

The Good News — E.P.A. Proposes New Emission Standards for Power Plants; Public Comment Invited

Catskill 3500 Club members and other organizations were urged in January to contact the [Environmental Protection Agency](#) to urge implementation of the Clean Air Act. On March 16, 2011, the E.P.A. proposed [the first national standard](#) for emissions of mercury and other pollutants from [coal-burning power plants](#). Roughly half of the nation's more than 400 coal-burning plants have some form of control technology installed, but about a third of states have set their own standards for mercury emissions. The proposed rule will require all plants to come up to the standard of the cleanest of current plants. The E.P.A. will take public comment on the proposed regulations for the next several months. It anticipates publishing a final rule at the end of this year or early next year. The rule would take effect fully three or four years later.

HISTORY

- The new rules bring to a close a legal and regulatory battle dating back to the passage of the 1970 [Clean Air Act](#) during the Nixon administration, which first directed the E.P.A. to identify and control major industrial sources of hazardous emissions.
- By 1990, federal regulators had still not set standards for toxic emissions from power plants, and Congress, in the face of stiff resistance from utilities and coal interests, directed the E.P.A. to study the health effects of mercury and other emissions, and to detail the cost and effectiveness of control technologies.
- In 1998, the agency delivered a comprehensive report to Congress detailing the health impact of numerous pollutants, including mercury, which had been linked conclusively in multiple studies to serious cognitive harm to fetuses.
- In December 2000, in the last days of the Clinton administration, the E.P.A. listed power plants as a source of hazardous air pollutants under the Clean Air Act.
- The Bush administration E.P.A. did not issue emissions standards in line with federal law — top agency officials instituted a controversial [cap-and-trade](#) program in 2005 for mercury, despite a warning from agency lawyers that the move would throw the issue back into the courts and almost certainly be reversed.
- As predicted, a coalition of states and environmentalists, including the Adirondack Mountain Club, sued the E.P.A., arguing that the cap-and-trade program would not limit other toxic emissions like arsenic and would allow the dirtiest power plants to pay for the right to pollute, putting nearby communities at risk.
- In 2008 a federal judge ruled against the E.P.A., giving the agency three years to develop standards for mercury and other pollutants.
- The long delay has meant that emissions of some major pollutants have grown in recent years: from 1999 to 2005, mercury emissions from power plants increased more than 8% to 53 tons from 49 tons. Arsenic emissions increased 31%, to 210 tons from 160 tons.

NOW

491 coal-fired power plants emit 78,367 lbs. of toxic mercury each year. Less than one teaspoon of mercury can contaminate an entire lake. [This information is from the Sierra Club, March 29, 2011.] Lisa P. Jackson, the E.P.A. administrator, said control of

dozens of poisonous substances emitted by power plants was long overdue and would prevent thousands of deaths and tens of thousands of cases of disease a year. [Mercury](#) and other emissions covered by the rule damage the nervous systems of fetuses and children, aggravate asthma, and cause lifelong health damage for hundreds of thousands of Americans. The Catskill region is the recipient of dozens of old mid-west power plants that have not installed scrubbers.

Total annual cost of compliance is estimated at about \$10 billion, in line with some industry estimates (although some are much higher), and the health and environmental benefits at more than \$100 billion a year. She said that households could expect to see their electric bills rise by \$3 to \$4 a month when the regulation was fully in force after 2015.

“If you think it’s expensive to put a scrubber on a smokestack, you should see how much it costs to treat a child over a lifetime with a birth defect,” said Dr. O. Marion Burton, president of the [American Academy of Pediatrics](#).

Public health advocates said that utilities had delayed the rules for more than two decades with court challenges and lobbying campaigns. Some utilities, business groups, and Congressional Republicans cast it as the latest salvo in a regulatory war on American industry, but others said that compliance would not be unduly burdensome. Paul Allen, senior vice president and chief environmental officer of Constellation Energy: “We know from experience that constructing this technology can be done in a reasonable time frame, especially with good advance planning,” said. “And there is meaningful job creation associated with the projects.” Installing and maintaining smokestack scrubbers and other control technology would create 31,000 short-term construction jobs and 9,000 permanent utility sector jobs; some industry lobbyists argue that the regulations will impose huge costs on businesses and choke off economic recovery. A spokesman for the utility industry’s largest trade group, the Edison Electric Institute, said it would be easier for some utilities to comply than others, particularly those that rely more heavily on nuclear power and those that have switched to natural gas for part of their generating capacity.

