Applied Economics Clinic

Economic and Policy Analysis of Energy, Environment and Equity

A CRITIQUE OF AN INDUSTRY ANALYSIS ON CLAIMED ECONOMIC BENEFITS OF OFFSHORE DRILLING IN THE ATLANTIC

Prepared for the

Southern Environmental Law Center

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EXECUTIVE SUMMARY

The Applied Economics Clinic (AEC) undertook an analysis of the impacts of proposed offshore oil and natural gas drilling in four southern states in the Atlantic region—Virginia, North Carolina, South Carolina, and Georgia—at the request of the Southern Environmental Law Center.

The Trump Administration has recently proposed allowing offshore oil and natural gas drilling on the Atlantic coast of the United States.[1] Currently, U.S. lease sales for offshore drilling are only active in the Gulf of Mexico and off the coast of Alaska. This report is structured primarily as a review of an April 2018 study[2] released by the American Petroleum Institute (API) supporting that proposal. The API report estimated:

- The availability of substantial oil and natural gas reserves in the Atlantic;
- The sale of between 115 and 450 offshore drilling leases per year; and
- Economic transformation of coastal states due to increased jobs, GDP, and government revenue.

Following a careful review of the API report (and additional relevant sources), AEC concludes that:

- API likely overestimated oil and natural gas potential, using far outdated and highly uncertain information.
- Offshore energy production has become less economic in recent years and is unlikely to compete with other energy sources. Onshore natural gas production has increased rapidly in recent years, while offshore natural gas production has markedly decreased—now representing only 5 percent of U.S. natural gas production.
- Even if offshore energy production in the Atlantic reached the level predicted by API, states would not likely see the economic transformation predicted in the report. When combined with API's job projections in the eastern Gulf of Mexico (in a separate report), these predictions would amount to a doubling of the entire U.S. oil and natural gas industry, a gross overestimation. API's economic predictions are also distorted by its assumption of revenue sharing, which would require an act of Congress to occur, and seems highly speculative in the current political and budgetary environment.
- Adverse economic impacts on other industries from offshore drilling were omitted in the API report—such as losses in the tourism and fishing industries.
- Also, not addressed by API in its report are the significant environmental costs and risks from offshore drilling—primarily spills that can be disastrous for the local population and deter tourists.
- The report appears to add together nominal dollars (i.e. unadjusted for inflation) over a 20-year period. Doing so would be misleading as dollars in year 20 are worth far less than those in year 1, for instance. If the authors are adjusting for inflation, they do not reference it.

API's April 2018 report focuses exclusively on inflated potential benefits of offshore drilling and fails to consider its costs and risks. The result is an unrealistically high forecast of the economic impacts of offshore drilling in the Atlantic. API also fails to comprehensively present its data sources and assumptions, and therefore does not provide the transparency necessary for a thorough third-party review. As a result, we cannot recommend that the API report be relied upon for policy or regulatory decision-making.

1. INTRODUCTION

The Trump administration has recently proposed allowing offshore oil and natural gas drilling off the Atlantic coast of the United States.[3] Currently, U.S. lease sales for offshore drilling are only active in the Gulf of Mexico and off the coast of Alaska. Waters from the coastline out to three nautical miles offshore are under state control, while waters more than three nautical miles from shore are under federal control—until they reach international waters at about 200 nautical miles offshore.[4] Currently, offshore drilling rights in federal waters may be leased to oil or natural gas companies by the federal government on a schedule developed every five years by the acting administration.

This report evaluates the impact of allowing offshore oil and natural gas drilling off the U.S. Atlantic coast, focusing on four southern states (Virginia, North Carolina, South Carolina, and Georgia) as presented in an April 2018 study released by the American Petroleum Institute (API).[5] The API report predicted an economic transformation for Atlantic coastal states based on very specific assumptions regarding oil and natural gas production and related local spending. A careful review of the API report and other relevant sources, however, finds that API has grossly overestimated the production and economic activity from offshore drilling. In addition, our evaluation presents costs of offshore drilling—including economic and environmental costs—that were not considered in the API study. A thorough review of the report was hindered by its lack of transparency about methodology, data sources, and assumptions, and, as a result, we cannot recommend that the API report be relied upon for a regulatory or policy decision.

