

## SCIENCE AT WORK

### Progress on Clean Power

As the nation's Clean Power Plan moves into action, requiring power plants to lower their global warming emissions, there's a lot of misinformation out there—including a good deal funded by fossil fuel interests. But UCS analysis of the rule, finalized on August 3, shows that most states are already making solid progress, having made decisions that, when fully implemented, will collectively move the United States more than two-thirds of the way toward the Environmental Protection Agency's (EPA's) 2022 emissions benchmarks.

Only four states have yet to take action to cut their power plant emissions in the coming years. In contrast, 31 states have already made commitments that will put them more than halfway toward meeting the EPA's initial 2022 benchmarks. Of these, 21 are already on track to meet or exceed the benchmarks.

***Progress on clean energy is proving the naysayers wrong.***

The list of states showing national leadership on clean energy includes California, Maryland, Massachusetts, and Minnesota, all of which have made significant commitments to renewable energy and energy efficiency. More surprising, the list also includes three of the states most dependent on coal power: New Mexico, North Carolina, and Ohio—

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## {IDEAS IN ACTION}

### Helping Communities Facing Fracking



UCS offers much-needed information about the choices local officials can make to protect public health and the environment when faced with the prospect of oil and gas development in their communities.

Imagine that your community sits atop a vein of untapped natural gas, far beneath the ground and hidden deep inside a layer of shale rock. Crews of workers are moving in to begin extracting that gas, using advanced technology such as hydraulic fracturing (or “fracking”). You naturally have many serious questions: Will your community's drinking water be affected? Where will potentially hazardous waste water be stored? Do you and your neighbors have any recourse if something goes wrong?

UCS has been working with scientists, activists, regulators, industry representatives, and politicians since 2013 to identify and manage the risks of fracking using rigorous, evidence-based science. The truth is, fracking is risky—and its effects on people and the environment are not yet fully understood. A recent Environmental Protection Agency report led with the ambiguous conclusion that the process of hydraulic fracturing doesn't *systemically* affect drinking water, but the report includes many instances in which fracking *did* contaminate water supplies. The rapid development of unconventional oil and gas extraction techniques has far outpaced the scientific research on its impacts—and some industry groups have a vested interest in spinning it as harmless.

The good news is that communities have many options available to them as they attempt to manage risks like water contamination. Local officials and other community

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# Pushing for Cleaner Trucks

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Tractor-trailers go about six miles on a gallon of diesel, a number that has barely budged since the 1970s. This shocked me the first time I heard it. After all, so many other products—passenger cars, lightbulbs, refrigerators—are much more efficient now. Why not trucks? The good news is that it doesn't have to be this way.

**UCS analysis shows a strong truck rule would save roughly 1.4 million barrels of oil each day by 2030.**

UCS analysts, in coordination with other technical experts, have determined that the nation's trucks can become roughly 40 percent more efficient by 2025, and a new draft rule issued by the Obama administration will get us part of the way there. The new rule covers everything from heavy-duty pickup trucks and delivery vans to the huge tractor-trailers that transport most of the goods we use every day.

The proposed rule is a good start, but we can make it even stronger. If we can reach the 40 percent standard UCS experts say is possible, we would save roughly 1.4 million barrels of oil each day and cut about 270 million metric tons of global warming pollution by 2030. See "Join the Conversation" (p. 3) to find out how you can help make this happen.

**KEN KIMMELL**

## FAST FACTS

### How Safe Is the Nuclear Reactor Near You?

UCS is actively working to make sure a Fukushima-like accident doesn't happen here. You can use our handy interactive database to track the safety record of every U.S. nuclear power plant, and to find other key facts such as:



**NUMBER OF OPERATING U.S. REACTORS: 99**

**9**

**NUMBER OF U.S. REACTORS DOCUMENTING NEAR MISSES (EVENTS THAT INCREASE THE RISK OF REACTOR CORE DAMAGE BY A FACTOR OF AT LEAST 10) IN 2014**



**STATE WITH THE MOST OPERATING REACTORS: ILLINOIS**

**26**

**PERCENT OF ALL OPERATING REACTORS THAT ARE WITHIN 10 MILES OF 100,000 OR MORE PEOPLE**



**NUMBER OF REACTORS OUT OF COMPLIANCE WITH FIRE PROTECTION STANDARDS: 40**

For more, visit [www.ucsusa.org/reactordatabase](http://www.ucsusa.org/reactordatabase).

## Progress on Clean Power

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primarily due to their recent decisions to retire uneconomic coal-fired plants and replace them with cleaner, cheaper alternatives. Finally, some states, including Delaware, New Hampshire, and New York, are in line to meet their benchmarks thanks largely to action they have taken in conjunction with the Regional Greenhouse Gas Initiative (RGGI)—a nine-state effort to collectively cap carbon emissions from power plants.

