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Tech Talk - Drilling off the Atlantic Coast

Posted by Heading Out on November 7, 2011 - 12:20pm
Topic: Supply/Production
Tags: governor christie, governor perry, new jersey, outer continental shelf, south carolina, virginia [list all tags]

When the U. S. presidential administration changes, particularly when that change involves a different political party, the results relating to energy policy and ultimately energy availability and price can be - but are not always - significant. In recent posts I have cited Governor Perry's Energy Plan were he to come to power, and have noted that for some issues, the change in power may not have much effect. This is particularly true where the energy reserve is already being produced, with production levels controlled to a degree by things such as price, rig availability, and the potential promise of a well.

But there are some regions of the country where government policies can have a greater impact on potential production. So the last region I have left to discuss of those included in the Governor's Plan is the Outer Continental Shelf (OCS) and particularly that off the Atlantic seaboard. However, it is not only Governor Perry who recognizes the potential promise of the region. This is a theme that ex-Speaker Gingrich, another presidential candidate, has also sounded. His remarks were directed at the benefits of dredging Charleston's port, thereby supporting the OCS activities and potentially adding 8,800 jobs in S. Carolina.

The most likely area to be leased first is that off the coast of Virginia, designated as Lease Sale 220.

Region designated for Lease Sale 220 by the Department of the Interior, in November 2008. (Bureau of Ocean Energy Management, Regulation and Enforcement)

At the time, it was estimated that the area might contain 130 million bbl of oil, and 1.14 Tcf of natural gas.

President Obama continued support, proposing to open the Atlantic Seaboard to drilling back in March, 2010. Unfortunately, while the initial plan had been for lease sales to begin off the coast of

Virginia this year, that was put on hold with the Deepwater Horizon disaster.

Following the sealing of the well in the Gulf and after due review, the Department of the Interior released a statement last December that noted, relative to the Atlantic and other locations:

> Based on lessons learned from the Deepwater Horizon oil spill, the Department has raised the bar in the drilling and production stages for equipment, safety, environmental safeguards, and oversight. In order to focus on implementing these reforms efficiently and effectively, critical agency resources will be focused on planning areas that currently have leases for potential future development. As a result, the area in the Eastern Gulf of Mexico that remains under a congressional moratorium, and the Mid and South Atlantic planning areas are no longer under consideration for potential development through 2017. The Western Gulf of Mexico, Central Gulf of Mexico, the Cook Inlet, and the Chukchi and Beaufort Seas in the Arctic will continue to be considered for potential leasing before 2017.

However:

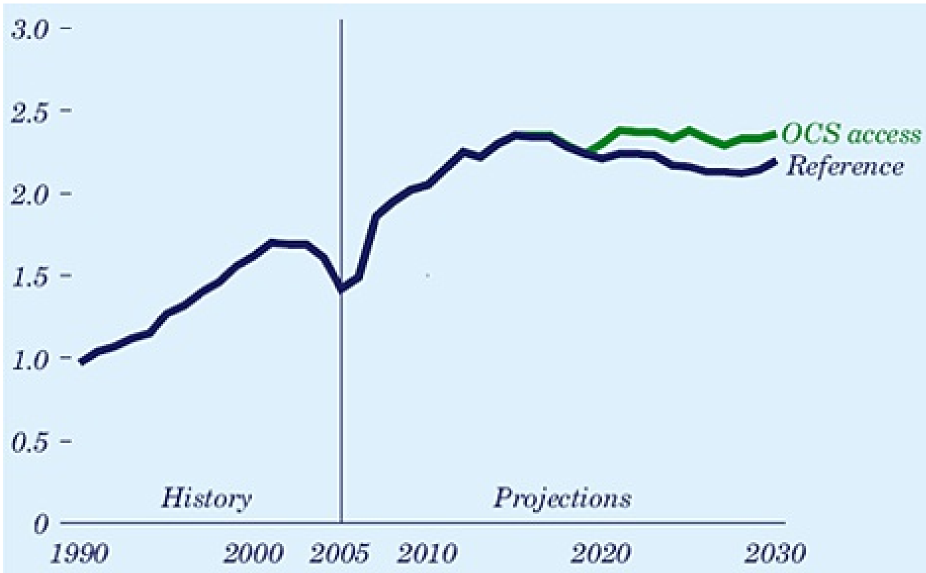
> Because the potential oil and gas resources in the Mid and South Atlantic are currently not well-known, Interior will move forward with an environmental analysis for potential seismic studies in the Mid and South Atlantic OCS to support conventional and renewable energy planning. No lease sales will be scheduled in the Atlantic in the 2007-2012 program or in the 2012-2017 program.