FACT TO PONDER

China now emits more mercury than the U.S., India and Europe combined. Studies on pristine mountains in the western U.S. show large quantities of Asian mercury in our air. Asian ozone — created by carbon monoxide, nitrogen oxides, and volatile organic compounds from Asian cars and industry — creates smog; U.S. efforts to reduce ozone levels are wiped out by the growing global pool. Consider, however, that much of Asian emissions occur from making products demanded and consumed by the West.

BOTTOM LINE

The world’s environment is interconnected; air and water contamination from all regions of the world circles the globe. Regulation of pollutants worldwide is a good and necessary investment. Thinking about how we personally can conserve energy and live more simply will reduce the problem at its beginning. **See: How do we become more fossil fuel independent? at the conclusion of gas drilling excerpts, below.**

More Good News

INTERIOR DEPT. REJECTS CATSKILLS CASINO PLAN

The Interior Department rejected the latest proposal to construct a mega-casino in New York’s

Catskills region, this one on the banks of the famed Neversink River. The proposal called for a 580,000-square-foot casino, 750 hotel rooms and 9,500 parking spaces, enough to draw six million annual visitors. If built, it would have threatened the Neversink River watershed — home to more than 130 species of birds — and drinking water supplies for millions.

The Bad News: Articles on Natural Gas Drilling, New York Times, February 26, March 2, 3, and 5, 2011:

Thousands of internal documents obtained by *The New York Times* from the [Environmental Protection Agency](#), state regulators and drillers show that [dangers](#) to the environment and health from natural gas drilling are greater than previously understood.

Richard Ed Barr, the Catskill 3500 Club liaison with the New York-New Jersey Trail Conference, will attend meetings of a **new Antifracking Collaboration** and report to us.

Visit the calendar of upcoming activities at:

http://www.google.com/calendar/embed?src=krbjmtdm2ejk8tmq19bp5bvlr8%40group.calendar.google.com&ctz=America/New_York

Excerpts from the Times articles:

The relatively new drilling method known as high-volume horizontal hydraulic fracturing, or hydrofracking, involves injecting huge amounts of water, mixed with sand and chemicals, at high pressures to break up rock formations and release the gas. A well can produce over a million gallons of wastewater that is often laced with highly corrosive salts, carcinogens like benzene and radioactive elements like radium, all of which can occur naturally thousands of feet underground. Other carcinogenic materials can be added to the wastewater by the chemicals used in the hydrofracking itself.

Documents reveal that the wastewater, sometimes hauled to sewage plants not designed to treat it and then discharged into rivers that supply drinking water, contains radioactivity at far higher levels that is safe for treatment plants to handle. A 2009 E.P.A. study, never made public, concluded that some sewage treatment plants were incapable of removing certain drilling waste contaminants. The Times also found never-reported studies by the E.P.A. and a [confidential study](#) by the drilling industry that all concluded that radioactivity in drilling waste cannot be fully diluted in rivers and other waterways. But the E.P.A. has not intervened; federal and state regulators are allowing most sewage treatment plants that accept drilling waste not to test for radioactivity. There is no way of guaranteeing that the drinking water taken in by all these plants is safe. That has experts worried. The level of radioactivity in the wastewater has sometimes been hundreds or even thousands of times the maximum allowed by the federal standard for drinking water.

Drillers trucked at least half of this waste to public sewage treatment plants in Pennsylvania and some of it has been sent to other states, including [New York](#) and [West Virginia](#). Yet sewage treatment plant operators say they are far less capable of removing radioactive contaminants than most other toxic substances. Indeed, most of these facilities cannot remove enough of the radioactive material to meet federal drinking-water standards before discharging the wastewater into rivers, sometimes just miles upstream from drinking-water intake plants. In late 2008, drilling and coal-mine waste released during a drought so overwhelmed the Monongahela that local officials advised people in the Pittsburgh area to drink [bottled water](#). E.P.A. officials described the incident in an internal memorandum as “one of the largest failures in U.S. history to supply clean drinking water to the public.”

Gas has seeped into underground drinking-water supplies in at least five states; air pollution caused by natural-gas drilling is a growing threat, too. Fumes containing benzene and toluene from 27,000 wells in a sparsely populated county in Wyoming, reacting to sunlight, create levels of ozone higher than those recorded in Houston and Los Angeles. In Texas, which now has 93,000 natural-gas wells, a hospital system with some of the heaviest drilling said in 2010 that it found a 25 percent asthma rate for young children, more than three times the state rate of about 7 percent. “It’s ruining us,” said Kelly Gant, whose 14-year-old daughter and 11-year-old son have experienced severe asthma attacks, dizzy spells and headaches since a compressor station and a gas well were set up about two years ago near her house in Bartonville, Tex.