### THE PATH FORWARD

Under the newly finalized Clean Power Plan, states now have one year to develop initial plans (with up to two years more to finalize them). These plans must show how the state will meet an average annual carbon emissions rate between 2022 and 2029 (called an interim target) and a final 2030 emissions rate.

States in every region of the country are well on their way toward meeting these targets. Strikingly, our analysis shows that seven of the states now making



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The vast majority of states are ignoring Senator Mitch McConnell's call to "say no" to the Clean Power Plan—including his home state of Kentucky.

progress rank in the top third of coal-generating states nationwide, proving that even the most coal-dependent states can make important strides toward lower-carbon power sources.

There's a lot more work to be done to achieve a clean energy economy, so states should continue to invest heavily in renewables and efficiency. But the progress already being made on emissions reductions is clearly proving the naysayers wrong and demonstrating that we can cost effectively and reliably make the transition to low-carbon power sources.

## ASK A SCIENTIST

**Can ocean water be used to saturate dry land to help grow crops and produce livestock?** —Victoria Resurreccion, Bellflower, CA

**Juliet Christian-Smith**, a climate scientist in our Oakland, California, office, lead author of the 2012 book *A Twenty-First Century U.S. Water Policy*, and an editor of the journal *Sustainability Science*, responds:



© Mike Olliver

As drought worsens in many parts of the country, communities and businesses are looking for new water sources.

Desalinating ocean water is often

mentioned as a possibility, but unfortunately it is just too expensive to be practical—at least for agriculture. In California, for instance, desalinated water can cost nearly 10 times more than water from federal canals. Desalination also requires a great deal of energy, which adds to the cost and contributes to global warming emissions if it's not powered by renewable resources.

Current government responses to drought tend to focus on short-term fixes, such as relying more on groundwater and instituting temporary water conservation and efficiency improvements. But if we think of groundwater as a bank

account, in much of the Midwest and West we are overdrafting our accounts—that is, using more groundwater than we replace. That could lead to a number of negative consequences including dried-up wells, higher well-drilling and pumping costs, and land subsidence (when land sinks due to decreased groundwater pressure).

Given that drought risk is increasing in many regions, it is critical for federal, state, and local governments to manage groundwater supplies sustainably and to incorporate longer-term solutions that increase local resilience to more frequent and severe drought conditions. For example, we need to do a better job monitoring and measuring water nationwide, and we need to use water more efficiently. We should get more use out of storm water, wastewater, and gray water (the relatively clean wastewater from baths, sinks, washing machines, and other appliances).



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## JOIN THE CONVERSATION

**Tell the EPA: We Need Stronger Emissions Standards for Trucks**



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Almost everything around you—clothes, cell phones, groceries—has traveled on a truck. Delivering all these products burns a lot more fuel than it needs to, so federal policy makers recently proposed standards that would require heavy-duty trucks to go farther on a gallon of fuel. UCS analysis has found that strong standards could reduce heavy-duty truck fuel use and global warming emissions 40 percent by 2025, but the government's draft rule—while a good start—doesn't get us there.

The Environmental Protection Agency and the Department of Transportation are currently accepting public comments on the draft standard. We are asking UCS members and supporters to take action by visiting [www.ucsusa.org/ActOnTrucks](http://www.ucsusa.org/ActOnTrucks) today and urging the EPA to create the strong truck emissions standard we need.

# Helping Communities Facing Fracking

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leaders can work within existing legal and regulatory frameworks such as zoning ordinances or create new ones such as nuisance regulations to reduce health, safety, and environmental impacts at all stages of fracking operations.

**As communities face fracking, a new UCS report offers tools and examples to help protect residents and the environment.**

## YOU'RE NOT IN THIS ALONE

UCS's latest report on fracking, *Managing the Risks of Unconventional Oil and Gas Development*, offers much-needed information about the choices local officials can make to protect public health and the environment when faced with the prospect of oil and gas development in their communities. The report, co-produced by the Center for Science and

Democracy at UCS and the Consensus Building Institute (a nonprofit organization specializing in negotiations and conflict resolution), includes examples of creative regulatory, non-regulatory, and fiscal approaches from seven counties, cities, and towns across the United States.

For example, in Boulder County, Colorado, oil and gas companies can obtain expedited permits for fracking operations if they agree to set up their sites away from homes, businesses, water supplies, and vital community infrastructure. In Collier Township, Pennsylvania, the town government enacted regulations to mitigate noise pollution, specifying acceptable noise levels for daytime and nighttime hours. And Bakersfield, California, has leaned on regulations that limit where and how hazardous waste can be stored.

Is your community facing fracking? For a straightforward guide to the tools and resources available to manage the impact of unconventional oil and gas development, visit [www.ucsusa.org/frackinglocalresponse](http://www.ucsusa.org/frackinglocalresponse).



U.S. Bureau of Land Management

Local communities often need help to identify and manage the risks associated with fracking.

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