2. COMMENTS ON THE AMERICAN PETROLEUM INSTITUTE STUDY

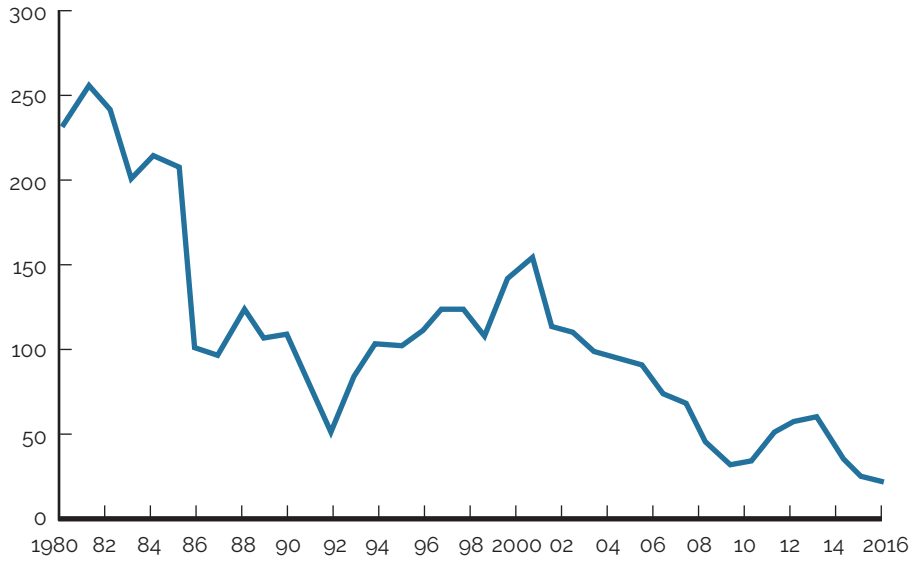
API's April 2018 study of the economic impacts of offshore drilling on the U.S. Atlantic coast anticipates a 20-year period of energy production, extrapolating from the Bureau of Ocean Energy Management's (BOEM) proposed lease schedule for 2019 through 2024. The API study claims that there will be significant leases sold, oil and natural gas produced, and increased economic activity if the region is opened to offshore drilling. However, the report made a number of assumptions to arrive at these specific conclusions, including: 1) the number of leases that will be sold; 2) the amount of oil and natural gas that is available; 3) the amount of oil and natural gas that will be extracted; 4) how much domestic spending will occur; 5) the number of local jobs that will be created; and 6) the amount of revenue that will be allocated to states. It is important to note that the results of the report would be highly sensitive to the authors' assumptions, which are also heavily interlinked. For instance, if there were fewer leases than the report claims, less oil and natural gas would be produced, fewer jobs would be created, and less government revenue would be collected. Even if the API report's estimates of the number of leases and amount of available energy resources are correct—which we do not suggest—these leases may not be the most economical way to obtain oil and natural gas. There may be lower cost sources available, such as onshore drilling. The API report's assumptions are discussed in more detail below.

A. API overstates the expected future offshore natural gas and oil production

Overly optimistic assumptions about offshore drilling activity off the Atlantic coast lead the API report to claim that there will be significant leasing activity and a high potential for oil and natural gas production. The number of offshore drilling leases projected by API is contingent on extrapolations made using unspecified data. API expects the number of leases sold to be between "115 to 450 per year."[6] API fails to explain how the number of leases was estimated, offering only that the number was:

Figure 1

Number of offshore oil and natural gas rigs operating in the United States



Source: Energy Information Administration (EIA). No Date. Crude Oil and Natural Gas Drilling Activity. Rotary Rigs in Operation. http://www.eia.gov/dnav/ng/ng_enr_drill_s1_a.htm.

> *… the estimated amount necessary to develop the projected number of projects, given historical leasing trends in other areas.*[7]

For the first five years of the 20-year study period, the API report follows the pattern of biennial leases laid out by the BOEM's proposal.[8] Beginning in year 6, however, the authors assume that leases are sold annually,[9] and the report provides no explanation for the increase in frequency. The report also does not provide a methodology for how the "projected number of projects" was calculated. Indeed, the historical trend of the number of U.S. offshore rigs has been declining overall—as shown in Figure 1.

