The Energy Industry’s Media Triumphs and Disasters

Mark Fischetti
Scientific American
Size of Oil Spill Underestimated, Scientists Say

Two weeks ago, the government put out a round estimate of the size of the oil leak in the Gulf of Mexico: 5,000 barrels a day. Repeated endlessly in news reports, it has become conventional wisdom.

But scientists and environmental groups are raising sharp questions about that estimate, declaring that the leak must be far larger. They also criticize BP for refusing to use well-known scientific techniques that would give a more precise figure.

The criticism escalated on Thursday, a day after the release of a video that showed a huge black plume of oil gushing from the broken well at a seemingly high rate. BP has repeatedly claimed that measuring the plume would be impossible.

The figure of 5,000 barrels a day was hastily produced by government scientists in Seattle. It appears to have been calculated using a method that is specifically not recommended for major oil spills.

Ian R. MacDonald, an oceanographer at Florida State University who is an expert in the analysis of oil slicks, said he had made his own rough calculations using satellite imagery. They suggested that the leak could “easily be four or five times” the government estimate, he said.

“The government has a responsibility to get good numbers,” Dr. MacDonald said. “If it’s beyond their technical capability, the whole world is ready to help them.”

Scientists said that the size of the spill was directly related to the amount of damage it would do in the ocean and onshore, and that calculating it accurately was important for that reason.
Don't worry about that pesky oil spill in the Gulf of Mexico, BP CEO Tony Hayward says: It's "relatively tiny" compared to the "very big ocean."

Hayward launched this novel defense of the worst spill in U.S. history during an interview with the Guardian that deserves a full read, especially with BP fighting the Obama administration's push to make the company pay the full tab for cleanup costs. The BP chief executive acknowledged for the first time that he expects his future with the company to be "judged by the nature of the response" to the current crisis; this may help explain his stream of delaying tactics and excuses.

"We will fix it. I guarantee it. The only question is we do not know when," Hayward told the Guardian. "The Gulf of Mexico is a very big ocean. The amount of volume of oil and dispersant we are putting into it is tiny in relation to the total water volume."

Before calling the oil spill analogous to the Apollo 13 flight and comparing it favorably with a deadly 2005 BP rig explosion in Texas, Hayward said BP is "increasingly confident" that they'll find a way to stop the oil flow, and that the company has already prevented significant amounts of oil from reaching the shore.

BP's CEO isn't alone in downplaying the effects of the spill. Mississippi Gov. Haley Barbour (R) told the Associated Press his state is ready for tourism dollars -- just don't get too close to the water while waterskiing.

"We don't wash our face in it, but it doesn't stop us from jumping off the boat to ski," Barbour said.
CASE (SECONDARY SOURCE)

Johnson & Johnson: The Tylenol Tragedy

by Stephen A. Greyser
Source: Harvard Business School
3 pages. Publication date: Oct 12, 1982. Prod. #: 583043-PDF-ENG

In October 1982, Johnson & Johnson was confronted with a major crisis when seven deaths were attributed to poisoned Tylenol. The case reviews the facts as known a week after the incident occurred, and raises a wide range of questions regarding consumer behavior, corporate responsibility, and competitive reaction.
EXTRA-STRENGTH COMEBACK

TYLENOL
Recent Market Share Of $1.3 Billion Over-the-Counter Analgesic Drug Sales:

Sept. 1982 35%
Sept. 1983 29%
Oct. 1982 8%
Merkel Defends Germany’s Nuclear Power Deadline

Chancellor Angela Merkel of Germany spoke to German troops stationed in Mazar-i-Sharif, Afghanistan, on Monday.

By MELISSA EDDY
Published: March 12, 2012

BERLIN — Chancellor Angela Merkel of Germany defended over the weekend her government’s decision to phase out nuclear power by 2022 and replace it with renewable energy sources, dismissing critics who said the government would never make the deadline.