In Pennsylvania, rigs announce their presence with the occasional boom and quiver of underground explosions. Smelling like raw sewage mixed with gasoline, drilling-waste pits sit close to homes. Anywhere from 10% to 40% of the water sent down the well during hydrofracking returns to the surface, **carrying** drilling chemicals, very high levels of salts and, at times, naturally occurring radioactive material. While most states require drillers to dispose of this water in underground storage wells below impermeable rock layers, Pennsylvania is the only state that allows drillers to discharge much of their waste through sewage treatment plants into rivers.

A review by *The New York Times* of more than 30,000 pages of federal, state and company records relating to more than 200 gas wells in Pennsylvania, 40 in West Virginia and 20 public and private wastewater treatment plants offers a full picture of the wastewater such wells produce and the threat it poses.

Among findings:

¶ More than 1.3 billion gallons of wastewater was produced by Pennsylvania wells over the past three years, far more than has been previously disclosed. Most of this water — enough to cover Manhattan in three inches — was sent to treatment plants not equipped to remove many of the toxic materials in drilling waste.

¶ At least 12 sewage treatment plants in three states accepted gas industry wastewater and discharged waste that was only partly treated into rivers, lakes and streams.

¶ Of more than **179 wells** producing wastewater with high levels of radiation, at least 116 reported levels of radium or other radioactive materials 100 times as high as the levels set by federal drinking-water standards. At least **15 wells** produced wastewater carrying more than 1,000 times the amount of radioactive elements considered acceptable.

Once radium enters a person’s body, by eating, drinking or breathing, it can cause cancer and other health problems, many federal studies show.

Little Testing for Radioactivity

Under federal law, testing for radioactivity in drinking water is required only at drinking-water plants, but federal and state regulators have given nearly all drinking-water intake facilities in Pennsylvania permission to test only once every six or nine years. The Times reviewed data from more than 65 intake plants downstream from some of the busiest drilling regions in the state. Not one has tested for radioactivity **since 2008**, and most have not tested since at least 2005, before most of the drilling waste was being produced. In 2009 and 2010, public sewage treatment plants directly upstream from some of these drinking-water intake facilities **accepted** wastewater that contained radioactivity levels as high as **2,122 times** the drinking-water standard. But most sewage

plants are not required to monitor for radioactive elements in the water they discharge. So there is virtually no data on such contaminants as water leaves these plants.

Other federal, state and academic studies have also found dilution problems with radioactive drilling waste. In December 2009, these very risks led E.P.A. scientists to advise New York that sewage treatment plants not accept drilling waste with radium levels **12 or more times** as high as the drinking-water standard. The Times found wastewater containing radium levels that were **hundreds of times** this standard. The scientists also said that the plants should never discharge radioactive contaminants at levels higher than the drinking-water standard.

Industry has outpaced regulators

In 2009, E.P.A. scientists studied the matter and also determined that certain Pennsylvania rivers were ineffective at sufficiently diluting the radium-laced drilling wastewater being **discharged into them**. Asked about the studies, Pennsylvania regulators said they were not aware of them.

In interviews, five treatment plant operators said they did not believe that the drilling wastewater posed risks to the public. Several also said they were not sure of the waste's contents because the limited information drillers provide usually goes to state officials.

"We count on state regulators to make sure that that's properly done," said Paul McCurdy, environmental specialist at Ridgway Borough's public sewage treatment plant, in Elk County, Pa., in the northwest part of the state. The plant takes about 20,000 gallons of drilling waste per day and discharges it into the Clarion River, which flows into the Ohio and Mississippi Rivers. Like most of the sewage treatment plant operators interviewed, Mr. McCurdy said his plant was not equipped to remove radioactive material and was not required to test for it. Documents filed by drillers show that in 2009 his facility was sent water from wells whose wastewater was laced with radium at 275 times the drinking-water standard and with other types of radiation at more than 780 times the standard.

Part of the problem is that industry has outpaced regulators. "We simply can't keep up," said one inspector with the Pennsylvania Department of Environmental Protection who was not authorized to speak to reporters. "There's just too much of the waste." As of last November, 31 inspectors were keeping tabs on more than 125,000 oil and gas wells. "If we're too hard on them," the inspector added, "the companies might just stop reporting their mistakes."

Lax Oversight

Gas producers are generally left to police themselves when it **comes to spills**. In Pennsylvania, regulators do not perform unannounced inspections to check for signs of spills. Gas producers report their own spills, write their own **spill response plans** and lead their own cleanup efforts. These state-approved plans often appear to be in violation of the law. At one well site where several **spills occurred** within a week, including one that flowed into a creek, the well's operator filed a **revised spill plan** saying there was little chance that waste would ever enter a waterway.

