Center for American Progress

1333 H Street, NW, 10th Floor
Washington, DC 20005
Tel: 202 682.1611 • Fax: 202 682.1867

www.americanprogress.org

Michael J. Conathan
Director of Ocean Policy
Center for American Progress

Testimony on "H.R. _____, The Offshore Energy and Jobs Act"

Subcommittee on Energy and Mineral Resources
of the Committee on Natural Resources

1324 Longworth House Office Building
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Chairman Lamborn, Ranking Member Holt, and members of the committee, thank you for the opportunity to testify today on the Offshore Energy and Jobs Act of 2013.

Our nation's ocean space is one of our greatest treasures. It gives us sustenance in the form of the seafood we consume and two-thirds of the oxygen we breathe. It provides a trade route that brings 90 percent of the material goods we import to our shores. It regenerates our souls with one of our most popular destinations for vacation, rest, and restoration of spirit and mind. And as we are here to discuss today, it also provides much of the energy that fuels our economy.

And in providing all of these services, our oceans and coasts are also fundamental economic drivers. According to the National Ocean Economics Program and the Monterey Institute of International Studies' Center for the Blue Economy, in 2011 the ocean economy—which consists of construction, living resources, minerals, ship and boat building, tourism and recreation, and transportation—accounted for 2.7 million jobs and contributed more than $250 billion to our gross domestic product.[1]

Particularly in today's economic environment, we must strive to protect all the sources of revenue we receive from our ocean. The legislation we are here to consider today unfortunately prioritizes one industry over all the rest, to the detriment of both our economic and environmental well-being.

The Offshore Energy and Jobs Act of 2013 focuses on increasing energy production and, to that end, seeks to prioritize job creation exclusively in the energy field. But one cannot truly consider the potential effect of expanded oil and gas production on the economy and on employment without looking beyond just a single industry. The "all of the above" energy strategy espoused by members of both political parties and echoed from both ends of Pennsylvania Avenue must mean exactly that—all sources of energy production must be included. The Offshore Energy and Jobs Act is an incomplete bill for an "all of the above" energy strategy.

The fact is, accelerating offshore oil and gas production in an attempt to create more jobs might be a fine idea if nothing else took place in our exclusive economic zone. But the ocean is a busy place, and prioritizing one industry will surely come at the expense of others.

So the first thing I would ask this committee to consider is a revision of perspective. Instead of asking how to create more oil and gas jobs, take a step back and ask how to create more good jobs in industries that rely on the ocean. The options are suddenly far stronger.

Here is the reality of today:

- Offshore oil and gas production is already a growth industry. According to *The Wall Street Journal*, "today … offshore drilling is booming in the Gulf of Mexico."[2] Every year of the Obama administration, there has been more oil

produced on the outer continental shelf than the last year of the previous administration, and every year but 2012 saw more production than *any* year of George W. Bush's presidency.

- In 2010 the Gulf of Mexico experienced the worst accidental offshore oil spill in the history of the world. Since then, Congress has passed exactly zero laws to strengthen oversight of offshore oil production or increase pathetically low liability limits of $75 million.

- Despite this massive quantity of production, this legislation would stomp on the gas pedal, accelerating production even further and forcing the opening of new areas in the Atlantic, the Pacific, and the Gulf Coast, including areas where local residents resoundingly oppose having their coastlines threatened by oil production.