Ms. Merkel made the decision nearly a year ago after a devastating nuclear plant explosion in Japan. Merkel set the deadline even before her ruling coalition of the German Christian Democrats, the Free Democrats and the Social Democrats approved the plan. At the time, many said it was impossible to achieve the goal on time. But Ms. Merkel’s party is now in the majority and has no reason not to follow through on her plans. She has also been buoyed by the fact that Germany’s economy is strong and that renewable energy is becoming cheaper.
NUCLEAR ENERGY

PLANNING FOR THE BLACK SWAN

The surprising accident at Fukushima puts the spotlight on a new generation of U.S. nuclear reactors. Are they safe enough?

By Adam Piore

Half a world away from Japan’s stricken Fukushima Daiichi nuclear power plant, deep in the pine forests of Georgia, hundreds of workers are prepping the ground for an American nuclear renaissance they still believe is on the way. Bulldozers rumble across sunken plateaus of fresh, hard-packed backfill that covers miles of recently buried piping and storm drains. If plans stay on track, sometime next year two new nuclear reactors will begin to rise from the ground—the first reactors to be approved in the U.S. in more than 25 years.

That would be the starting gun for a renewed expansion of nuclear power in the U.S., which came to a virtual standstill after a partial meltdown at the Three Mile Island plant in 1979. Since then, the specter of climate change has turned nuclear power from an environmental menace to a potential source of carbon-free energy. But President George W. Bush and Bush-Cheney embraced the technology in the hope of triggering new construction. The U.S. Nuclear Regulatory Commission (NRC) is now reviewing proposals to build 20 more reactors in addition to the Georgia pair, adding to the 104 built decades ago.

More than half of these new reactors—including the two Vogtle units in Waynesboro, Ga.—would be AP1000s, the first of a new generation that incorporates “passive” safety features intended to avoid disasters like the one in Japan. In the event of an accident, the reactor relies on natural forces such as gravity and condensation to help keep its nuclear fuel from dangerously overheating—features the Fukushima plant lacked.

A few months ago it seemed a good bet that Georgia’s two AP1000s would win the final stage of NRC approval for construction later this year. But the Fukushima calamity in March, in which a staggering 9.0 earthquake and massive tsunami left the hot cores of four reactors deprived of coolant, has once again put the prospects for new nuclear construction in the United States into doubt.
**Boiling Water Reactor**
Fuel rods in the core boil cool water (blue) to steam (orange), which spins a turbine that generates electricity. A condenser turns the steam back to water. Steel and concrete bottle up the radioactive core, but if water fails to flow from cooling pumps or the suppression pool for days, hydrogen from steam reactions can explode inside the building, releasing radioactivity from the core or spent fuel.

**Pressurized Water Reactor**
The core heats pressurized water that never boils (red), which in turn converts water in a second loop (blue) into steam. Radioactivity is limited to the pressurized loop, but if electricity is lost, pumps cannot circulate water to cool the core, raising the risk of a core meltdown. Spent fuel is housed separately, reducing exposure during core accidents.

**Westinghouse AP1000**
This new pressurized water reactor is designed to cool a hot core without electricity or human operation for several days. Three tanks inside the containment vessel—and a fourth in the roof above it—rely only on natural forces to supply cooling water.
NEW CONSTRUCTION: The U.S. government approved plans to build two new nuclear reactors of a new design in Georgia. Significant work has already taken place, including beginning the construction of the reactor vessel's bottom as seen here.

*Image: Courtesy of Southern Co.*
The Drillers Are Coming

Companies and regulators are squaring off over a controversial technique that yields natural gas but threatens to pollute water supplies

BY MARK FISCHETTI

A SINGLE, VAST SHALE DEPOSIT—the Marcellus formation, stretching from Tennessee to New York—might contain enough natural gas to supply the U.S. for more than 40 years at today’s consumption rates, according to recent estimates. Thousands of vertical wells have exploited the shale’s easy-to-reach deposits. But newer technology and improved procedures are making horizontal drilling cost-effective, greatly expanding the amount of gas that can be extracted economically.

