

Sandy's Energy Lessons

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The devastation caused by Hurricane Sandy produced heart-wrenching loss of life, entire cities obliterated by floods, wind and fires, and the need for millions to rebuild a semblance of normalcy. For some, the pain promises to linger for weeks if not months. From the complete reworking of New Jersey's coastlines to the freakish blizzards in West Virginia, Sandy will leave an indelible imprint on our memories and our physical surroundings. Sandy also taught us lessons relating to energy.

One lesson is that we take energy for granted, and interruptions in its delivery to our homes and businesses profoundly disrupt our lives. Millions without personal generators either evacuated or suffered in darkened homes, awaiting a return to power that could take hours to days. The simple modern pleasures of watching television, washing clothes, or keeping food cold were denied to many so dependent on electricity.

The importance of that lesson should be kept in mind as we debate the wisdom of extracting energy in our own backyards. Critics of natural gas development from shale rightly cite the risks, especially to drinking water, surface water, and public health. However, they often underplay the benefits that such energy provides to consumers.

Unfortunately, distance and circumstance prevent people from fully seeing both the risks and benefits. Those who live in energy-development regions must often cope with the risks. But they don't see the benefits that their energy provides to consumers, often hundreds of miles away. And energy consumers typically don't worry about distant risks when they flip the switch or turn the knob. In order to have intelligent discussion about the energy options available to us, we need to honestly consider both the risks and benefits – as well as the choices in front of us. We can't have energy policy driven solely by "no."

The second lesson is that our past and current energy choices likely contributed to Sandy's severity. Of course, Sandy is not the first devastating storm to hit the United States. But, we seem to experience a "storm of the century" every few years. Such pattern shifts are consistent with scientific predictions that link fossil fuel combustion and changes in global climate.

The link between burning fossil fuels and climate has been extensively reported since the 1980s. While other factors, including solar activity, air-ocean linkages, and

water vapor, all come into play, the scientific consensus is that pumping carbon dioxide into our atmosphere already affects our climate and will do so for decades.

Our problem is that we will remain dependent on fossil fuels for decades to come. First, our modern lives demand energy. Second, more than 80 percent of our energy – both globally and in the U.S. – comes from burning fossil fuel. Third, non-carbon alternatives have limitations. Ramping up nuclear power would take decades, and it faces bitter opposition. Solar and wind are promising. But intermittency, low energy density, high start-up costs and their own environmental issues hamper their development. Third, many people steadfastly reject any notion that global climate change is real and often denigrate those accepting the scientific consensus.

Some trends are encouraging. First, natural gas is replacing coal as a fuel for electrical production. While the extraction and transport of natural gas pose risks that desperately deserve prompt and honest evaluation, it does emit lower greenhouse emissions than coal – especially when gas companies prevent methane from escaping into the air at wells and pipelines. Second, start-up costs for wind and solar are decreasing, benefitting consumers interested in adopting those technologies. Third, new conservation strategies will help us make the most of every BTU.

By all indications, the pain inflicted by Sandy is part of a pattern resulting from our dependence on fossil fuels. Our debates on energy must include honest accountings of the benefits and drawbacks of all the options open to us. At the very least, we should resist the calls for deregulation of energy producers, support efforts of scientists to understand the impacts of energy on our lives and ecosystems, and encourage the next generation of innovators to find alternatives to our wasteful dependence on carbon-based energy.

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