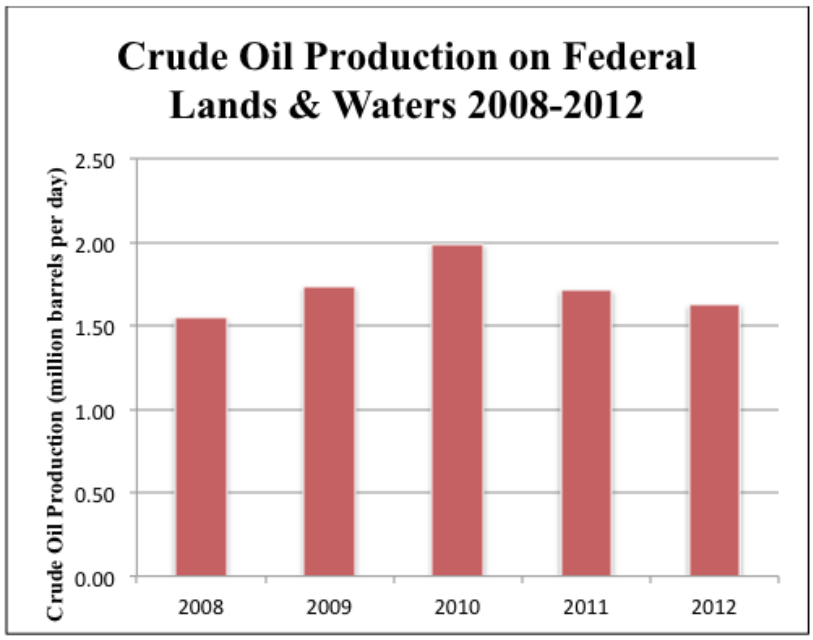
- In many of these regions, the current economy depends on clean, healthy oceans. The increase in industrial activity and the risk of blowouts, spills, and pollution that comes with offshore drilling would threaten oceans.

- Instead of creating offshore energy jobs by doubling down on dirty energy policies of the 20th century, we should be investing in the future: renewable energy. Shallow water offshore wind is ready for prime time in U.S. waters, and other offshore renewable technologies are right behind.

Offshore oil and gas production is already booming

Production in offshore waters is currently outpacing production under the Bush administration

There has been quite a bit of rhetoric from the oil industry about the decline of oil production from federal lands and waters under the Obama administration. These claims are disproven by the data from the Energy Information Administration as analyzed by the Congressional Research Service.[3] Oil production from federally owned places was higher in every one of the past four years compared to 2008 when oil hit a record-high price of $142.50 per barrel.[4]



Source: Congressional Research Service

Crude oil production on federal lands and waters (thousands of barrels per day)

Fiscal year	Federal onshore	Federal offshore	Total federal
2008	285	1,266	1,550
2009	288	1,444	1,731
2010	296	1,693	1,989
2011	307	1,408	1,715
2012	332	1,296	1,627

Source: Congressional Research Service.

Increasing production will not lower gas prices

One of the issues Americans care about most fervently when it comes to oil production is the price of gasoline. But the fact is that increasing production will do nothing to lower prices at the pump. In 2012 the Associated Press, or AP, tested the theory of whether more U.S. drilling would lower gasoline prices. It conducted an exhaustive analysis of 36 years of monthly U.S. oil production and gasoline price data. AP found "[n]o statistical correlation between how much oil comes out of U.S. wells and the price at the pump."[5]

As fundamental as the law of supply and demand might be to macroeconomic theory, the on-the-ground reality is that more drilling will not lower gas prices. The Energy Information Administration finds that even if we wave the green flag for our entire exclusive economic zone, it will do nothing more than reduce the cost of gasoline by two cents and not until 2030.[6]

Here is why:

- As of 2012 U.S. oil production was at an eight-year high,[7] and the most recent "Short-Term Energy Outlook" from the Energy Information Administration projects production to continue growing at least through 2013 based on current activity.[8] By the end of President Obama's recently issued five-year drilling plan, fully 75 percent of our undiscovered, technically recoverable offshore reserves will be open for drilling.[9] All that additional activity has not brought down the price of gasoline at the pump.

- If oil companies wanted to increase production, they could. In March 2011 the Department of the Interior released a report revealing that two-thirds of oil-and-gas companies' offshore leases and more than half of their onshore leases are not being produced.[10]

- Gasoline supply is ultimately constrained not by oil production but by refining capacity. More than half of the nation's refineries are controlled by five companies, and in the spring of 2011 as gas prices surged close to $4 per gallon, the *Los Angeles Times* reported that domestic refineries were "operating at about 81 percent of their production capacity," and that exports of refined products such as gasoline were increasing because foreign buyers were "willing to pay a premium."[11]

Richard Newell, then-administrator of the Energy Information Administration, testified before the full House Natural Resources Committee in 2011 to explain that "[w]e do not project additional volumes of oil that could flow from greater access to oil resources on Federal lands to have a large impact on prices given the globally integrated nature of the world oil market."[12] In other words, because the price of oil is set on a global market rather than a domestic market, opening up protected lands and waters to more drilling would not substantially affect oil prices.