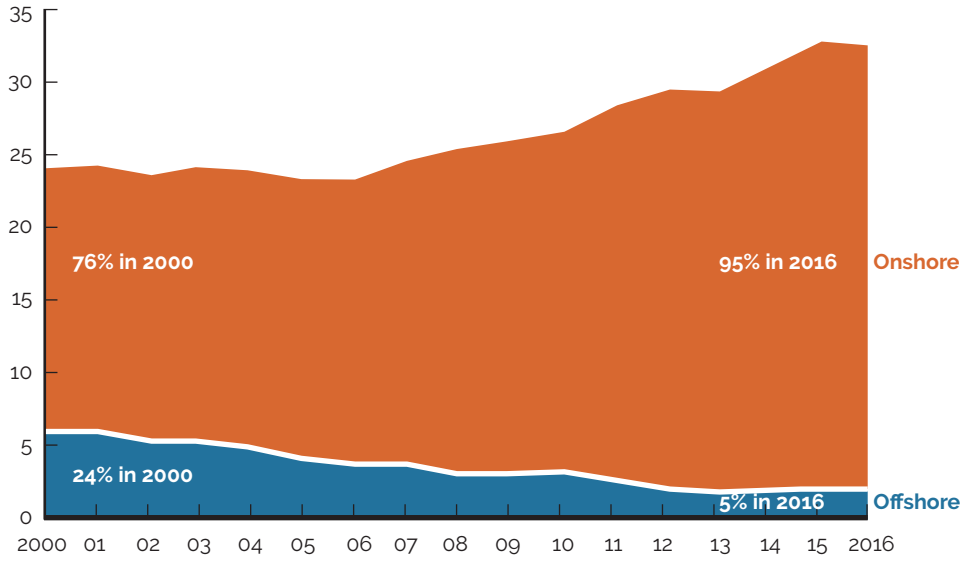
In a recent auction held by the Department of the Interior, only one percent of the area up for auction was bid on, while the winning bid prices per acre were 35 percent lower than those in 2017.[10] The historical trend—if appropriate for projecting future leases in the Atlantic region—should have led API to assume a declining number of leases in each year and not burgeoning offshore drilling activity. Our review cannot determine with certainty whether this downward trend was accounted for because API fails to present: 1) what data were used; 2) what trend was estimated from the data used; and 3) how that trend was applied to reach a conclusion of growing offshore drilling industry in the Atlantic. However, the API report correctly acknowledges that the amount of oil and natural gas that is available to drill off the Atlantic coast is highly uncertain.[11]

B. API overstates the economic viability of new offshore drilling

The API report claims that most of the production from offshore wells in the Atlantic in the next decades will be from natural gas (64 percent) as opposed to crude oil (36 percent).[12] Greater production of fossil fuels in recent years has increased the energy independence of the United States without increased offshore gas drilling. As shown in Figure 2 below, U.S. total natural gas production has increased rapidly in recent years, while offshore natural gas production has markedly decreased—representing only 5 percent of natural gas production in 2016.

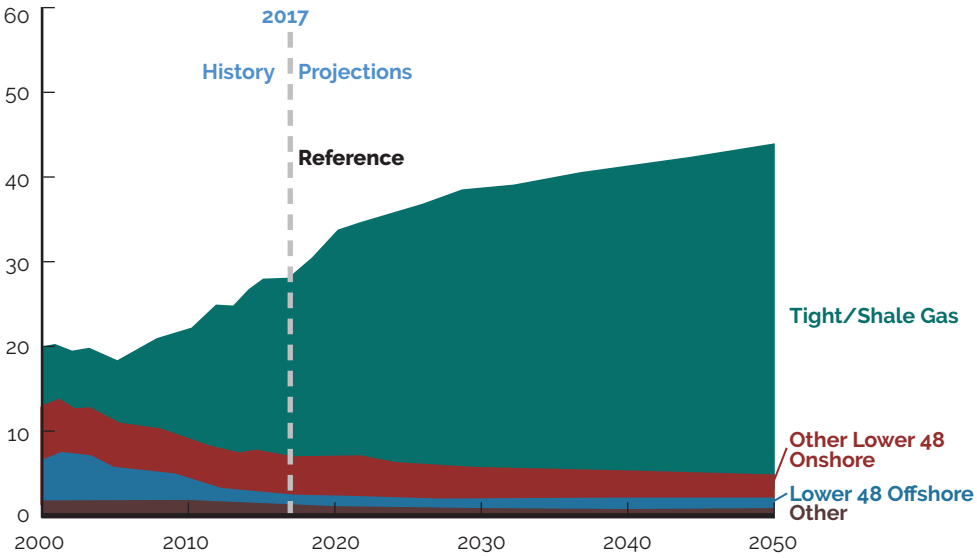
Since spiking in 2005 and 2008, U.S. natural gas prices have mostly remained low and stable. In the past five years, prices have averaged $3.42 per MMBtu compared

Figure 2
U.S. natural gas production (trillion cubic feet)



Source: EIA. Natural Gas Gross Withdrawals and Production. Available at: https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm. Note that data for total U.S. offshore was not available after 2016.