"There are business pressures" on companies to "cut corners," John Hanger, who stepped down as secretary of the Pennsylvania Department of Environmental Protection in January, has said. "It's cheaper to **dump** wastewater than to treat it."

Records back up that assertion. From October 2008 through October 2010, regulators were more than twice as likely to issue a written warning, than to levy a fine for environmental and safety violations, according to state data. Fifteen companies were fined for drilling-related violations in 2008 and 2009, and the companies paid an average of about \$44,000 each year, according to state data. This average was less than half of what some of the companies earned in profits in a day and a tiny fraction of the more than \$2 million that some of them paid annually to haul and treat the waste. Republican governor-elect Tom Corbett took more gas industry contributions than all his competitors combined, and said he would reopen state land to new drilling, clearing the way for as many as 10,000 wells on [public land](#), up from about 25 active wells today. In arguing against a proposed gas-extraction tax on the industry, Mr. Corbett said regulation of the industry had been too aggressive.

Wastewater Recycling No Cure-All in Gas Process

Energy companies faced mounting criticism over the extraction process that involves pumping millions of gallons of water into the ground for each well and can leave significant amounts of hazardous contaminants in the water that comes back to the surface. Well operators reported recycling at least 320 million gallons, but at least 260 million gallons of wastewater were sent to plants that discharge their treated waste into rivers; those 260 million gallons would fill more than 28,800 tanker trucks, a line of which would stretch from about New York City to Richmond, Va.

Problems

Some well operators are also selling their waste, rather than paying to dispose of it. Because it is so salty, they have found ready buyers in communities that spread it on roads for de-icing in the winter and for dust suppression in the summer. When ice melts or rain falls, the waste can run off roads and end up in the drinking supply. Wastewater contains barium, strontium and radioactive elements that need to be removed. More than 155,000 gallons of this wastewater was sent by a drilling company called Ultra Resources to nine towns for dust suppression in 2009, [state records show](#). The water came from two gas wells in Tioga County and contained radium at almost 700 times the levels allowed in drinking water. “I was told nothing about frack water or any gas-well brines or anything else,” said Deborah Kotulka, the secretary of Richmond Township, in Tioga County, whose name appears on the state record. Her township received 101,640 gallons of the water from wells with high radioactivity, [those records show](#).

Paid off?

Pennsylvania regulators tried to strengthen state oversight of how drilling wastewater is tracked, by tracking each load of wastewater from the well to its disposal to verify that it was not dumped at the side of the road. The Marcellus Shale Coalition (an industry coalition) argued vehemently against it and after initially [resisting](#), state officials K. Scott Roy, Barbara Sexton and J. Scott Roberts [agreed](#); they would also try to persuade the secretary of Pennsylvania’s Department of Environmental Protection to agree, and in the end, the state’s proposed manifest system for tracking was not carried out. **These officials have since left their posts for jobs in the natural-gas industry.** **The existing tracking system** requires reports to the state from well operators indicating where their waste was taken, but offers no way for the state to guarantee that the waste actually reached the disposal sites. The challenges of tracking all of the industry’s drilling waste and disposing of it are just beginning — at least 50,000 new Marcellus

wells are supposed to be drilled in Pennsylvania over the next two decades, up from about 6,400 permitted now.

Brent Halldorson, chief operating officer of a drilling wastewater recycling company, said that for all the benefits of recycling, it was not a cure-all. “There still needs to be a candid discussion,” Halldorson said, “and there needs to be accountability about where the recycled wastewater is going.” Drilling experts say that virtually all forms of recycling still result in liquid waste that can be **more toxic** than it was after the first use. “The wastewater that comes up from the well will likely increase to some degree in many contaminants such as salts and possibly radium and other radionuclides with each new fracking, but the data is very limited on this issue so not much is known,” said Radisav Vidic, an environmental engineering professor and drilling expert at the [University of Pittsburgh](#). “There needs to be more data on this.”

Though the amount of wastewater decreases over time, the wells can continue to ooze for decades after they have been hydrofracked. Fluids that come up from it become more toxic, and the state or companies are even less likely to be tracking it,” said Anthony Ingraffea, a drilling expert and professor of civil and environmental engineering at Cornell. There are regulations that govern how gas wells are plugged and abandoned, but each gas well could produce 27 tons of salt per year over 20 to 30 years; multiply this amount by tens of thousands more Marcellus gas wells and the potential pollution effects are “tremendous.”