Legacy of the BP Deepwater Horizon oil spill

Congressional inaction

In the spring and summer of 2010, horrified Americans watched as the worst oil spill in America's history gushed uncontrollably into the Gulf of Mexico more than a mile below the surface. By the time BP's Macondo well was finally plugged 89 days after the explosion that killed 11 men and sunk the Deepwater Horizon drilling rig, nearly 5 million barrels of oil had polluted the Gulf, compounded by the application of millions of gallons of chemical dispersant.

In the aftermath of the incident, President Obama convened the National Commission on the BP Deepwater Horizon Oil Spill to investigate what happened in the accident and how the country could improve future operations and reduce the chances of another such disaster. In January 2011 the commission published its final

report, including a 60-page summary document with recommendations for Congress, the industry, and the administration to overhaul our drilling procedures and make adequate reparations in the aftermath of the spill.

In the more than two years since this report was published, Congress has enacted exactly zero bills to strengthen our oversight of offshore drilling activities, even those carried out in ultra-deep water like the Deepwater Horizon operation.

The Offshore Energy and Jobs Act would partially address one of these recommendations: codifying changes to the former Minerals Management Service to increase federal oversight and ensure separation between the government's permitting and revenue collection authorities and its enforcement arm. Yet even this change would be late in coming. The Obama administration has acted swiftly to resolve this issue with the creation of the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement.

Yet numerous other issues remain unaddressed, and we should not be aggressively accelerating offshore oil and gas development until we have fixed the problems that either led to or were exposed by the BP disaster in 2010. Perhaps the most glaring area in need of congressional attention is the issue of oil companies' liability for spills.

The current liability cap for offshore oil spills remains at a pathetically low $75 million per incident. According to the Congressional Research Service, BP has already paid approximately $14 billion on cleanup operations alone.[13] Early on in the process, BP agreed to waive the $75 million cap and pay all costs of the clean up, but they were not legally required to do so.

Opponents of raising the liability cap argue that it would prevent smaller companies from entering into the industry because they would be unable to get insurance to cover the extent of their liability. Even disregarding the counterargument that if a company cannot afford to clean up the potential mess, they should not attempt the action in the first place, there are ways around this conundrum. One would be to create a shared risk pool that would make all oil companies jointly liable for major accidents. A similar structure already exists for the nuclear industry under the Price-Anderson Act that, as of 2011, would cover the first $12 billion of liability for a nuclear accident.[14]

To date, the only meaningful piece of legislation Congress has passed following the spill was the RESTORE the Gulf Coast Act, which ensures 80 percent of BP's fines under the Clean Water Act will be distributed to the Gulf Coast states for economic and environmental restoration activities. This action was called for by the Commission and in "Beyond Recovery"—a report released in February 2011 by the Center for American Progress and Oxfam America[15]—and it will ensure the bulk of the funds received by the federal government are repurposed to specifically repair some of the damage caused by BP and its partners' mistakes.

Direct impacts of the BP disaster

The Gulf of Mexico is one of the nation's most productive fishing grounds. But in 2010 at the peak response to the oil spill, about 40 percent of Gulf waters were closed to all commercial and recreational fishing—a huge blow to area fishermen, many of whom have yet to rebound. Louisiana oysterman Terrence Shelley recently told Bloomberg that total losses from his family's 18,000 acres of oyster reefs could reach $20 million by 2017—the year their oyster leases are projected to fully recover.[16]

And while long-term damage estimates vary, a new study published in the *Canadian Journal of Fisheries and Aquatic Sciences* determined that over seven years, the oil spill could have an $8.7 billion impact on the economy of the Gulf of Mexico including losses in revenue, profit, wages, and close to 22,000 jobs.[17]