The current emphasis has been on the Mid-Atlantic States, particularly Virginia and South Carolina, where there is support for the idea. In contrast, New Jersey has expressed concern over the risks of offshore drilling in the past and Governor Corzine was particularly outspoken against offshore drilling or leasing acreage, feeling that it would threaten the tourism and fishing industries of the state. Governor Christie (who replaced Governor Corzine) has retained that opposition to drilling off New Jersey, but is apparently not as passionate about states further south.

The OCS was first surveyed by the USGS back in 1974, and from 1976 on some 40 wells were drilled, though none brought in commercial quantities. President Carter approved a five-year leasing plan in 1980 that saw an additional 50 leases sold over the next two years. But in 1990, President Bush withdrew the Atlantic OCS from lease potential. That action was in process of being reversed at the time of the GOM oil spill. (Linda Bennan.)

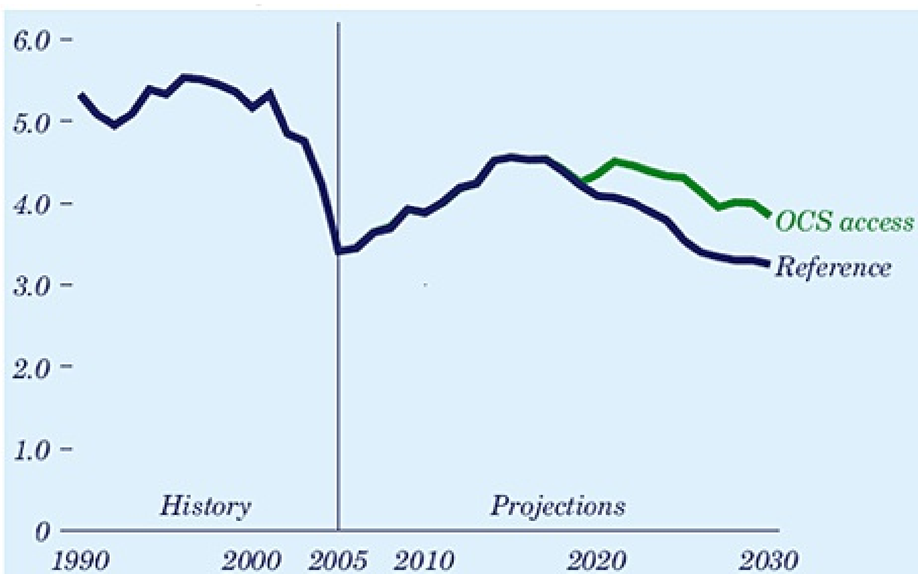
The possible change in the party that holds the presidency might therefore influence the opening of leases to develop the Atlantic OCS. However, given that it was a Republican president who withdrew the acreage in the past and that this has been advanced by Democratic presidents, it is not necessarily a conclusive declaration. This is particularly the case given the objections of some of the Republican governors.

But even if the decision is made to go ahead, the EIA considers it will take at least four years from the sale of leases until production from any identified reserves can begin, and in some cases such an interval is considered optimistic. (Art Berman has pointed out that in the sequence of first carrying out new seismic work, then drilling an initial well, followed by appraisal wells, that if that first well were to be successful, then the construction of production platforms would likely move the timeline out closer to ten years). Estimates of the total oil and natural gas available vary quite widely. The BOEMRE thinks that there is 0.5 to 1 billion barrels of oil in the Mid Atlantic and 0.03 to 0.15 billion barrels in the South Atlantic. But with the slow rates of development, it is unlikely that the production will exceed the estimate of the EIA, which foresaw some years ago that this new OCS production might possibly only stabilize production of offshore oil.



Projected OCS production (2007) (EIA)

It was not expected to stabilize offshore natural gas production.



Lower 48 offshore NG production with and without increased OCS (EIA)

In this regard, the model that the EIA uses in predicting production from these fields is:

> For currently producing fields, a 20-percent exponential decline is assumed for production except for natural gas production from fields in shallow water, which uses a 30-percent exponential decline. Fields that began production after 2008 are assumed to remain at their peak production level for 2 years before declining.

In passing, lease sales are anticipated to restart in December for the Gulf of Mexico in waters ranging from 16 to 10,900 feet deep. The prospects are considered to have the potential to the production of between 200 and 450 million barrels of oil, and 1.5 to 2.65 Tcf of natural gas. However, minimum bids for the acreage bave risen from $37.50 to $100 an acre.
(H/t Gail and Art)

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