If drillers were to lose the exemption from federal law that allowed their waste not to be considered hazardous, they would probably be forced, at great expense, to start more rigorously testing the waste for toxicity. They might also have to do what most other industries do: ship any sludge or salts that are high in radioactivity to Idaho or Washington State, where there are some of the only landfills in the country permitted to accept such waste. Federal regulators informed the industry that their exemption remained intact.

The Politics Behind it all

In the 1980s, researchers concluded that some of the drillers’ waste was hazardous and should be tightly controlled. In 1987, findings were altered because of pressure from the Office of Legal Counsel of the White House under [Ronald Reagan](#). “It was like the science didn’t matter,” Carla Greathouse, the author of the study, said in a recent interview. “The industry was going to get what it wanted, and we were not supposed to stand in the way.”

Carla Greathouse’s experience was not an isolated case. More than a quarter-century of efforts by some lawmakers and regulators to force the federal government to police the industry better have been thwarted. E.P.A. studies have been repeatedly narrowed in scope and important findings have been removed. **For example, the agency had planned to call last year for a moratorium on the gas-drilling technique known as hydrofracking in the New York City watershed, according to internal documents, but the advice was removed from the publicly released letter sent to New York. Asked why the letter about hydrofracking in the New York City watershed had been revised, an agency scientist involved in writing it offered a one-word explanation: “politics.”**

Documents show that the agency dropped some [plans](#) to model radioactivity in drilling wastewater being discharged by treatment plants into rivers upstream from

drinking water intake plants. Interviews with E.P.A. scientists show long and deep divisions within the agency over whether and how to increase regulation of oil and gas drillers, and over the enforcement of existing laws, to stop what some of those lawyers say is a clear violation of federal pollution laws: drilling waste **discharged** into rivers and streams with minimal treatment. The outcome of that dispute has the potential to halt the breakneck growth of drilling in Pennsylvania. **The agency has pulled its punches, as in New York.**

Natural gas drilling companies have major exemptions from parts of at least 7 of the 15 sweeping federal environmental laws that regulate most other heavy industries and were written to protect air and drinking water from radioactive and hazardous chemicals.

Examples:

- Coal mine operators that want to inject toxic wastewater into the ground must get permission from the federal authorities. But when natural gas companies want to inject chemical-laced water and sand into the ground during hydrofracking, they do not have to follow the same rules.
- The air pollution from a sprawling steel plant with multiple buildings is added together when regulators decide whether certain strict rules will apply. At a natural gas site, the toxic fumes from various parts of it — a compressor station and a storage tank, for example — are counted separately rather than cumulatively, so many overall gas well operations are subject to looser caps on their emissions.

An Earlier Reversal

The E.P.A. studied hydrofracking in 2004 during the George W. Bush administration, when the Republican Congress considered whether the process should be fully regulated by the Safe Drinking Water Act. An early draft of the study discussed potentially dangerous levels of contamination in hydrofracking fluids and mentioned “possible evidence” of contamination of an aquifer. The report’s final version excluded these points, concluding instead that hydrofracking “poses little or no threat to drinking water.”

Weston Wilson, an E.P.A. whistle-blower, said the agency had been strongly influenced by industry and political pressure. “It was shameful,” Wilson said in a recent interview about the study. He explained that five of the seven members of that study’s peer review panel were current or former employees of the oil and gas industry. “The study ended up being the basis for this industry getting yet another exemption from federal law when it should have resulted in greater regulation of this industry.”

Current E.P.A. officials are frustrated with how research is being handled and demand that certain topics be included in a current study:

- The study was to consider the dangers of toxic fumes released during drilling, the impact of drilling waste on the food chain, and the risks of this **radioactive** waste to workers. But many of these concerns, cited by field scientists as high priorities, were cut from the **current study plan**, according to a version made public on Feb. 8.
- Earlier planning documents also called for a study of the risks of contaminated runoff from landfills where drilling waste is disposed and included detailed **plans** to model whether **rivers** can sufficiently dilute hazardous gas-well wastewater discharged from treatment plants. These topics were cut from the current study

plan, even though E.P.A. officials have acknowledged that sewage treatment plants are not able to treat drilling waste fully before it is discharged into rivers, sometimes just a few miles upstream from drinking water intake plants. While the current study plan clearly indicates that the agency plans to research various types of radioactivity concerns related to natural gas drilling, this river modeling, which E.P.A. scientists say is important, has been removed.