The ultimate environmental and human health effects of the oil still emerging from the beaches and wetlands are to this day unknown. Auburn researchers, however, found that Deepwater Horizon tar balls contained 10 times more of the bacteria *Vibrio vulnificus*, which is the leading cause of death from seafood contamination, than the surrounding sand and up to 100 times more than nearby seawater.[18]

Another alarming discovery came in the "State of the Beach" report released this week by the Surfrider Foundation. The report found that the mixture of toxic dispersants and crude oil has now weathered into tar product. The "unholy mix" is allowing potentially carcinogenic concentrations of organic pollutants to remain in the environment and is absorbed by wet skin twice as fast as by dry skin.[19]

The BP oil spill shocked the Gulf Coast's already compromised ecosystem, which will continue to degrade until comprehensive coastal restoration is undertaken. A new report from the National Wildlife Federation determined that 3,000 miles of beaches and wetlands along the Gulf Coast were contaminated by oil and that "oil contamination or efforts to clean it up can damage wetlands, killing vegetation and thereby causing accelerated erosion and conversion of land to open water."[20]

Coastal wetlands serve as critical buffers to storm surges and sea level rise, as well as filtering pollution and providing habitat for juvenile fish that ultimately mature and fill the nets of commercial fishermen. The financial impacts of these environmental services are difficult to quantify, but efforts to protect them will clearly have a positive effect on the region's economy.

Legislation would open inappropriate areas to production

Perhaps the most troubling aspect of the Offshore Energy and Jobs Act is its sheer scope. Drilling is already prominent in the Gulf of Mexico where about 95 percent of our offshore oil and gas is produced.[21] But in most other parts of the country, the

ocean and coastal economy depends on activities that would be put at risk by the imposition of offshore oil and gas drilling.

The coastal economies of states along the Atlantic and Pacific coasts are driven by such industries as tourism and recreation, fisheries, shipping, and military installations. Most of these uses are incompatible with oil and gas development as proposed in the Offshore Energy and Jobs Act.

In Virginia, for example—a state that the bill would specifically require to be included in a revised five-year leasing plan—tourism is a massive economic driver. A recent PricewaterhouseCoopers analysis of Virginia's tourism industry reported that the sector supports more than 200,000 jobs, which yielded an economic impact of more than $20 billion in 2011.[22] Virginia's coast and ocean also support thriving fisheries; in 2011 fishermen in Virginia landed 247,000 tons of seafood worth more than $191 million, ranking it the third largest seafood producer in the country by weight.[23]

The bill would also force the expansion of drilling operations into areas of Alaska where the risk posed by offshore drilling operations is simply too high, primarily in the Bristol Bay region and along the Arctic coast. Despite potentially large reserves of petroleum in those places, they should remain off-limits.

In 2011 Alaska fishermen hauled in about 35 percent of America's catch by value—more than three times as much as Massachusetts, the state in second place.[24] Alaska fishing also provides more than half of total U.S. landings by weight—more than four times as much as Louisiana, the runner-up.[25] Even by Alaska's standards, Bristol Bay's salmon fishery is a huge economic driver. One study from the University of Alaska found that in 2010 Alaska created the equivalent of nearly 10,000 fulltime jobs across the United States and $1.5 billion in total economic output.[26]

The thriving Bristol Bay ecosystem underpins all of these jobs by supporting an astounding number of wild fish. Since the early 1990s annual upriver runs of sockeye salmon from Bristol Bay have averaged more than 37 million fish, the biggest run of sockeyes anywhere in the world.[27] As a result, this sockeye run is also the world's most valuable. Since 1991 Bristol Bay's commercial sockeye fishermen have landed an average of 25.6 million fish annually,[28] which is about 51 percent of the global sockeye catch; British Columbia's Fraser River region takes a distant second place, contributing about 11 percent.[29] And exports of the salmon return $250 million to the U.S. economy,[30] comprising nearly 6 percent of all U.S. exports of seafood in 2010.[31]

The Offshore Energy and Jobs Act would also likely have the result of accelerating offshore drilling in the Arctic Ocean despite the fact that recent operations in that region have proven that the industry is currently incapable of carrying out safe operations in one of the harshest environments on earth. In the summer of 2012,

after committing five years and investing nearly $5 billion in the process, Royal Dutch Shell finally received the green light to begin drilling in the Beaufort and Chukchi Seas off Alaska's north slope. The result was an unmitigated failure.