Figure 3
EIA projection of U.S. natural gas production by source (trillion cubic feet)



Source: Reproduced from EIA Annual Energy Outlook 2018. (EIA 2018) Slide 65. February 6, 2018. Available at: https://www.eia.gov/outlooks/aeo/.

to $5.48 per MMBtu in the previous five years.[14] The flood of natural gas supply to the market has kept prices low, leading the United States to become a net exporter of natural gas (i.e. exporting more than it imports) for the first time in 50 years.[15] The Energy Information Administration (EIA) expects the United States will export even more natural gas in the future, and that most will originate from onshore shale gas and only a small portion will originate from offshore drilling (see Figure 3 on Page 3).[16]

The EIA predicts that "offshore natural gas production in the United States stays nearly flat over the projection period as production from new discoveries generally offsets declines in legacy fields."[17] Importantly, EIA assumes that none of the offshore gas produced through 2050 comes from the Atlantic coast.

EIA's projections of offshore oil production are not as stark as those for offshore natural gas but are also projected to decline. The share of U.S. oil produced offshore was 18 percent in 2017, down from 27 percent in 2008.[18] EIA expects the share of offshore oil to gradually decline to around 13 percent in 2035 and remain at approximately that level through 2050. As with natural gas production, the United States is expected to produce more oil onshore than it has historically.[19] Moreover, EIA projects that none of the oil produced through 2050 will come from the Atlantic.

The development of U.S. onshore oil and natural gas production has rendered offshore oil and natural gas development less economically viable. In its 2017 Securities and Exchange Commission (SEC) filings, one of the largest drilling companies in the world, Halliburton, asserted that:

> *Low commodity prices have stressed budgets and have impacted economics across the deepwater market, negatively impacting activity and pricing. These headwinds persist today, and we believe there will continue to be challenges in 2018 to deepwater project economics.*[20]

Thus, even without offshore drilling in the Atlantic, the United States is expected to produce more oil and natural gas than it has historically.

C. API overstates the economic activity expected to result from offshore drilling

This section reviews the API report's economic impact estimates supported by Atlantic offshore drilling, including the projected in-state spending, Gross Domestic Product (GDP), employment, and government revenue.

i. Local Spending

According to the API report, Virginia, North Carolina, South Carolina, and Georgia will benefit from the projected offshore energy activity off their coasts and nearby waters, while Georgia will benefit mostly from operational spending and drilling. The API report predicts $259 billion in capital investment and spending during the 20-year forecast period for the Atlantic coast.[21] Investments in Virginia, North Carolina, South Carolina, and Georgia are expected to account for $79 billion (30 percent of the Atlantic coast in total): $19 billion for Virginia, $36.2 billion for North Carolina, $20.8 billion for South Carolina, and $2.8 billion for Georgia.[22]

The assumptions underlying in-state spending estimates are not clearly explained, and the report cautions that they are based on current conditions and are subject to change. These values are also likely overstated due to several methodological issues. First, API bases these amounts on overly optimistic projections of oil and natural gas that will be produced (as mentioned previously). Second, where spending occurs (i.e. in which state) depends on a variety of unknown variables, such as the exact location of resources, the time it takes for project development, or the type of machinery and equipment used to extract resources. Projects of the magnitude claimed by API would transform economic activities within and across regions, making it very difficult to estimate the amount of spending among individual states over the 20-year period. At a minimum, API should have provided a detailed methodology explaining how it arrived at its expected investments by state.

In addition, the report appears to add together nominal dollars (i.e. unadjusted for inflation) over a 20-year period.

Table 1

Comparison of API estimated GDP contribution from offshore oil and natural gas with total ocean economy GDP from the National Ocean Economics Program ($2015 billions)

State	Year 20 GDP Contribution Forecast	Ocean Economy GDP (2015)	Ratio Offshore/ Ocean Economy
North Carolina	$2.5	$2.4	106%
South Carolina	$1.6	$4.2	37%
Virginia	$1.3	$8.5	15%
Georgia	$0.2	$1.4	16%

Source: National Ocean Economics Program, Ocean Economy Data.