In interviews, several agency scientists who declined to be named for fear of reprisals, said the [study](#) was narrowed because of pressure from industry and its allies in Congress, and budget and time constraints. Brendan Gilfillan, an agency spokesman, said that the agency had taken additional steps to investigate the impacts of drilling, including issuing a subpoena against the energy services company [Halliburton](#) to force the company to provide fuller disclosure about its drilling operations.

Federal scientists also say the national study is being used to squelch other research by the E.P.A. on hydrofracking. Jeanne Briskin of the [E.P.A.'s Office of Research and Development](#) informed regional directors that the national study would be the [only forum](#) for research on hydrofracking, meaning that some projects underway in regional offices would probably have to be halted.

One [e-mail](#), forwarded to The Times by David Campbell, director of the [E.P.A. Region 3 Office of Environmental Innovation](#), described instructions he had been given by the agency's regional administrator, Shawn M. Garvin. Mr. Garvin's office had been most resistant to stepping up its regulatory role in Pennsylvania. "His concern is that if we spell out what we think we want to do (our grandest visions), the public may have access to those documents and challenge us to enact those plans."

Recipients of oil and gas campaign contributions

In its efforts to oppose new federal regulations, the oil and gas industry has found strong allies in Congress to [lobby the agency](#) about its current research.

"I am confident this study, if truly focused on hydraulic fracturing," [wrote](#) Republican Senator [Tom Coburn](#) of Oklahoma, last April to the E.P.A. administrator [Lisa P. Jackson](#), "will prove the process indisputably safe and acceptable." Republican Senator [James M. Inhofe](#) from Oklahoma wrote to agency officials: "We caution against potential panelists who have been longtime critics of hydraulic fracturing."

Over their careers, the two lawmakers from Oklahoma, a major drilling state, have been among the Senate's top 20 recipients of oil and gas campaign contributions, according to federal data.

Chad Bradley, a lobbyist for [Chesapeake Energy](#), criticized the E.P.A., said the agency was going beyond its "mandate" from Congress, adding new topics resulting in "mission creep." But Representative [Maurice D. Hinchey](#), Democrat from New York, who wrote the original language, said his words were being taken out of context.¹ He added that the E.P.A. had full jurisdiction to study other risks from hydrofracking, like air quality or toxic waste being discharged into rivers. "The language I authored does not at all limit the scope of the E.P.A.'s study, rather it sets forth the minimum that Congress expects," he added. "Any assertion otherwise by industry is a blatant attempt to misrepresent Congress's intentions."

The natural gas drilling boom is forcing the E.P.A. to wrestle with questions of jurisdiction over individual states due to extensive exemptions from federal law. In Wyoming the E.P.A. is investigating water-well contamination in an area of heavy

drilling, though because of industry exemptions the agency might not have jurisdiction. In Texas, after an aquifer was contaminated, E.P.A. officials ordered a drilling company to provide clean drinking water to residents despite strong resistance from state regulators who said the federal action was premature and unfounded.

Drillers throughout the country are watching Pennsylvania to see whether the federal agency will overrule the state's decisions on how to dispose of drilling waste. The central question on this issue: Should drillers in Pennsylvania be allowed to dump "mystery liquids" into public waterways? "Treatment plants are not allowed under federal law to process mystery liquids, regardless of what the state tells them," explained one E.P.A. lawyer in an internal draft memo obtained by The Times. "Mystery liquids is exactly what this drilling waste is, since its ingredient toxins aren't known." Under federal law, basic rules govern sewage treatment plants: operators have to know what is in the waste they receive, and they have to treat this waste to make it safe before discharging it into waterways.

Some E.P.A. lawyers say that Pennsylvania is not policing treatment plants properly and is acting beyond its authority — allegations that state officials reject. These lawyers are calling for the E.P.A. to revoke, at least temporarily, Pennsylvania's right to give treatment plants operating permits to handle drilling waste. Last year, state regulators created their own pretreatment standards for plants handling this waste, even though the regulators lacked federal permission to do so, agency lawyers say. E.P.A. scientists have also emphasized that sewage treatment plants are not, technically speaking, treating the waste. For example, when one agency scientist wrote in a draft plan for the national study that wastewater could be "discharged to surface water after treatment to remove contaminants," another scientist corrected the statement in the margin. Using the federal definition of treatment, the second scientist wrote, "we really don't fully treat the waste."

"The bottom line is that under the Clean Water Act, dilution is not the solution to pollution," the enforcement lawyer wrote. "Sewage treatment plants are legally obligated to treat, not dilute, the waste. These plants are breaking the law," the lawyer said. "Everyone is looking the other way." The E.P.A. Region 3 office, which oversees Pennsylvania, has staunchly resisted calls from agency lawyers to order the state to stop issuing permits to treatment plants handling drilling waste.

