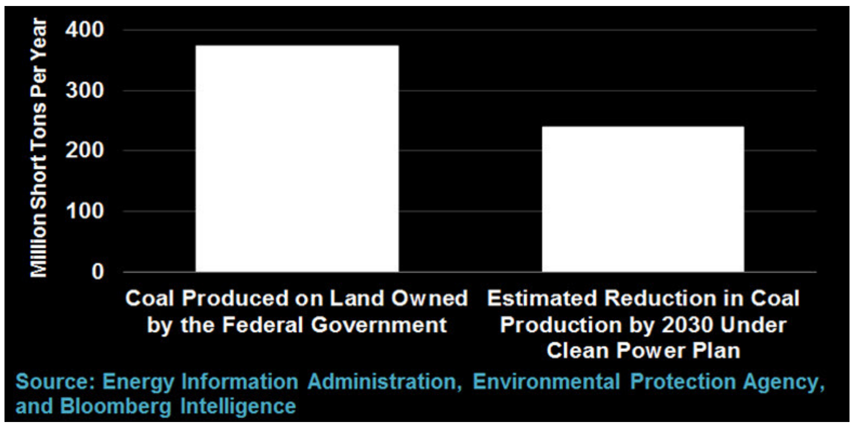
At-Risk Coal Production



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Alterations to Existing Federal Coal Leases May Come After 2020

Analysts: Rob Barnett & Andrew Cosgrove
Jan 27, 2016

RISK: While President Barack Obama's coal lease moratorium announced Jan. 15 is primarily directed at new mines, the Interior Department's review could eventually place more requirements on existing mines. New federal coal leases are typically granted for a 20-year period, with the possibility of 10-year extensions thereafter. After the agency has wrapped up its review in 2019, mine owners might be compelled to close certain mines as existing leases come up for renewal.

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Lease Dates for Federal Coal Mines in Wyoming

Mine Name	Tons of Coal (in millions)	Lease Effective Date
Antelope	60.4	Feb 1997
Antelope	275.6	Dec 2000
Antelope	195.0	Mar 2005
Belle Ayr	221.7	Nov 2011
Black Thunder	417.0	Oct 1992
Black Thunder	157.6	Jan 1998
Black Thunder	537.5	May 2002
Buckskin	142.7	Jan 2005
Caballo	130.2	Nov 2011
Caballo	55.0	Jan 1993
Cordero	288.1	Aug 2008
Cordero	54.7	May 2009

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Natural Gas, Renewables Set to Gain on U.S. Coal Moratorium

Analysts: Rob Barnett & Vincent G Piazza
Jan 27, 2016

OPPORTUNITY: Natural gas and renewables likely will gain market share if upcoming Interior Department requirements make it more costly to produce coal on land owned by the federal government. About 14% of electricity in the U.S. is generated using coal produced on federal land. If all such electricity were replaced by natural gas-fired power plants, it could boost power-sector gas demand by nearly 50%. Natural gas, based on current prices, is the cheapest alternative to coal in most markets.

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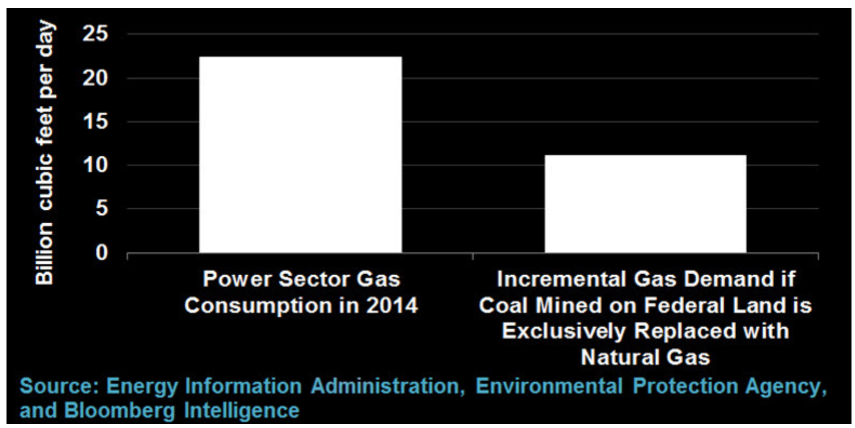
Natural Gas Demand From Power Plants



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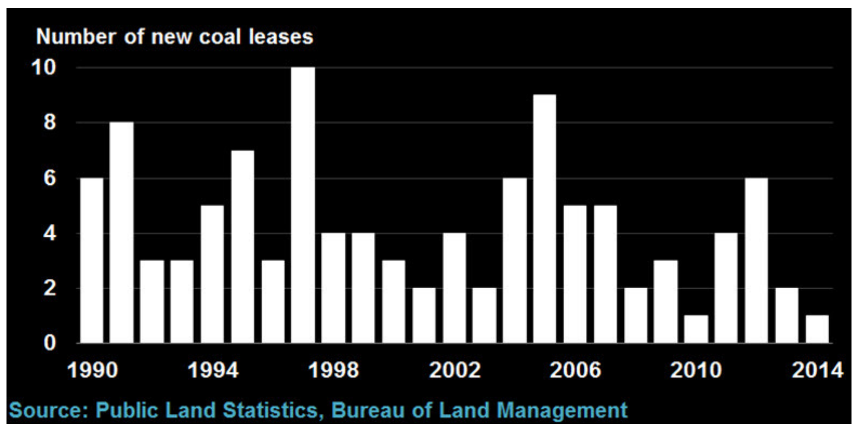
Coal Lease Pipeline May Weaken Even if U.S. Regulators Back Off

Analysts: Rob Barnett & Bernard Chen

Jan 27, 2016

TIMING: Even if the Interior Department eventually decides to make minimal changes to its coal leasing program, it won't issue new leases for about three years while it conducts its review. Historically, the agency has issued an annual average of four new leases for coal mining on U.S. government-owned land. While the pause in leasing probably won't affect coal production before 2020, it could lead to reduced coal production in the longer term, given it can take years to develop new mines.

