U. S. Environmental Protection Agency
Blog Round-up
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Round-up of Major Blogs

AIR

Energy Independence Is America's Most Elusive Technological Goal (*Grist*)

by Keith Schneider
21 Jun 2010 9:01 AM
BP Oil Disaster, Climate & Energy
In calling for a new "national mission" to achieve energy independence during his Oval Office address last week, President Obama was clearly seeking inspiration from his predecessors, a number of whom actually achieved the big technological goals they'd pursued. At various inflection points in the nation's history, presidents managed to cross the country with a unified rail line, developed the powerful bombs in the Manhattan Project that ended World War Two, and sent men and returned them safely from the moon with the Apollo program.

In pursuit of energy independence, President Obama has described many steps to make the transition to a clean energy economy, but never specified a timetable or a deadline. There's a reason for that, as Jon Stewart astutely pointed out this week on The Daily Show. Seven presidents before Obama, starting with Richard Nixon, had done just that and came up with zilch.

It's not that he isn't trying. To his credit, President Obama has acted on his election promise to change the rules of the oil game, and to begin responding to the worst of its economic and environmental consequences, including climate change.

In February 2009 he signed the American Recovery and Reinvestment Act, which invests over $100 billion in clean energy equipment, practices, and transit. In September 2009 the president called on the world to cut greenhouse gas emissions during a speech at the United Nations and was one of the heads of state at the G20 economic summit in Pittsburgh, which issued a formal declaration to eliminate subsidies for fossil fuel.

Two months ago, the administration issued new fuel mileage and carbon emissions standards for cars and light trucks that will take effect in 2012 and over the first five years reduce oil use by 1.8 billion barrels, says the E.P.A., and cut greenhouse gas emissions by 900 million tons. And last month the president ordered up similar new efficiency and emissions reductions standards for heavy trucks.

Then came the BP Gulf catastrophe, now in its 60th day, which has turned the nation's attention to all of the dimensions of what Obama and other presidents have called an "addiction" to oil, but which can also be accurately described as America's steadfast devotion.

Obama knows that actually producing more energy at home than America imports, and making good on the greenhouse gas reducing commitments the president made last year in the Copenhagen Accord, takes another level of engagement. It means opening a new era of political

partnership in Washington and pursuing much more aggressive designs for non-polluting and energy efficient economic growth.

The problem is that America is in a place it's rarely encountered, which is stuck. Some 24 million gallons of oil - the government's latest estimate - is gushing every 10 days from a hole at the bottom of the Gulf. The president is unable to summon the technical skills needed to plug the leak. Instead he's using legal and policy tools available to him to begin rebuilding the Minerals Management Service, promised more rigorous oversight of deep water drilling, and convinced BP on Wednesday to set aside $20 billion in a precedent-setting disaster restoration fund.

Decent responses as far as they can go. But not to the president's opponents. Fox News commentators mounted a national right wing broadcast chorus to defend the oil industry and accuse the president of "demonizing" BP. The next day, in an instance as revealing as it was enraging, Representative Joe Barton of Texas, a senior lawmaker who receives more oil industry donations than any other House member, appeared at an oversight hearing on the spill to apologize to BP's chairman for the president's action in creating the restoration fund, which he called a "shakedown."

Never has the United States sustained such a large oil disaster. Never have so many biologically rich coastal estuaries been in the path of so much oil. Never has the United States been so unprepared to respond to a manmade calamity that is producing so much damage to the people, the economy, and the environment of so many states. Never has the U.S. imported more of its oil or been further from achieving energy independence. Representative Barton's apology, like so many other moments since the Deepwater Horizon exploded on April 20, illustrated just how grueling the last decades of the Age of Oil will be.

