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The Debate on Fracturing

The argument over hydraulic fracturing — a technique used to extract natural gas from deep shale formations — has become increasingly polarized. Some environmental groups have demanded a nationwide moratorium because of complaints about polluted drinking water in wells. Meanwhile, industry officials and many politicians, including Gov. Rick Perry of Texas, extol fracturing and insist there is already more than enough regulation.

A new federal report from a panel of energy experts, convened by Energy Secretary Steven Chu, offers a sensible way forward. It agrees that natural gas is an abundant and increasingly important fuel because it emits only half the carbon dioxide emitted by burning coal and is an important bridge to a less carbon-intensive energy future. It also warns that hydraulic fracturing presents real risks to the air, water and land that must be addressed by energy companies and federal and state regulators.

Hydraulic fracturing involves pumping enormous amounts of fluid — a mixture of water, sand and chemicals — underground to crack the shale and drive the gas to the surface. A decade ago, the technique accounted for only 1 percent of America's natural gas supply. Today the figure is 30 percent and climbing. Yet the industry cannot continue on this path if it loses public and political support, which the report says is certain to happen unless people can be sure the practice can be done safely.

The panel's overriding message is the need for greater transparency. Industry must disclose the exact nature of the chemicals it uses in the fracturing process, and should routinely measure the impact that drilling operations have on air and water quality and make the information publicly available.

The panel also suggested remedies to specific problems. The biggest risk to water quality, it said, arises from "flowback" — the huge volumes of water that drilling brings to the surface along with the natural gas. A single well site can cough up a million gallons laced with naturally occurring radioactive elements like radium. Storing that water in containment ponds on the surface presents risks; a better option, the report suggested, is to recycle it by injecting it underground as part of the drilling loop.

On air quality, the panel expressed special concern about methane emissions. Methane is the main component in natural gas and a powerful greenhouse gas. Methane that leaks into the air from

poorly designed wells contributes to global warming, undercutting the claim that natural gas is more environmentally friendly than coal. Industry, the report said, must do a far better job of plugging leaks or capturing the gas when it emerges.

The panel was largely silent on the question of who should regulate the industry. But it made clear that while the industry can do much to improve itself, the Environmental Protection Agency, other federal authorities and state regulators must step forward.

The challenge here is to harvest a vast natural resource without putting public safety or the environment at risk. If we can do that we can enhance the country's energy security while reducing greenhouse gases.