

GOVERNMENT ASSUMES U.S. WILL FAIL CLIMATE GOALS IN ITS 5-YEAR OFFSHORE DRILLING PROPOSAL

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The Bureau of Ocean Energy Management's (BOEM) recently released its proposal for offshore oil and gas drilling lease sales in the 2017-2022 period.¹ Buried within the supplementary documentation is the agency's remarkable conclusion regarding the climate impact of drilling for more oil and gas: **More drilling reduces emissions.**¹¹

It is hard to imagine a conclusion more disconnected from both scientific reality and the government's stated goals.

The BOEM comes to this conclusion because the model it uses to assess the flow of energy through the U.S. economy assumes the United States and the world will not take the actions necessary to prevent catastrophic levels of climate change. It therefore calculates that because demand for oil and gas remains strong in a (theoretical) world

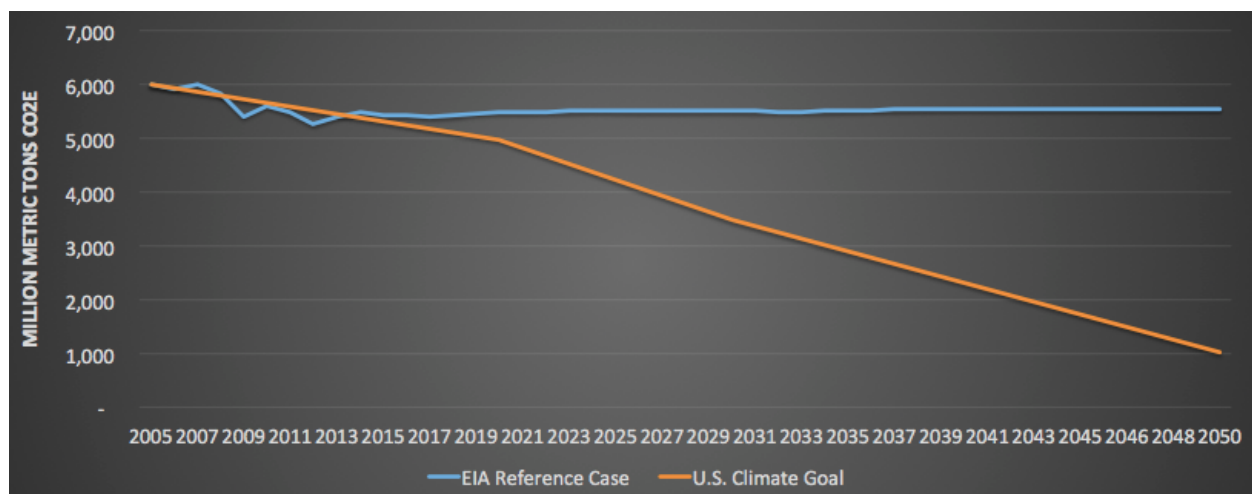
heading full tilt toward climate chaos, it reduces emissions slightly to produce oil and gas closer to home.

This is a textbook example of setting ourselves up for failure. This fundamental issue remains at the heart of a myriad of poor decisions being made by government regarding fossil fuel infrastructure and policy, and it urgently needs to change.

The Problem with BOEM's Assumptions

The BOEM uses a computer model to simulate market responses to energy supply. The model is a modified version of the Energy Information Administration's (EIA) National Energy Modeling System (NEMS) called MarketSim. It takes the EIA's Reference Case produced by NEMS¹ and subtracts any expectation the EIA had of new lease sales

Figure 1 U.S. GHG emissions in AEO 2015 Reference Case and U.S. Climate Goal²



Source: EIA AEO 2015^{III} and the Department of State^{IV}

¹ This is the same Reference Case presented in the EIA's Annual Energy Outlook (AEO) 2015.

² The EIA Reference Case only goes to 2040 but to compare with the 2050 climate goal we continued the trend out to 2050 as there is no reason to believe that in this scenario the trend would dramatically change after 25 years.

after 2017, beginning with a scenario that assumes no new production from these leases. It then adds expected production from these sales “as a shock to the baseline” to simulate a market response to this added production.