Footnote ¹ Congress Gives Final Approval to Hinchey Provision Urging EPA to Conduct New Study on Risks Hydraulic Fracturing Poses to Drinking Water Supplies

Washington, DC — The U.S. House of Representatives today approved a provision authored by Congressman Maurice Hinchey (D-NY) that formally urges the U.S. Environmental Protection Agency (EPA) to conduct a new study on the risks that hydraulic fracturing poses to drinking water supplies. The Senate is due to pass the identical bill in the coming days and President Obama is expected to sign the measure into law soon after that. Earlier this week, members of the Interior Appropriations Conference Committee, including Hinchey, signed off on the Interior and Environment Appropriations bill and report for fiscal year 2010, which contains the study provision.

"While natural gas certainly has an important role in our national energy policy, it's imperative that we take every step possible to ensure that our drinking water supplies

are not contaminated or adversely impacted in any way,” Hinchey said. “This legislation puts Congress on record in support of a new, comprehensive study that will examine the impact that hydraulic fracking really has on our water supplies. The study results will put us in a position to take any further steps that are necessary to protect our drinking water supplies from the chemical concoctions being pumped into the ground by energy companies.”

The congressman asked EPA Administrator Lisa Jackson at a House Interior Appropriations Subcommittee hearing about the need for such a study. Jackson told Hinchey that she believed her agency should review the risk that fracturing poses to drinking water in light of various cases across the country that raise questions about the safety of the natural gas drilling practice. Hinchey's measure would formalize that congressional request for an EPA study on the risks that toxic chemicals used in hydraulic fracturing pose to drinking water supplies in New York and across the nation. The EPA did conduct a study on the matter in 2004 under the Bush administration, but that study is widely considered to be flawed for a variety of reasons, including the way data was selectively collected from sources that had a vested interest in the oil and gas industry while other relevant information was ignored.

The language that Hinchey had inserted into the report reads, "The conferees urge the EPA to carry out a study on the relationship between hydraulic fracturing and drinking water, using a credible approach that relies on the best available science, as well as independent sources of information. The conferees expect the study to be conducted through a transparent, peer-reviewed process that will ensure the validity and accuracy of the data. EPA shall consult with other federal agencies as well as appropriate state and interstate regulatory agencies in carrying out the study, and it should be prepared in accordance with EPA quality assurance principles."

In the now infamous 2005 Energy Policy Act, which Hinchey strongly opposed and voted against, the then Republican-controlled Congress exempted hydraulic fracturing from the Safe Drinking Water Act (SDWA), which was designed to protect people's water supply from contamination from toxic materials. This loophole, which some have called the Halliburton Loophole, created an extremely dangerous set of circumstances.

Hinchey, Congresswoman Diana DeGette (D-CO), and several of his colleagues introduced the FRAC ACT -- Fracturing Responsibility and Awareness of Chemicals Act, which would close the loophole that exempted hydraulic fracturing from the SDWA and require the oil and gas industry to disclose the chemicals they use in their hydraulic fracturing processes. Currently, the oil and gas industry is the only industry granted an exemption from complying with the SDWA.

“It is critical that our communities are assured that the process of hydraulic fracturing is safe and will not contaminate drinking water supplies," said DeGette (D-CO), Vice Chair of the Committee on Energy and Commerce. "I will continue to work with EPA to encourage a robust study of hydraulic fracturing and its potential impact on drinking water.”

Hydraulic fracturing, also known as “fracking,” is used in almost all natural gas wells. It is a process whereby fluids are injected at high pressure into underground rock formations to blast them open and increase the flow of fossil fuels. This injection of unknown and potentially toxic chemicals often occurs near drinking water sources.

Troubling incidents have occurred around the country where people became ill after fracking operations began in their communities. Some chemicals that are known to have been used in fracking include diesel fuel, benzene, industrial solvents, and other carcinogens and endocrine disrupters.

SUMMARY

Coal-fired power plants without updated equipment to capture pollutants are a major source of radioactive pollution. Coal mines annually produce millions of tons of toxic waste. Hazards [associated](#) with natural-gas production and drilling are far less understood and regulations have not kept pace with the natural-gas industry's expansion.

How do we become more fossil fuel independent?

- **Conservation**
- **New sources of energy — “green energy”**

Great strides are being made. Some examples show the amazing progress that is emerging in our “Ecological Age.”