-- Keith Schneider

BP SPILL

June 22, 2010

Developing:Oil Spill Cleanup(*Huffington Post*)

Posted: June 21, 2010 04:22 PM
Gulf Oil Spill: A Hole in the World
BP Oil Spill , Gulf Oil Spill , Naomi Klein Oil Spill , Oil Spill , Green News
Everyone gathered for the town hall meeting had been repeatedly instructed to show civility to the gentlemen from BP and the federal government. These fine folks had made time in their busy schedules to come to a high school gymnasium on a Tuesday night in Plaquemines Parish, Louisiana, one of many coastal communities where brown poison was slithering through the marshes, part of what has come to be described as the largest environmental disaster in US history.

"Speak to others the way you would want to be spoken to," the chair of the meeting pleaded one last time before opening the floor for questions.

And for a while the crowd, mostly made up of fishing families, showed remarkable restraint. They listened patiently to Larry Thomas, a genial BP public relations flack, as he told them that he was committed to "doing better" to process their claims for lost revenue--then passed all the details off to a markedly less friendly subcontractor. They heard out the suit from the Environmental Protection Agency as he informed them that, contrary to what they have read about the lack of testing and the product being banned in Britain, the chemical dispersant being sprayed on the oil was really perfectly safe.

But patience started running out by the third time Ed Stanton, a coast guard captain, took to the podium to reassure them that "the coast guard intends to make sure that BP cleans it up".

"Put it in writing!" someone shouted out. By now the air conditioning had shut itself off and the coolers of Budweiser were running low. A shrimper named Matt O'Brien approached the mic. "We don't need to hear this anymore," he declared, hands on hips. It didn't matter what assurances they were offered because, he explained, "we just don't trust you guys!" And with that, such a loud cheer rose up from the floor you'd have thought the Oilers (the unfortunately named school football team) had scored a touchdown.

The showdown was cathartic, if nothing else. For weeks residents had been subjected to a barrage of pep talks and extravagant promises coming from Washington, Houston and London. Every time they turned on their TVs, there was the BP boss, Tony Hayward, offering his solemn word that he would "make it right". Or else it was President Barack Obama expressing his absolute confidence that his administration would "leave the Gulf coast in better shape than it was before", that he was "making sure" it "comes back even stronger than it was before this crisis".

It all sounded great. But for people whose livelihoods put them in intimate contact with the delicate chemistry of the wetlands, it also sounded completely ridiculous, painfully so. Once the oil coats the base of the marsh grass, as it had already done just a few miles from here, no miracle machine or chemical concoction could safely get it out. You can skim oil off the surface of open water, and you can rake it off a sandy beach, but an oiled marsh just sits there, slowly dying. The larvae of countless species for which the marsh is a spawning ground--shrimp, crab, oysters and fin fish--will be poisoned.

It was already happening. Earlier that day, I travelled through nearby marshes in a shallow water boat. Fish were jumping in waters encircled by white boom, the strips of thick cotton and mesh BP is using to soak up the oil. The circle of fouled material seemed to be tightening around the fish like a noose. Nearby, a red-winged blackbird perched atop a 2 metre (7ft) blade o contaminated marsh grass. Death was creeping up the cane; the small bird may as well have been standing on a lit stick of dynamite.

And then there is the grass itself, or the Roseau cane, as the tall sharp blades are called. If oil seeps deeply enough into the marsh, it will not only kill the grass above ground but also the roots. Those roots are what hold the marsh together, keeping bright green land from collapsing into the Mississippi River delta and the Gulf of Mexico. So not only do places like Plaquemines Parish stand to lose their fisheries, but also much of the physical barrier that lessens the intensity of fierce storms like hurricane Katrina. Which could mean losing everything.

How long will it take for an ecosystem this ravaged to be "restored and made whole" as Obama's interior secretary has pledged to do? It's not at all clear that such a thing is remotely possible, at least not in a time frame we can easily wrap our heads around. The Alaskan fisheries have yet to fully recover from the 1989 Exxon Valdez spill and some species of fish never returned. Government scientists now estimate that as much as a Valdez-worth of oil may be entering the Gulf coastal waters every four days. An even worse prognosis emerges from the 1991 Gulf war spill, when an estimated 11m barrels of oil were dumped into the Persian Gulf--the largest spill ever. It's not a perfect comparison, since so little clean-up was done, but according to a study conducted 12 years after the disaster, nearly 90% of the impacted muddy salt marshes and mangroves were still profoundly damaged.