A rush is on to capture as much Marcellus gas as possible. Drilling is expanding fastest in Pennsylvania’s extensive reserve. Only two Marcellus wells were drilled in that state in 2005, but 210 were drilled in 2008, and 768 were drilled in 2009, according to the Pennsylvania Department of Environmental Protection (DEP). And every year the portion of drilling permits for horizontal wells has increased significantly, accounting for 75 percent in 2009 and 87 percent so far in 2010. Fewer than 3,000 Marcellus drilling permits were approved from 2005 through 2008; in the first two months of 2010, 2,165 were approved.
Huge underground shale formations (gold) could provide the U.S. with natural gas for years. But concerns that drilling into deposits could contaminate freshwater sources has prompted New York to fight extraction in regions of the Marcellus that underlie drinking water supplies.
Tough sell: Strict regulations might be key to winning over citizens who fear unsafe drilling practices, such as demonstrators in Albany, N.Y., who supported a state ban.
Shell: We need tough fracking rules

APRIL 17, 2011

Marvin Odum, the president of Shell Oil, made a revealing and insightful observation at the “Shell 2011 Energy Summit” last week in Houston.

“You are only as good as the worst operator in your industry,” he said.

He could have been talking about BP. Shell wants to drill offshore in Alaska, home to some of the richest undeveloped oil and gas reserves in North America, but there’s little chance of that so long as memories of the BP Deepwater oil spill remain fresh.

Or he could have been talking about the Tokyo Electric Power Co. Last month’s accident at Fukushima has cast a cloud over hopes for a global nuclear renaissance, fueling opposition to nukes from India to Germany to Minnesota.

In fact, he was talking about hydrofracking—the technology that will allow vast amounts of natural gas to be tapped from fields around the U.S., creating a boom in the shale fields of Wyoming, Texas, Louisiana and Pennsylvania.

But fracking, as it’s called, is controversial. When wells are improperly drilled, water...
THE TRUTH ABOUT
FRACKING

Fracturing a deep shale layer one time to release natural gas might pose little risk to drinking-water supplies, but doing so repeatedly could be problematic

By Chris Mooney
Risks to Drinking Water

Once a drill pad and wastewater pond are established, a driller may sink a dozen wells or more to fully tap the shale gas. Three spots may have the greatest potential to contaminate groundwater, which happened in Pennsylvania in September because of flooding by Tropical Storm Lee. Concrete that encases the vertical pipe can crack (inset, left), and new fissures opened by the fracking can connect to natural fissures or old wells (inset, right).

Hidden Routes Upward
New fissures opened by pressured fracking fluid can connect to unknown natural fissures or old gas wells abandoned and covered years ago, providing an unforeseen pathway for methane or chemicals to flow up to groundwater.

Broken Seal
Concrete surrounds the steel gas pipe to prevent methane or chemically laden water from flowing up from below and seeping into the environment. But poor cementing can create cracks or voids that open a pathway for contamination.
Fracking Could Work If Industry Would Come Clean

By Mark Fischetti | February 18, 2012 |

VANCOUVER—Resistance to hydraulic fracturing in the U.S. has risen steadily in recent months. Citizens and politicians are worried that fracking deep shales to extract natural gas can contaminate groundwater, trigger earthquakes and release methane, the potent greenhouse gas, into the atmosphere. But a panel of experts not tied to industry told a large audience at the American Association for the Advancement of Science annual meeting here yesterday that the primary concerns can be solved if drilling and gas companies would impose tougher controls on their own operations, and if regulators would stiffen safety rules and crack down on violators who break them.

That realistic but optimistic tone arose primarily from conclusions made in a new
Industry Behavior that Gets Positive Press

1. Action speaks louder than words. Address issues by taking action on them.

2. Saying something speaks louder than saying nothing. Don’t try to avoid the media, or avoid the issues. Address the situation at hand.

3. Be honest and open.
Journalists want:

stories, stories, stories

“news” means “new”s
How to Get Your Story Told. Tell the media:

1. What’s the headline? The one, big takeaway point? Clarify, in one sentence, what the story is.

2. Why now? Why is this news today, versus, say, a year ago, or a year from now?


4. What’s the storyline? Is it about a person, a discovery, a new insight? How might the story begin and end?
How to Stay Engaged with the Media

1. Cultivate relationships with journalists you trust.

2. Understand the challenges of a journalist’s job.

3. Don’t be afraid to approach *them*.

4. Help the journalist do a good job.

5. Provide context.

6. Have a positive message.
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