If the authors are adjusting for inflation, they do not reference it or provide the deflator. Failure to adjust for inflation when combining money values over many years can be misleading; dollars in year 20 are worth much less than dollars in year 1.

ii. State GDP Contributions

API estimates that offshore oil and natural gas activities will contribute approximately $260 billion to the nation's GDP over the 20-year forecast period (again, unadjusted for inflation).[23] We compared the predicted states' GDP contribution in year 20 with the current annual contributions to GDP levels from their existing "ocean economies" (see Table 1).[24] For North Carolina, API projects that offshore oil and natural gas activities will contribute almost $2.5 billion to the state's GDP in year 20, which is more than the current contribution to GDP from the state's entire ocean economy in 2015 ($2.4 billion).[25] This suggests a strong shift in these states' economies—especially for North Carolina.

It is unclear where the resources will come from to make an economic transformation predicted by API. To increase GDP, resources such as labor, capital, intermediate inputs, and technological improvements will be required. Thus, it may be necessary to shift resources away from other industries and/or regions of the country. The API report does not consider these effects. We expand on this idea further in the next section.

iii. State Employment

The API report predicts that "the nation as a whole, but especially the Atlantic coast states would likely see large employment gains."[26] API predicts that approximately 265,000 jobs will be created over the 20-year forecast period, with Virginia, North Carolina, South Carolina, and Georgia accounting for 45 percent of those jobs. However, similar to investment and GDP estimates, these employment estimates are likely overstated. API projects that in the Atlantic OCS region, offshore activities will support 101,000 direct jobs with oil and natural gas companies.[27] However, total U.S. employment in the oil and natural gas extraction industry (including onshore and offshore activities) was 152,000 in August 2018.[28]

The employment impacts should also be viewed along with projections that API made in a separate report for the eastern Gulf of Mexico. In that report, they estimate that offshore drilling in that region would create over 152,000 jobs—53,000 of them being "direct" jobs in the oil and natural gas industry.[29] Taken together, API is estimating that the eastern Gulf and Atlantic combined would generate over 150,000 direct jobs—doubling the size of the entire U.S. oil and natural gas industry. The implications of what would be a dramatic transformation of an important U.S. economic sector is not addressed in either API report.

In addition, there is the possibility that some offshore oil and natural gas jobs will not be filled by workers from within the Atlantic OCS region, but by workers currently living in the Gulf of Mexico who are already highly trained and mobile.[30] Recent reports suggest that offshore oil and natural gas companies have been laying off workers in the Gulf of Mexico,[31] who could migrate to the Atlantic region and fill jobs generated by the proposed offshore oil and natural gas development.

iv. State Government Revenue

API predicts that the offshore oil and natural gas development will generate $52 billion in federal and state government revenue over the 20-year period.[32] API assumes that the Atlantic states will receive 37.5 percent of total government revenues (generated from bonus bids, rents, and royalty income). This assumption is based on the revenue sharing that four different states (Alabama, Louisiana, Mississippi, and Texas—as a group) receive under the Gulf of Mexico Energy Security Act (GOMESA) of 2006.[33] However, Congress has not provided revenue sharing for any Atlantic coast states for which offshore drilling has been proposed, and Members of Congress have signaled their opposition to such a plan. According to the Center for the Blue Economy (CBE 2015):

> *(u)nder current law, however, Atlantic coast states would not receive any such revenues. The sharing of federal revenues with the states has been a controversial issue for decades, and to establish revenue sharing for the Atlantic region, Congress would have to pass legislation.*[34]

Therefore, API's reference to funds originating from revenue sharing for Atlantic states is highly speculative. The economic impacts of Atlantic offshore oil and gas development should not assume revenue sharing will occur. Even if such revenue were to be shared in the Atlantic, the shared revenue for Gulf states is currently earmarked to partially compensate the affected states for the disruption and damages to the environment produced by offshore oil and natural gas activities. According to the GOMESA agreement, Gulf states' revenue is to be used for:

> *(A) Projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection, and infrastructure directly affected by coastal wetland losses. (B) Mitigation of damage to fish, wildlife, or natural resources. (C) Implementation of a federally-approved marine, coastal, or comprehensive conservation management plan. (D) Mitigation of the impact of outer Continental Shelf activities through the funding of onshore infrastructure projects.*[35]

The API report does not consider environmental damages or mention the compensatory nature of current GOMESA revenue. It is likely that funds for Atlantic states would be treated similarly—should they accrue at all. For instance, North Carolina state law dictates that:

> *Any revenues and royalties paid to the State as a result of offshore leasing, exploration, development, and production of all energy resources shall be deposited in the Offshore Emergency Fund until the Fund reaches two hundred fifty million dollars ($250,000,000).*[36]

Should it occur, Atlantic states' revenue from offshore drilling would likely not be discretionary. In fact, it would more likely go towards compensation for environmental damages (discussed in Section 3 of this report, below).