We do know this. Far from being "made whole," the Gulf coast, more than likely, will be diminished. Its rich waters and crowded skies will be less alive than they are today. The physical space many communities occupy on the map will also shrink, thanks to erosion. And the coast's legendary culture will contract and wither. The fishing -families up and down the coast do not just gather food, after all. They hold up an intricate network that includes family tradition, cuisine, music, art and endangered languages--much like the roots of grass holding up the land in the marsh. Without fishing, these unique cultures lose their root system, the very ground on which they stand. (BP, for its part, is well aware of the limits of recovery. The company's Gulf of Mexico regional oil spill response plan specifically instructs officials not to make "promises that property, ecology, or anything else will be restored to normal". Which is no doubt why its officials consistently favour folksy terms like "make it right".)

If Katrina pulled back the curtain on the reality of racism in America, the BP disaster pulls back the curtain on something far more hidden: how little control even the most ingenious among us have over the awesome, intricately interconnected natural forces with which we so casually meddle. BP cannot plug the hole in the Earth that it made. Obama cannot order brown pelicans not to go extinct (no matter whose ass he kicks). No amount of money--not BP's recently pledged $20bn (£13.5bn), not $100bn--can replace a culture that has lost its roots. And while our politicians and corporate leaders have yet to come to terms with these humbling truths, the people whose air, water and livelihoods have been contaminated are losing their illusions fast.

"Everything is dying," a woman said as the town hall meeting was finally coming to a close. "How can you honestly tell us that our Gulf is resilient and will bounce back? Because not one of you up here has a hint as to what is going to happen to our Gulf. You sit up here with a straight face and act like you know when you don't know."

This Gulf coast crisis is about many things--corruption, deregulation, the addiction to fossil fuels. But underneath it all, it's about this: our culture's excruciatingly dangerous claim to have such

complete understanding and command over nature that we can radically manipulate and re-engineer it with minimal risk to the natural systems that sustain us. But as the BP disaster has revealed, nature is always more unpredictable than the most sophisticated mathematical and geological models imagine. During Thursday's congressional testimony, Hayward said: "The best minds and the deepest expertise are being brought to bear" on the crisis, and that, "with the possible exception of the space programme in the 1960s, it is difficult to imagine the gathering of a larger, more technically proficient team in one place in peacetime." And yet, in the face of what the geologist Jill Schneiderman has described as "Pandora's well", they are like the men at the front of that gymnasium: they act like they know, but they don't know.

Tsunami and Earthquake Reporting (*Huffington Post*)

A new and less well known asymmetric threat has surfaced in the Gulf of Mexico oil gusher. Methane or CH4 gas is being released in vast quantities in the Gulf waters. Seismic data shows huge pools of methane gas at the location immediately below and around the damaged "Macondo" oil well. Methane is a colourless, odourless and highly flammable substance which forms a major component in natural gas. This is the same gas that blew the top off Deepwater Horizon and killed 11 people. The "flow team" of the US Geological Survey estimates that 2,900 cubic feet of natural gas, which primarily contains methane, is being released into the Gulf waters with every barrel of oil. The constant flow of over 50,000 barrels of crude oil places the total daily amount of natural gas at over 145 million cubic feet. So far, over 8 billion cubic feet may have been released, making it one of the most vigorous methane eruptions in modern human history. If the estimates of 100,000 barrels a day -- that have emerged from a BP internal document -- are true, then the estimates for methane gas release might have to be doubled.

Warnings

Older documents indicate that the subterranean geological formation below the "Macondo" well in the Gulf of Mexico may contain the presence of a huge methane deposit. It has been a well known fact that the methane in that oil deposit was problematic. As a result, there was a much higher risk of a blow out. Macondo shares its name with the cursed town in the novel "One Hundred Years of Solitude" by the Nobel-prize winning writer Gabriel Garcia Marquez.