The trouble is **the EIA Reference Case leads to 445 percent higher GHG emissions than the level the U.S. has committed to in order to prevent runaway climate change.** This is because the 2015 Reference Case does not account for policy changes aimed at bringing these emissions under control. In other words, it is a business as usual, climate disaster energy scenario. In fact, given that the world’s governments agreed to an aggressive reduction in GHGs in Paris in December, it no longer reflects the likely business as usual path.^v

So the BOEM is dismissing the climate impact of drilling for fossil fuels that cannot be burned because its model assumes we will not act on climate and will accept a catastrophic level of climate change. This is not only self-defeating and dangerous but also ignores significant efforts to address climate change already under way.

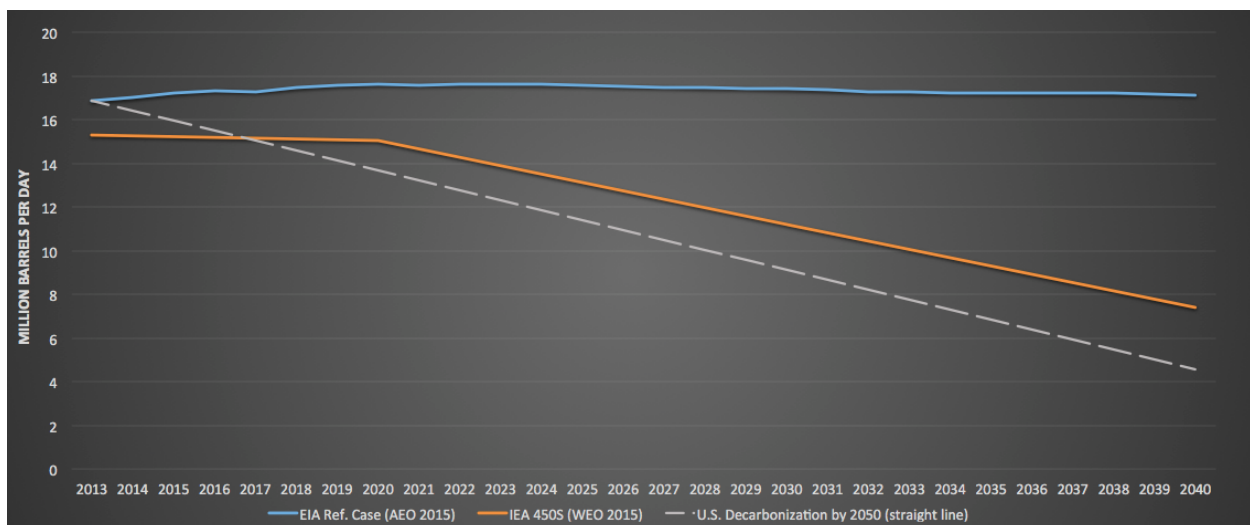
The below charts show just how completely unrelated the EIA Reference Case is to U.S. climate goals. The first shows that under the EIA Reference Case, U.S. emissions are more or less steady out to 2050, compared to the 83 percent reduction the U.S. has pledged.

The Need for Energy Models Consistent with National and Global Climate Goals

There are currently no country level energy models that are consistent with a global economic transition away from high-carbon fossil fuels at the speed necessary to avoid climate catastrophe. The chart below shows three scenarios for comparison purposes only:

- U.S. oil demand under the EIA Reference Case. In this scenario, U.S. oil demand remains more or less static for the next 25 years. This scenario is likely consistent with a 5 to 6 degree C global temperature rise.
- U.S. oil demand under the International Energy Agency’s (IEA) 450 Scenario. This

Figure 2: U.S. Oil Demand: EIA Reference Case, IEA 450 Scenario³, and U.S. Decarbonization by 2050



Source: EIA and IEA

³ IEA and EIA measure oil demand differently and therefore the 2013 starting point for each is roughly 1 million bpd apart. However, the trend is very clear. Demand in the EIA Reference Case is steady while the IEA 450S shows a 51% decline from 2013 to 2040. IEA figures are only for 2013, 2020, 2030 and 2040, so changes in demand to date are not reflected. As U.S. oil demand has increased since 2013 a greater percentage reduction is now needed.

scenario allows for a rise in atmospheric CO₂ to 450 parts per million (PPM). This level of carbon pollution aims to result in a 50 percent chance of constraining climate change to 2 degrees Celsius - an unacceptably high risk of severe climate impacts. Arguably it does not even achieve this, as it assumes that atmospheric concentrations will exceed 450ppm and then somehow be reduced after 2040.^{VI} Further, the United States and the rest of the world agreed to pursue efforts towards limiting warming to 1.5 degrees at the recent Paris climate summit, in recognition of the severe impacts associated with 2 degrees.

