



America's Arctic – The Dual Threat of Climate Change and Offshore Drilling

In his State of the Union address, President Obama reiterated his commitment to acting on climate change for the sake of future generations. America's Arctic is ground zero for the devastating impacts of climate change – warming at about twice the rate of the rest of the world – and offshore drilling can only exacerbate the problem.

CLIMATE CHANGE

- Rapidly melting sea ice: The National Oceanic and Atmospheric Administration's 2012 Arctic Report Card documented dramatic changes, including record lows for sea ice and snow extent.
- Thawing permafrost: Melting tundra is accelerating warming by releasing additional carbon as it thaws, potentially adding 0.4°F –1.5°F to total global warming by 2100.
- Increased warming from black carbon: Black carbon (a major component of soot), significantly increases climate change by darkening ice surface, causing it to absorb more heat and accelerate warming.

OFFSHORE DRILLING

- In order to stay within the upper limit of warming allowable for maintaining climate stability, the International Energy Agency warned that two-thirds of the world's proven fossil fuel reserves need to remain in the ground, untouched.
- Exploiting reserves in the Arctic Ocean has the potential to release an additional 15.8 billion tons of CO₂ into the atmosphere when burnedⁱ – equivalent to the emissions from all passenger cars and light trucks in the US over a 13 year time periodⁱⁱ and raising global CO₂ concentrations by 7.44 parts per million (ppm).ⁱⁱⁱ 7.44 ppm equals 10% of the total rise in the global CO₂ concentration over the past 50 years.^{iv}
- Despite industry claims that Arctic offshore drilling can be managed safely, Shell Oil's attempts to drill exploratory wells in 2012 resulted in a litany of mishaps, including: twice losing control of drill rigs, violating clean air protections, and dramatically failing a safety test of its oil spill response equipment.

Bottom line: Shell's long list of setbacks and failures – coupled with the extreme risk for oil spills and further climate destruction in an already fragile ecosystem – provides overwhelming evidence that the oil and gas industry is not prepared to operate safely in the Arctic Ocean. President Obama should prioritize protecting the Arctic as part of his climate legacy and not approve any further offshore drilling in the region.

For more information: Center for American Progress (www.americanprogress.org), Alaska Wilderness League (www.alaskawild.org), The Wilderness Society (www.wilderness.org), NOAA (www.arctic.noaa.gov), IEA (www.iea.org), Climate Progress (www.thinkprogress.org/climate)

ⁱ The Arctic Ocean has 23.6 billion barrels of technically recoverable oil and 104.41 trillion cubic feet of technically recoverable gas (http://boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/PFP%2012-17.pdf at page 2). One barrel of oil = 0.43 metric tons of CO₂ (<http://www.epa.gov/greenpower/pubs/calcmeth.htm>). One cubic foot of gas = 53.02 kg CO₂ (<http://www.theclimaterestory.org/downloads/2012/01/2012-Climateregistry-Default-Emissions-Factors.pdf>). Producing all reserves would result in 15.8 billion metric tons CO₂ (10.1 billion from oil and 5.7 billion from gas).

ⁱⁱ According to the U.S. Dept. of Transportation, in 2006 all light-duty vehicles in the U.S. (passenger cars and light-duty trucks) emitted 1,235,000,000 metric tons of CO₂ equivalent (http://ntl.bts.gov/lib/32000/32700/32779/DOT_Climate_Change_Report_-_April_2010_-_Volume_1_and_2.pdf at page 2-8). Thus, 15.8 billion metric tons of CO₂E divided by 1,235,000,000 metric tons of CO₂ equivalent emitted from light-duty vehicles per year equals 12.8 years of vehicle CO₂ emissions.

ⁱⁱⁱ 2,130,000,000 metric tons of CO₂ = 1ppm

^{iv} According to NOAA, CO₂ has risen 77.84 ppm since 1959 (<http://www.esrl.noaa.gov/gmd/ccgg/trends/>).