

## **WTE Column of August 1, 2014. Editor's Headline: Our energy addiction is killing off animals**

You find the corner of your world, where you make a living and raise a family, suddenly bombarded by deafening noise. Every ten seconds, pulses of sound-waves many times louder than a jet engine knock you about. The unbearable racket goes on week after week. Your family relations are in tatters. Blood is gushing from your ears. There's no escape from the attacks, so you decide on suicide by suffocation. Because you are a whale, you accomplish this by beaching yourself.

"Shale Shocked" is the caption beneath the picture of a beached whale, "shale" referring to the oil-and-gas industry's use of sonar cannons to locate stretches of earth where offshore deposits might be present. Towed behind boats, the monster cannons send down pulses of sound that reverberate beneath the ocean floor and rebound to the surface, where hydrophones capture the results. They've been used in the Gulf of Mexico and along the shores of Alaska, destroying marine life and the fisheries that depend on it. From dolphins to turtles to small fry, all is annihilated. As for whales, which use sonar communication to stay in touch with their own kind, the unrelenting booms destroy the links to the whales' pods.

In the Eastern seaboard, industry wishes to use sonar cannons on waters stretching from Florida to Delaware. Notwithstanding strenuous protests from fisheries, environmentalists, and the tourism industry, the U.S. Bureau of Ocean Energy Management wants to make sure industry gets its way. President Obama has consented to the scheme. Though the congressional moratorium on offshore drilling is in effect until 2018, industry wants to get a head start on future leases by sounding out potential sites. Fisheries, horrified at the impending demise of their livelihood, seem powerless against decisions that appear to have originated in the White House.

That President Obama has assented to an expansion of fracking shows that EPA's attempt to limit coal's greenhouse gases is but window dressing. The president merely takes from Peter to pay Paul. Now the industry has set its sights on the coastline of California as well. Although a moratorium exists on new oil leases offshore of California, old leases that should be retired are reignited with dangerous fracking technologies. More than half of the platforms in federal waters off the coast of California dump their wastewater into the ocean.

"Coal to gas is a meaningless transition," commented Sandra Steingraber at a recent a teleconference of scientists concerned over President Obama's contention that natural gas is our "bridge fuel." Bridge to what? The President's so-called clean-power plan will only accelerate construction of gas wells, intensifying their notorious methane leaks. EPA's hundreds of pages never once suggest reining in methane (the unburned natural gas), relying on an old report instead of the 2013 IPCC report. Another scientist, Bob Howard, ventured that the agency was "obviously under great pressure from the White House." He noted that President Obama is "tight with the gas industry."

Carbon dioxide and methane are partners in crime, but methane is 120 times more powerful than CO<sub>2</sub>. And, while CO<sub>2</sub> is a "slow responder," this is not true of methane. That's why fracking for gas only moves us closer to the tipping point of runaway climate change; indeed, it's worse than oil and coal, stated Dr. Howard, and "shale gas is worse yet."

The thawing of permafrost, triggered by a warming climate, has methane scientists intensely worried. Across the Arctic, swathes of once-frozen-solid ground have begun to thaw, with profound implications about catastrophic climate change. Not just in Siberia, Canada, and Alaska but along plate boundaries around the world, the thawing releases unfathomable tons of methane. The recently-discovered Siberian crater, the size of a football field, is thought to have been caused by a momentous burst of methane that exploded.

How do we power the world without destroying it in the process? There is a way forward, say the scientists. Clean energy solutions exist at every stage of the energy system. Our nation's priority must be the rapid expansion of energy efficiency and renewable energy resources.

The problem lies with our market-driven economy. When there's a buck to be made, someone will insist on making it. The demise of species of animals and plants, even the collapse of entire human societies, simply do not enter into the equation.

We are in the midst of unprecedented species loss. Science Magazine's current issue terms it the Great Dying, the Sixth Extinction. The massive losses irrevocably diminish the ecosystems on which we all depend. Animal species are dying off 1,000 times faster today than they did before humans arrived.

How do you say "I'm sorry?"