1. Building the Super-efficient Home.

The Energy Efficient and Smart Appliance Agreement of 2010, proposed by the Association of Home Appliance Manufacturers, sets out specific targets and specific timetables that manufacturers can meet. The new minimum efficiency levels cover freezers, clothes dryers and washers, air conditioners, dishwashers, refrigerators and a wide range of other appliances. Over the next 30 years, for example, the accumulated energy savings will equal the energy needed to power 40% of U.S. homes for one year.

The Department of Energy's emerging standards, which mirror those in this 2010 agreement, could save consumers up to \$18.6 billion on their energy bills over 30 years. A great by-product of this progress is boosting jobs, as appliance companies retool to produce more efficient components.

2. Naval Intelligence—Can the U.S. Navy launch us into the post-fossil fuel era?

The Assistant Secretary of the Navy for Energy, Installations, & Environment has a mission: Reduce reliance on fossil fuels and find alternative energy sources to power everything from computers and communications gear to jet fighters and warships. Use energy efficiently. Enhance national security by not importing so much imported energy:

“You’ll be seeing a lot of electric vehicles on our bases, which have housing, some retail, lots of offices, industrial sections. Energy efficiency is our first step. It’s the cheapest alternative and everybody realizes that. So we’re introducing more-efficient lighting, windows, insulation, and putting in a lot of solar and wind and geothermal and looking at waste energy. I thought California had the most aggressive building standards in the country, but I’m told that our new standards are 30% more stringent. The Marines in Afghanistan are putting together solar panels that power air-conditioning for their tents and desalination packages for clean water. We want all our ships and aircraft to run on non-fossil fuels. Algae-blend biofuels work fine in command boats and an F/A-18 fighter on a 50-50 blend of jet fuel and biofuel tested beautifully. Biofuel research by the military could have a long-term impact on civilian technologies, for example on the airline industry. Regarding crops for biofuels, it must be a sustainable crop—which

means taking into account the whole life-cycle cost, including the carbon emissions involved in production.”

3. Roadmap to the Future. See <http://switchboard.nrdc.org/transportation.php>

President Dwight D. Eisenhower envisioned the nation’s Interstate highway system, and the program changed the way we live. Today, facing oil shortages, pollution from coal, dangers of extracting natural gas and nuclear power plant hazards, we again must think and act anew. The transportation system of the U.S. can be made more efficient, safer, and cleaner. Examples:

- *High Efficiency Vehicles* — Government institutes incentives, such as tax breaks or rebates for drivers who purchase high-efficiency vehicles, and gives priority to electric cars in high-occupancy vehicle lanes. Compared with standard cars, electric vehicles reduce greenhouse gas emission by as much as 54%.
- *High Speed Rail* — In 2009 the Obama administration launched a new national high-speed rail program. Producing only 0.26 pounds of carbon dioxide per passenger mile, this could cut greenhouse gas emissions by four million tons a year by 2030.
- *Alternative Transportation* — Invest in bike lanes, light rail, and walking routes in cities.
- *Bus Rapid Transit* — Government builds dedicated lanes for buses, on the same principle as train lines, which allow them to avoid traffic. Buses consume less than a quarter of the energy per passenger mile that cars and trucks use.
- *Smart Growth* — Compact urban development would place residential neighborhoods close to stores, transportation, and other services as an antidote to sprawl. Reduced vehicle use could avoid almost two billion metric tons of greenhouse gas emissions by 2050.

4. The Fashion Industry Gets a Makeover.

From space, you learn which colors are in fashion by observing the hue of rivers in China! The country’s 50,000 textile mills produce about half the world’s clothing — \$150 billion worth annually! — and fabric for everything from bedspreads to car seats. Chinese mills emit up to three billion tons of soot each year burning coal to heat water that’s used to dye and finish fabric. Processing one ton of fabric requires as much as 200 tons of water, which is then discharged to often inadequate water-treatment plants.

The Natural Resources Defense Council recruited major U.S. corporations seeking to green their operations: Walmart, Levi Strauss, Nike, Gap and others have signed the “Clean by Design” initiative. Studies of Chinese mills show where improvements can save water, energy, money, and will reduce pollution. The Redbud Textile Mill, a supplier to Walmart, was a notoriously wasteful and polluting mill until it spent \$72,000 to upgrade its equipment. It now saves ten times that amount annually by using 740 fewer tons of water and 9.4 fewer tons of coal per day. Factory workers are being trained to implement recommendations. These and other companies have agreed to consider environmental practices when deciding where to buy textiles; this provides mills with an incentive to clean up. When companies join together, they have more sway over the environmental practices of mills than each would have alone. It is hoped that once

the benefits of good practices are documented, people will realize the monetary, practical and ethical value in good environmental practices.