Shale Gas and Oil Drilling and the Debate Over Hydraulic Fracturing

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Key Points:

- Many observers regard the recent shale gas and oil surges as a “game changer” for the U.S. economy, creating new jobs and spin-off industries, fattening tax coffers, driving down energy prices, and moving the nation closer to energy independence.

- Concerns about the environmental impact of hydraulic fracturing have grown along with its rapid expansion. Critics maintain that the industry is drilling without fully evaluating the effects on water, air, and community life and without adequate oversight. The industry responds that shale gas development is by and large safe, and that companies are stepping up efforts to minimize their environmental footprint.

- A major focus in the shale gas debate is on fracturing fluid, which is 99.5 percent water and sand. The remaining 0.5 percent is chemicals, some of them found in household products and others carcinogenic and potentially hazardous.

- Industry supporters say there is no proof that fracturing fluids cause groundwater contamination. Environmental groups counter that hydraulic fracturing is the prime suspect in a number of instances of polluted drinking water.

- Some experts have concluded that faulty well construction, surface spills and waste disposal pose the greatest potential risks to water. Air pollution in heavily drilled areas is also a growing concern.

- The debate over hydraulic fracturing has sparked increased governmental oversight at the local, state and federal levels. Recently, the Environmental Protection Agency issued the first federal air standards for hydraulically fractured wells and is conducting a major study of the effects of fracturing on drinking water.

- The energy industry has taken steps to address environmental and other issues, adopting improved drilling techniques and safety measures, developing best management practices, and agreeing to more disclosure of fracturing fluid chemicals.