- A straight line trend towards U.S. decarbonization by 2050. The Climate Vulnerable Forum, a body of countries highly vulnerable to climate change calls for full decarbonization of the world economy and zero emissions by mid-century. Note that this straight line to U.S. decarbonization by 2050 does not reflect the USA's fair share of the global effort to decarbonize by that date,⁴ which would require faster and deeper cuts than the global average.

The EIA and IEA scenarios clearly do not reflect the necessary pathway for the United States - and the world - to reach stated climate goals. It is essential that the United States has a clear roadmap for global energy supply and demand based on 1.5°C and 2°C limits.

The Need for a Climate Test

The U.S. government sorely needs to develop a starting point for climate analysis that begins with an assumption of climate success rather than failure. This consideration is relevant for a wide range of projects, including the BOEM assessing the climate impact of offshore leasing or drilling on federal lands, the Federal Energy Regulatory Commission (FERC) assessing the permitting of gas pipelines and LNG export terminals, and the

State Department assessing tar sands pipelines crossing the border from Canada. The current use of the EIA Reference Case completely fails to provide a roadmap for decision makers that can be used to assess whether a project or policy is acceptable in terms of the nation's climate goals.

By using an energy forecast scenario that results in climate disaster, the BOEM analysis fails to actually assess the impact of increased drilling on the climate, which is surely the point of calculating GHGs in the first place. This is because in the scenario BOEM is using, the destruction of the climate has already been written into the model.

It is time for the U.S. to start planning for climate success. Last month, Oil Change International and 15 other organizations from the U.S. and Canada launched a call for a Climate Test to be applied to government decisions regarding fossil fuel infrastructure and energy policy.^{VII} In the words of the group statement: "The Climate Test will use the latest climate science to evaluate all proposed energy supply and demand policies and projects in light of the globally agreed goal of limiting global warming to 1.5°C".

The BOEM needs to go back and look at the offshore lease sales in light of climate science. The current analysis simply sets us up to fail.

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⁴ This is for 3 reasons: (i) the USA's emissions are disproportionately higher than other countries', in relation to its share of global population; (ii) as the world's wealthiest country, the USA has greater ability to act than others; and (iii) the USA bears a large share of historic responsibility for the greenhouse gases already in the atmosphere.

ENDNOTES

ⁱ United States Department of Interior. Press Release. 'Interior Department Announces Next Step in Offshore Oil and Gas Leasing Planning Process for 2017-2022.' March 15, 2016. <https://www.doi.gov/pressreleases/interior-department-announces-next-step-offshore-oil-and-gas-leasing-planning-process>

ⁱⁱ United States Department of Interior, Bureau of Ocean Management. 'Draft Economic Analysis Methodology for The 2017-2022 Outer Continental Shelf Oil and Gas Leasing Program'. March 2016. <http://www.boem.gov/Economic-Analysis-Methodology/> See Section 3.1.

ⁱⁱⁱ Energy Information Administration. Annual Energy Outlook 2015. <http://www.eia.gov/forecasts/aeo/>

^{iv} United States Department of State. U.S. Climate Action Report 2010. Washington: Global Publishing Services, June 2010. <http://www.state.gov/documents/organization/140636.pdf>

^v UNFCCC, 'Adoption of the Paris Agreement' December 12, 2015. <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

^{vi} International Energy Agency (IEA) World Energy Model Documentation. 2015 Version. Page 5. http://www.worldenergyoutlook.org/media/weowebiste/2015/WEM_Documentation_WEO2015.pdf

^{vii} <http://www.climatetest.org/>