Over the course of 2012:

- A February report from the Government Accountability Office identified a slew of environmental, logistical, and technical challenges associated with Arctic offshore drilling and concluded that Shell's "dedicated capabilities do not completely mitigate some of the environmental and logistical risks associated with the remoteness and environment of the region."[32]
- In July Shell briefly lost control of its *Noble Discoverer* rig when the vessel slipped its mooring and came close to running aground in Dutch Harbor, Alaska.[33]
- Later in July Shell's oil spill response barge, a key piece of oil spill response equipment, repeatedly failed to obtain Coast Guard certification. In conjunction with late lingering sea ice that blocked access to the drill sites, these delays prevented Shell from beginning drilling work on schedule.[34]
- In August Norwegian oil and gas company Statoil announced that it would suspend its own plans to drill offshore in the Alaskan Arctic Ocean after watching Shell's struggles in the region.[35]
- In September, after repeatedly failing to receive Coast Guard approval for its containment barge, Shell was forced to postpone exploratory drilling operations until 2013 and settle instead for beginning to drill two non-oil-producing preparatory wells.[36]
- In December internal emails between Department of the Interior officials revealed that the September test of Shell's oil spill containment system was not just a failure but a complete disaster. The containment dome "breached like a whale" and was "crushed like a beer can"—and all in the comparatively temperate waters of Puget Sound.[37]
- And on the last day of the year, in a rush to avoid paying Alaska state taxes on its rig for 2013, Shell lost control of the rig in heavy weather, and it ended up running aground. [38]

As a result of this lengthy series of mistakes and failures, Shell has announced that it will not attempt to drill in the Arctic in 2013 as both of its rigs are now in Asia awaiting repairs.

As a 2012 report from the Center for American Progress points out, the United States currently lacks adequate response capacity in the Arctic region. No rail lines and only one highway connect the north slope of Alaska to the rest of the state. There is no deepwater port facility, and the closest Coast Guard station is more than 500 miles away in Kodiak. Should a spill occur in the Arctic region of Alaska XX CORRECT? XX, mounting a response would be all but impossible with limited accessibility and nowhere to house response personnel. There is equally scant

scientific knowledge about how oil behaves in frigid water or how we might go about cleaning it up.

The bottom line is that Alaska's waters are among the most pristine and productive on earth, and whether the region in question is the fish-rich area around Bristol Bay or the remote, unknown, and untested Arctic, they should remain off-limits to oil and gas exploration.

Blue economy is more vibrant than drilling

The motive to create more jobs in America is a good one. With unemployment stubbornly hovering around 8 percent, we clearly need them. There is, however, more than one way to generate employment from our oceans and coasts, and, in many cases, accelerating offshore oil and gas development will hinder job creation in other industries. We have already seen how one accident three years ago devastated the coastal economy of an entire region. We must do all we can to ensure that we protect and grow the jobs currently supported by vibrant, healthy oceans and coastal regions.

Commercial and recreational fisheries

Fishing is perhaps the first vocation that comes to mind when considering ocean and coastal economic activity. We also have better data for the fishing industry than many other ocean industries. A report released in March by the National Oceanic and Atmospheric Administration, or NOAA, found that "U.S. commercial and recreational saltwater fishing generated more than $199 billion in sales and supported 1.7 million jobs in the nation's economy in 2011."[39] By comparison, the oil and gas extraction and refinement industry employed approximately 641,000 people, according to the Bureau of Labor Statistics. Adding in employees of gasoline service stations to account for supply chain employment, that figure reached 1.4 million jobs but still falls short of the jobs created from fishing.[40]