Federal Coal Leases Issued Each Year



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Clinton Victory Could Affect Cloud Peak, Peabody Coal Leases

Analysts: Rob Barnett & Bernard Chen

Jan 27, 2016

VARIABLES: If Democratic presidential candidate Hillary Clinton wins in 2016, her staff has indicated she would continue the Interior Department's review of coal-leasing practices. This means mines being developed by Cloud Peak, Peabody, Alpha Natural Resources and others would be blocked until at least 2019. When the agency lifts the moratorium on new federal coal leases after finishing its review, such projects could face far less favorable lease terms, including higher royalties or a carbon fee.

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Projects Affected by Coal Moratorium

State	Mine Name	Company	Acres of Land	Recoverable/Minable Reserves (million tons)
MT	Decker	Lighthouse Resources	310	--
MT	Decker	Lighthouse Resources	2375	203
MT	Spring Creek Coal Mine	Cloud Peak	1603	198
MT	Spring Creek Coal Mine	Cloud Peak	170	--
WY	Rawhide	Peabody	291	26
WY	Black Butte	Lighthouse Resources	450	--
WY	Belle Ayr West	Alpha Natural Resources	1874	253
WY	West Antelope III	Cloud Peak	3508	441
WY	Haystack	Peter Kiewit Sons', Inc	300	17

Source: Bureau of Land Management

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Sanders Victory Might Mean Oil, Gas Leases Get Coal Treatment

Analysts: Rob Barnett & Vincent G Piazza

Jan 27, 2016

VARIABLES: If Democratic presidential hopeful Bernie Sanders wins the White House, he probably will try to extend the moratorium on new federal coal leases to the oil and gas sector -- including offshore leases. Sanders is a co-sponsor of legislation (S. 2238) that would stop all fossil fuel leases on land owned by the U.S. government. Congress probably would attempt to block such an effort, but as demonstrated by President Barack Obama's coal moratorium, the commander in chief has some latitude on such issues.

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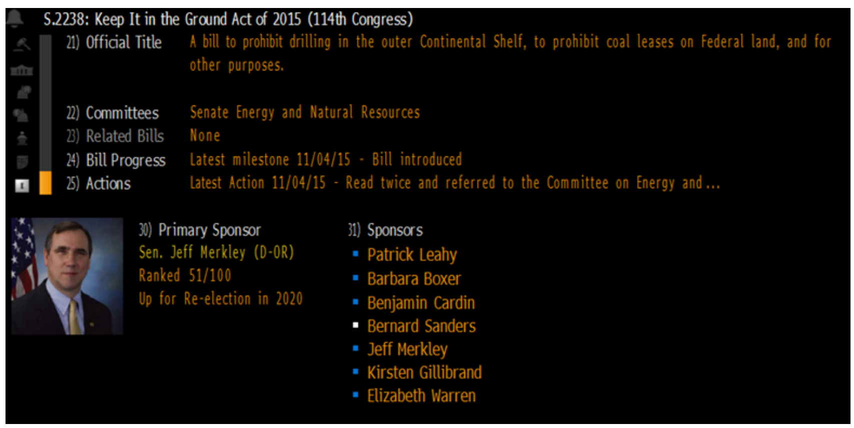
Keep It in the Ground Act of 2015



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Republican President Would Almost Certainly End Coal Moratorium

Analysts: Rob Barnett & Cheryl Wilson

Jan 27, 2016

VARIABLES: President Barack Obama's effort to halt or slow coal produced on U.S. government-owned land would almost certainly be reversed if a Republican wins the White House this November. Because the Interior Department's coal leasing review will be ongoing (as opposed to a final rule) when the next president takes office, he or she could simply stop the process without Congress' involvement. But legislation probably would be needed to block the Clean Power Plan or other final rules.

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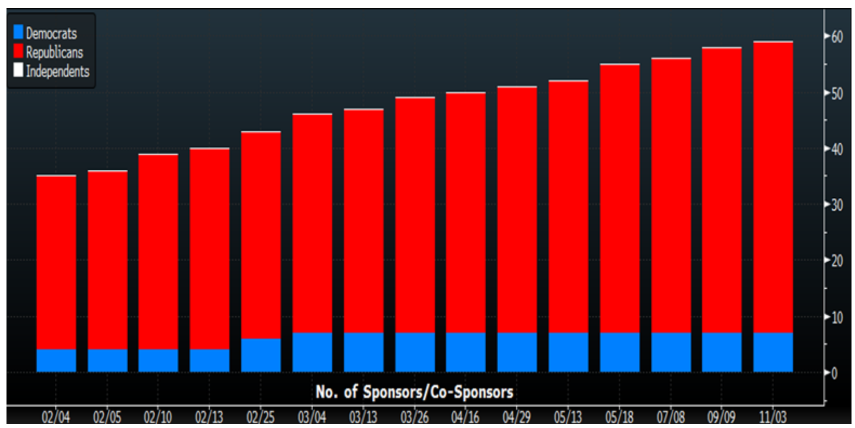
Sponsors of a Bill to Block the Clean Power Plan



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