There is significant uncertainty about the future of state revenue sharing. In May of 2017, the White House announced its intention to end the GOMESA program in order "to ensure the sale of public resources from Federal waters owned by all Americans, benefit all Americans."[37] The Trump administration also wanted to eliminate GOMESA's allocation formula and replace it with a fixed annual allocation, although this idea was later abandoned.[38] U.S. Secretary of the Interior, Ryan Zinke, has said that he would like to increase federal government income from offshore oil and natural gas drilling in order to spend more on national parks.[39]

Under GOMESA, there is a cap on state revenue, whereby shared revenue cannot exceed $500 million in any fiscal year between 2016 and 2019, $650 million in any fiscal year between 2020 and 2021, and $500 million in any fiscal year between 2022 and 2055.[40] However, API provides no explanation as to why it is reasonable to assume that federal and state revenue sharing would be the same in the Atlantic region as in the Gulf region, nor does it account for revenue caps that currently apply to Gulf states. The API report does note that actual revenue sharing between the Atlantic states and the federal government will be determined by legislation.[41] Therefore, the expected flow of revenues to states is highly uncertain.

API's estimate of government revenue is also large in comparison with the actual government revenue accrued to the four oil and natural gas producing states in the Gulf of Mexico, which received a combined $37.5 million in revenue over the first nine years (2009-2017) of the Phase I GOMESA agreement (see Table 2).[42,43] In April 2018, the Secretary Zinke announced that the four Gulf states would receive almost $188 million in revenue during the 2018 fiscal year, which corresponds to Phase II of the GOMESA Agreement.[44,45] The large increase in revenue for the Gulf states is due the greater number of leases included under Phase II. This means that the Gulf states will have received $225 million in the 10-year period from 2009 to 2018 (unadjusted for inflation). By contrast, the API report predicts that over the first 10 years of the offshore oil and natural gas program (2020 to 2029), Virginia, North Carolina, South Carolina, and Georgia—combined—will receive more than $1.4 billion in revenue (see Table 3). This is more than six times the Gulf states' actual revenue over a 10-year period.

3. COSTS OF ATLANTIC OFFSHORE DRILLING

The API report does not address the costs and risks to the environment and economy from the existence of offshore oil and natural gas drilling. In reviewing other sources, we find that the activity can harm other sectors of the economy and create severe damage to the environment. Of course, these two effects are interlinked: damage to the local environment harms industries that depend on a clean environment for success—such as fishing and tourism.

Table 2
Gulf States Revenue under GOMESA (Millions $)

Year	Alabama	Lousiana	Mississippi	Texas	All
2009	$7.7	$7.9	$6.9	$2.7	**$25.2**
2010	$0.8	$0.9	$0.7	$0.3	**$2.7**
2011	$0.3	$0.3	$0.2	$0.1	**$0.9**
2012	$0.1	$0.1	$0.1	$0	**$0.3**
2013	$0.1	$0.1	$0.1	$0	**$0.3**
2014	$1.3	$1.4	$1.2	$0.5	**$4.3**
2015	$0.7	$0.8	$0.7	$0.3	**$2.4**
2016	$0.1	$0.1	$0.1	$0	**$0.3**
2017	$0.3	$0.3	$0.3	$0.1	**$1.0**
Total (2009-17)	**$11.3**	**$11.9**	**$10.2**	**$4.1**	**$37.5**
2018 approved (approximate figures)	$27.0	$82.0	$27.0	$50.0	**$188.0**

Source: U.S. Department of Interior, Natural Resources Revenue Data. Note: Numbers include revenues for the states' coastal political subdivisions; this is additional money that goes to particular counties in each state, called coastal political subdivisions.