By some geologists' estimates, the methane could be a massive bubble trapped for thousands of years under the Gulf of Mexico sea floor. More than a year ago, geologists expressed alarm in regard to BP and Transocean putting their exploratory rig directly over this massive underground reservoir of methane. Warnings were raised before the Deepwater Horizon catastrophe that the area of seabed chosen might be unstable and inherently dangerous.

Methane and Poison Gas Bubble

The US Environmental Protection Agency (EPA) has found high concentrations of gases in the Gulf of Mexico area. The escape of other poisonous gases associated with an underground methane bubble -- such as hydrogen sulfide, benzene and methylene chloride -- have also been

found. Recently, the EPA measured hydrogen sulfide at more than 1,000 parts per billion (ppb) -- well above the normal 5 to 10 ppb. Some benzene levels were measured near the Gulf of Mexico in the range of 3,000 to 4,000 ppb -- up from the normal 0 to 4 ppb. Benzene gas is water soluble and is a carcinogen at levels of 1,000 ppb according to the EPA. Upon using a GPS and depth finder system, experts have discovered a large gas bubble, 15 to 20 miles wide and tens of feet high, under the ocean floor. These bubbles are common. Some even believe that the rapid release of similar bubbles may have caused the sinking of ships and planes in the Bermuda Triangle.

50,000 to 100,000 PSI

The intractable problem is that this methane, located deep in the bowels of the earth, is under tremendous pressure. Experts agree that the pressure that blows the oil into the Gulf waters is estimated to be between 30,000 and 70,000 pounds per square inch (psi). Some speculate that the pressure of the methane at the base of the well head, deep under the ocean floor, may be as high as 100,000 psi -- far too much for current technology to contain. The shutoff valves and safety measures were only built for thousands of psi at best. There is no known device to cap a well with such an ultra high pressure.

Oxygen Depletion

The crude oil from the "Macondo" well, which is damaging the Gulf of Mexico, contains around 40 percent methane, compared with about 5 percent found in typical oil deposits. Scientists warn that gases such as methane, hydrogen sulfide and benzene, along with oil, are now depleting the oxygen in the water and are beginning to suffocate marine life creating vast "dead zones". As small microbes living in the sea feed on oil and natural gas, they consume large amounts of oxygen which they require in order to digest food, ie, convert it into energy. There is an environmental ripple effect: when oxygen levels decrease, the breakdown of oil can't advance any further.

Fissures or Cracks

According to geologists, the first signs that the methane may burst its way through the bottom of the ocean would be manifest via fissures or cracks appearing on the ocean floor near the path of least resistance, ie, the damaged well head. Evidence of fissures opening up on the seabed have been captured by the robotic midget submarines working to repair and contain the ruptured well. Smaller, independent plumes have also appeared outside the nearby radius of the bore hole. When reviewing video tapes of the live BP feeds, one can see in the tapes of mid-June that there is oil spewing up from visible fissions. Geologists are pointing to new fissures and cracks that are appearing on the ocean floor.

Fault Areas

The stretching and compression of the earth's crust causes minor cracking, called faults, and the bottom of the Gulf of Mexico has many such fault areas. Fault areas run along the Gulf of Mexico and well inland in Mexico, South and East Texas, Louisiana, Mississippi, Alabama and

the extreme western Florida Panhandle. The close coupling of new fissures and cracks with natural fault areas could prove to be lethal.

Bubble Eruption

A methane bubble this large -- if able to escape from under the ocean floor through fissures, cracks and fault areas -- is likely to cause a gas explosion. With the emerging evidence of fissures, the tacit fear now is this: the methane bubble may rupture the seabed and may then erupt with an explosion within the Gulf of Mexico waters. The bubble is likely to explode upwards propelled by more than 50,000 psi of pressure, bursting through the cracks and fissures of the sea floor, fracturing and rupturing miles of ocean bottom with a single extreme explosion.