Furthermore, as the members of the Committee on Natural Resources—which has jurisdiction over our nation's fisheries—know very well, we have effectively ended deliberate overfishing in the United States. NOAA's most recent "Status of Stocks" report to Congress showed a record number of domestic fish populations rebuilt to sustainable levels.[41] In her testimony before the Senate Committee on Commerce, Science, and Transportation in 2011, former NOAA Administrator Jane Lubchenco estimated that rebuilding all U.S. fish populations to sustainable levels could generate "an additional $31 billion in sales impacts, support an additional 500,000 jobs and increase the revenue fishermen receive at the dock by $2.2 billion … *more than a 50 percent increase from the current annual dockside revenues*" (emphasis in original).[42]

Recreation and tourism

Visiting the beach is the greatest connection to our oceans for many Americans, and coastal tourism and recreation sustain our coastal economies. Traveling to the shores along our coasts and Great Lakes and snorkeling, boating, and surfing are activities that directly contribute to local economies. According to the Joint Ocean Commission report titled "America's Ocean Future," in 2007 the leisure and hospitality industry in U.S. coastal states supported almost 11 million jobs and more than $214 billion in wages.[43]

FIGURE 3

Benefits of coastal tourism and recreation

Contributions of ocean tourism and recreation establishments by region, 2009

Region	Establishments	Employment	Wages	GDP
Great Lakes	12,223	217,265	$3.6 billion	$7.9 billion
Gulf of Mexico	14,938	229,466	$4.2 billion	$9.1 billion
Mid-Atlantic	36,097	514,668	$11.4 billion	$25.1 billion
North Pacific (Alaska)	1,238	13,045	$0.25 billion	$0.51 billion
Northeast	10,833	147,319	$2.9 billion	$5.9 billion
Pacific (Hawaii)	3,543	86,198	$2.2 billion	$4.6 billion
Southeast	14,210	248,422	$4.8 billion	$10.7 billion
West	23,239	405,486	$8.6 billion	$18.3 billion
Total	116,321	1,861,869	$37.95 billion	$82.1 billion

Source: Data courtesy of NOAA Coastal Service Center, Economics: National Ocean Watch

Coastal tourism generates significant economic activity every year. As David Beckman, water program director for the Natural Resources Defense Council, told the *Christian Science Monitor*, "Beach going and resort attendance is big business in America—especially on Fourth of July weekend. Some 450 million people will visit over 3,000 US beaches this year [2011]."

Florida is a prime example of the great economic value of nonextractive ocean and coastal activities. Florida's tourism, fish and wildlife, ports, and defense-related industries generate more than $175 billion in economic benefits and over 2.2 million jobs annually.[44] Tourism alone is Florida's leading industry, employing around 1 million people and accounting for more than one-fifth of the state's total sales tax revenue and 9.3 percent of its gross domestic product.[45]

The oceans and Great Lakes are not an everlasting source of recreation and GDP, however. All of these activities and industries require healthy oceans and coasts to prosper. Who wants to relax on a contaminated beach or surf through an oil slick? This is why Floridians have long been wary of offshore drilling and its potential to kill the tourism industry—the goose that lays the state's golden eggs. Even in the

face of mounting pressure to open more areas to drilling, Florida has maintained a two-decade-old ban on drilling in state waters.[46]

Oil spills and other disasters are inevitable consequences of offshore drilling, and the Deepwater Horizon disaster took a huge toll on Florida's economy. In the immediate wake of the spill, for example, "many Panhandle hotels and restaurants reported seeing sales down by 50 percent in the peak summer months" and in Franklin County, located in the northwestern panhandle, tourism in July 2010 declined by 25 percent from the previous year, according to the county's tourism bureau.[47]

The Joint Ocean Commission's report also found that as of 2007, more than 85 percent of California's gross domestic product and nearly 12 million jobs derived from economic activity in the state's coastal estuarine areas. California's beaches are also vital assets to the state's economy with total value estimated between $1.5 and $3 billion per year.[48]

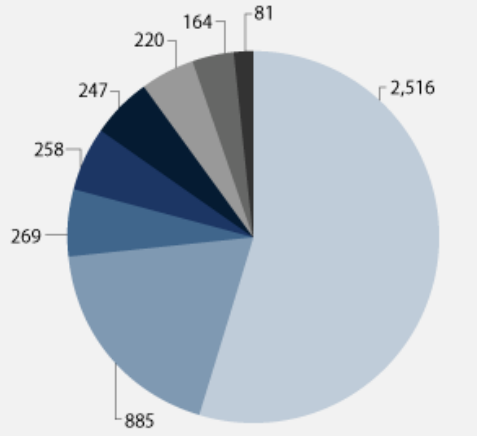
Offshore renewable energy

Energy must unquestionably be part of America's ocean economy, but even in the energy sector, we can create tremendous growth in employment without solely prioritizing the oil and gas sector.