A. Offshore drilling impacts the environment

The API report omits the environmental effects of seismic and drilling activity in the Atlantic region and the potential for oil spills. Offshore oil and natural gas exploration, development, and eventual decommissioning have been linked to adverse effects on the marine environment. Figure 4, adapted from 2016 article in *Frontiers in Environmental Science*, shows the environmental impacts from a typical offshore drilling rig.[46] Direct physical impacts on marine life result from anchor chains, drill cuttings, drilling fluids, pipelines, and contaminated water discharge. Concurrently, indirect disturbance from sound and traffic may also cause environmental harm. Finally, decommissioning offshore oil and natural gas operations directly impacts the sea floor, can introduce contaminants to the marine environment, and can result in explosions that seriously damage marine life.[47]

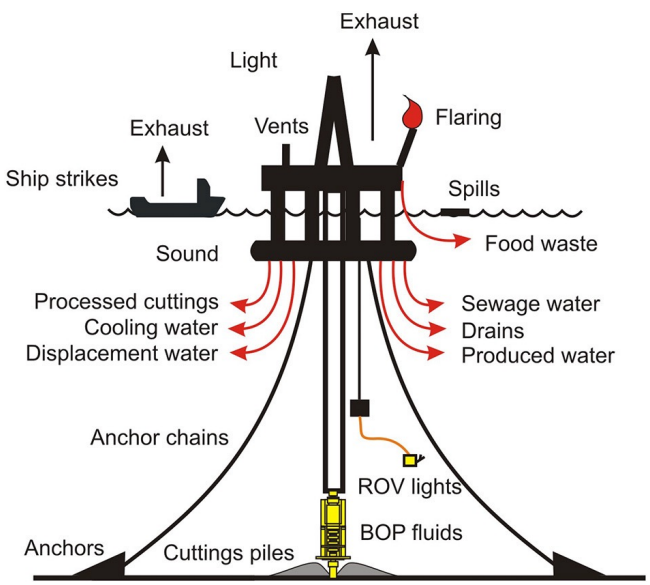
Recent research shows that marine seismic surveys, which are used to locate and estimate the size of oil and natural gas reserves, can have important effects on the amount and composition of fish in the ocean.[48] By producing high noise in the ocean, seismic surveys disrupt marine life and harm marine animals by causing hearing damage or mortality.[49]

The API report does not address the potential for oil spills and disasters, even though it is well established that offshore oil and natural gas projects represent a threat to the environment through these events. Harmful effects from oil spills can last for decades, particularly in critical habitats like wetlands and coral reefs.[50] According to the Bureau of Safety and Environmental Enforcement (BSEE),[51] between 1964 and 2015, there were over 2,400 oil spills.[52] One of the most well-known incidents occurred in the Gulf of Mexico in April 2010, caused by the explosion and sinking of the *Deepwater Horizon* drilling rig. This incident released over 200 million gallons of oil,[53] the largest ocean spill in the history of the U.S. oil industry.

The *Deepwater Horizon* oil spill was an environmental disaster that has affected and will continue to affect marine life, vegetation, and beaches for many years. The oil spill also caused huge economic losses to the fishing industry as well as to the tourism and travel industry, with many people losing their jobs.[54] One study estimated that leisure visitor spending in Louisiana alone was expected to decline by $422 million from 2010 through 2013, due to the spill.[55] Another study estimated that the fishing industry would lose $3.7 billion in revenue over a seven-year period.[56]

In response to the *Deepwater Horizon* spill, President Obama created a national commission to study the incident. The commission concluded that the oil spill could have been prevented but that neither the industry nor

Figure 4
Environmental impacts of offshore drilling



Source: Reproduced from Cordes et al. (2016). "Environmental Impacts of the Deep-Water Oil and Gas Industry: A Review to Guide Management Strategies." Frontiers in Environmental Science 4 (58): 1-26.

Table 3
API Projected Revenue for Southeast Atlantic States (Millions $)

Year	North Carolina	South Carolina	Virginia	Georgia	All
2020	$0	$0	$0	$0	**$0**
2021	$1	$3	$3	$3	**$10**
2022	$46	$39	$23	$19	**$127**
2023	$4	$3	$5	$2	**$14**
2024	$51	$43	$25	$22	**$141**
2025	$54	$40	$31	$17	**$142**
2026	$57	$42	$31	$17	**$147**
2027	$83	$65	$43	$16	**$207**
2028	$113	$88	$57	$16	**$274**
2029	$151	$121	$75	$16	**$363**

Source: API 2018

the government was adequately prepared to do so. The commission recommended new safety and environmental regulations as well as accountability standards for U.S. offshore drilling.[57] In response to this report, the Obama administration issued a number of offshore drilling safety regulations, including most notably the *Blowout Preventer Systems and Well Control Rule*, which introduced a set of comprehensive reforms to offshore oil and natural gas safety regulation in the United States.[58] On April 27, 2018, however, the Trump Administration issued a proposal that began steps to remove these environmental protections.[59]