Cascading Catastrophe Scenarios

1. Loss of Buoyancy

Huge methane gas bubbles under a ship can cause a sudden buoyancy loss. This causes a ship to tilt adversely or worse. Every ship, drilling rig and structure within a ten mile radius of the escaping methane bubble would have to deal with a rapid change in buoyancy, causing many oil structures in its vicinity to become unstable and ships to sink. The lives of all the workers, engineers, coast guard personnel and marine biologists -- measuring and mitigating the oil plumes' advance and assisting with the clean up -- could be in some danger. Therefore, advanced safety measures should be put in place.

2. First Tsunami with Toxic Cloud

If the toxic gas bubble explodes, it might simultaneously set off a tsunami travelling at a high speed of hundreds of miles per hour. Florida might be most exposed to the fury of a tsunami wave. The entire Gulf coastline would be vulnerable, if the tsunami is manifest. Texas, Louisiana, Mississippi, Alabama and southern region of Georgia might experience the effects of the tsunami according to some sources.

3. Second Tsunami via Vaporisation

After several billion barrels of oil and billions of cubic feet of gas have been released, the massive cavity beneath the ocean floor will begin to normalise, allowing freezing water to be forced naturally into the huge cavity where the oil and gas once were. The temperature in that cavity can be extremely hot at around 150 degrees celsius or more. The incoming water will be vaporised and turned into steam, creating an enormous force, which could actually lift the Gulf floor. According to computer models, a second massive tsunami wave might occur.

Conclusion

The danger of loss of buoyancy and cascading tsunamis in the Gulf of Mexico -- caused by the release of the massive methane and poisonous gas bubble -- has been a much lower probability in the early period of the crisis, which began on April 20th. However, as time goes by and the risk

increases, this low probability high impact scenario ought not to be ignored, given that the safety and security of the personnel involved remains paramount. Could this be how nature eventually seals the hole created by the Gulf of Mexico oil gusher?

TOXICS

EPA extends deadline for lead paint training (*Huffington Post*)

MATTHEW DALY | June 21, 2010 05:37 PM EST |
Compare 05:37 PM EST03:02 PM EST and 05:37 PM EST03:02 PM EST versions
WASHINGTON — Home improvement contractors will have more time to meet new federal requirements for dealing with lead paint.

The Environmental Protection Agency said Monday it will delay until Oct. 1 enforcement of a rule requiring contractors to take additional precautions when renovating houses where children could be exposed to lead dust from old paint.

The delay comes amid a storm of complaints from industry groups and congressional Republicans, who said the government has not provided enough trainers to help contractors meet an April deadline.

The EPA rule requires contractors to use "lead-safe" practices when working on homes, day-care centers and schools built before 1978, the year lead paint was banned for residential use because of health risks.

The delay allows contractors to sign up for training by Sept. 30. Training must be completed by Dec. 31.

The EPA said in a statement that it remains committed to protecting children and families from the dangers of lead poisoning, adding that "EPA can and will take enforcement action when contractors violate those work practices."

The decision simply gives firms more time to file needed paperwork to demonstrate they are following lead-safe work practices, as well as more time for contractors to enroll in and complete the required training courses, said EPA spokesman Brendan Gilfillan.

Sen. Jim Inhofe of Oklahoma, senior Republican on the Senate Environment and Public Works Committee, hailed the delay.

"We won," Inhofe said, referring to industry groups and lawmakers who had pushed the EPA to back off its earlier deadline for enforcement of the rule.

Inhofe said he supports the lead paint rule, but he called the EPA's handling of the issue a "disaster."

The National Association of Home Builders said the delay will give contractors and remodelers much-needed time to get the training to meet the stricter requirements.

"EPA listened to our concerns and did the right thing," said NAHB Chairman Bob Jones, a builder and developer in Bloomfield Hills, Mich.

Online:

EPA lead-paint rule: http://www.epa.gov/lead/pubs/renovation.htm