Countries throughout the world are embracing offshore wind energy from traditional players such as Denmark, Germany, and the United Kingdom to newcomers such as China, India, and South Korea. Countries the world over are acknowledging the economic and environmental benefits of turning sea breezes into electricity. Yet the United States has yet to install the first offshore wind turbine in our waters despite offshore wind's proven economic viability.

FIGURE 1

Global installed offshore wind capacity (2012)



Source: Reproduced from Earth Policy Institute, Plan B Updates, based on Global Wind Energy Council, 4C Offshore, EWEA

The 2008 report from the Department of Energy set a target of developing 54 gigawatts of offshore wind energy in U.S. waters by 2030—slightly more than 1 percent of the total 4,150 GW of potential energy identified in areas out to 50 miles from shore.[49] A follow-up report released in 2011 that focused exclusively on a potential offshore wind industry found that those 54 GW "would create more than 43,000 permanent operations and maintenance jobs and would require more than 1.1 million job-years to manufacture and install the turbines."[50]

Last Tuesday, June 4, the Department of the Interior began the first auction process for developers to bid on leases for a designated offshore wind area off the coast of Rhode Island and Massachusetts.[51] While the results of that process will not be known for some time, it is encouraging to see the administration moving forward with the offshore leasing process. But the fact is, offshore wind developers need certainty on the tax breaks and subsidies that will be required to grow this burgeoning industry.

Last year, Congress made offshore wind projects eligible for the investment tax credit—a critical policy. That policy will unfortunately expire at the end of 2013 unless Congress acts again to renew it. With the threat of expiration dangling over the industry, it will be extremely difficult to attract the investments required to build these projects. And since the vast majority of the cost of offshore wind energy production comes in the construction and development phase, without adequate upfront capital investment, the industry will not become viable.

The federal government has a long history of subsidizing energy development. The oil and gas industry has received $442 billion in subsidies over the past 90 years,[52] and even today it still receives about $4 billion per year even as the five largest oil companies reported $118 billion in profits in 2012 alone.[53] It is time to refocus our priorities and diversify our energy supply to truly implement an "all of the above" energy policy.

A word about climate change

We ultimately cannot talk about energy production without talking about climate change. The science is clear and the facts are in. Human-induced climate change is here, it is real, and we are simply not doing enough to address it. Glaciers and Arctic ice sheets are retreating to levels never before recorded. Extreme weather events driven by warmer, moister air are pummeling the planet more than ever before. Our oceans are more acidic than they have been in tens of millions of years, threatening the very foundations of the ocean food chain. Sea levels are rising. And this past month the concentration of atmospheric carbon shot past a terrifying benchmark—400 parts per million, a level last seen between 2 million and 4 million years ago.

These are facts not theories. The National Aeronautics and Space Administration reports that "ninety-seven percent of climate scientists agree that climate-warming trends over the past century are very likely due to human activities, and most of the leading scientific organizations worldwide have issued public statements endorsing this position."[54]

If we continue down the path of unending devotion to fossil fuels, our children and grandchildren will inherit a planet that is far more volatile. Livelihoods, our food supply, and even global stability will be put at risk as the planet's population blossoms to 9 billion people by 2050. The rising oceans are stealing our land. Volatile weather patterns will make agriculture less stable, as we have already seen in the form of epic droughts in the American Midwest and grain shortages in Russia. Less land, less food, more people; the math does not add up to a prosperous future.

Now is the time we should be drawing the line. Rather than rushing headlong down the path to short-term profits, we have to step back and consider the long game. Smart, targeted investment in renewable energy technology is the way to a prosperous future. Perpetuating the same old policies of yesterday is a road to ruin.

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