Offshore oil and natural gas projects are also a risk to the workers directly involved in these projects. According to the BSEE, between 2007 and 2016, there were 6,556 safety incidents on the outer continental shelf, including 46 fatalities, and 2,517 injuries (most of them major).[60]

B. Offshore drilling hurts other sectors in the economy

The API report fails to account for lost economic activity in the Atlantic region due to offshore drilling. Oil and gas activity would likely have substantial, negative effects on other industries in the region. Two of the most adversely affected industries will likely be commercial fishing and tourism which are significant contributors to the region's economy. The ocean economy, which is primarily represented by these industries, brings $16.5 billion per year to the region (see Table 1).

The Atlantic is the most important region in the country for both commercial fishing (39 percent of the country in value) and aquaculture production (41 percent of the country in value). In addition, recreational fishing—representing 57 percent of all U.S. catch—may also impact tourism, another key sector in the Atlantic economy.[61] Seismic testing for oil and gas can reduce fish catch success and catch quantities significantly, disrupting the commercial fishing industry before drilling even begins.[62]

Offshore development could also result in infrastructure that is visible from the coast—such as offshore platforms and coastal onshore infrastructure—having potential negative effects for tourism.[63] Apart from pure aesthetic issues, there are concerns from visitors regarding the contamination of water and sand or the potential for dangerous oil spills.[64] Thus, the success of tourism in the Atlantic region is likely, in part, due to the lack of current offshore drilling.

The API report does not address changes in land value due to offshore drilling. While lower demand for fishing and tourism would likely decrease land value (all else equal), oil and natural gas development could increase the demand for land near the coastline, which would increase rental and housing prices (all else equal). Land value and real estate price impacts (positive and negative) should be considered by API as they would directly affect local residents and businesses.

API is also predicting substantial, new offshore activity for the eastern Gulf of Mexico.[65] This means that offshore drilling leases in the Atlantic would have to compete with eastern Gulf oil to hire workers and obtain equipment. This competition could increase prices for capital goods, intermediate inputs, and wages—thus hurting the bottom line of the offshore drilling industry.

4. CONCLUSION

API fails to consider the costs and risks of offshore drilling and overestimates its economic benefits. Based on our review of its April 2018 report on the economic impacts of offshore drilling in the Atlantic coast states (focusing on Virginia, North Carolina, South Carolina, and Georgia), we conclude the following:

- API likely overstates oil and natural gas potential, using outdated and uncertain information.
- API likely overstates oil and natural gas production. Offshore production has become less economic in recent years and is unlikely to complete with other sources.
- Even if the level of offshore energy production in the Atlantic predicted by API occurred, states would not likely see the economic transformation predicted in the report, which, when combined with API's estimates for offshore drilling in the eastern Gulf of Mexico (in a separate report), assumes a doubling of the U.S. oil and natural gas industry. It also assumes the existence of revenue sharing with the federal government, which is not allowed for by federal law and is speculative to assume.
- There are adverse economic impacts on other industries that were omitted in the API report—such as losses in the tourism and fishing industries
- There are significant environmental costs and risks from offshore drilling—primarily spills that can be disastrous for the local population. These impacts were not addressed by API.

Secretary Zinke, a proponent of the Atlantic offshore leasing proposal, recently stated that: "What we are seeing is more production onshore than offshore. There is no question offshore oil and natural gas drilling is riskier. It's riskier for a number of reasons..."[66] The industry has instead offered an unrealistically high economic impact estimate of offshore drilling activities in the Atlantic. The API report also fails to comprehensively present its data sources and assumptions, and therefore lacks the transparency necessary for a thorough evaluation. As a result, we cannot recommend that the April 2018 API report be relied upon for policy or regulatory decision-making.

END NOTES

[1] Bureau of Ocean Energy Management (BOEM 2018). *2019–2024 National Outer Continental Shelf Oil and Gas Leasing*. Draft Proposed Program. January 2018. Available at: https://www.boem.gov/National-OCS-Program/

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[3] Bureau of Ocean Energy Management (BOEM 2018). *2019–2024 National Outer Continental Shelf Oil and Gas Leasing*. Draft Proposed Program. January 2018. Available at: https://www.boem.gov/National-OCS-Program/

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