Shale Gas Quick Facts

There are now over 1,300 scientific studies, journalistic investigations and government regulatory reports on every aspect of shale gas extraction. The overwhelming majority of them substantiate the threats that the industry poses towards public health, water and the environment, and climate change. At the same time, the industry's promise of jobs and riches has proven to be an empty one.

Public Health: A continually growing number of studies have associated fracking and other shale gas extraction processes with cancer and serious health threats to almost every system in our bodies. Expectant mothers and infants seem especially vulnerable to premature birth, low birth weights, and congenital heart and brain defects. Risks for childhood leukemia, asthma and other respiratory diseases increase. Many of the chemicals used in fracking can disrupt our hormone systems, and cause developmental and reproductive problems lasting a lifetime. Reviewers of all the medical research have stated that they can see no way for the industry to operate safely as regards public health.

Local Impacts on Fracking Communities: Cost of living increases, as do rents, which impacts low income families and seniors. Stress on health care systems increase. Property values decrease, and getting mortgages or insurance may prove difficult. Farming, fishing, hunting, tourism and agriculture suffer losses. Shale gas is a boom-bust economy that leaves areas worse off.

Roads, Bridges and Traffic: A single well pad requires thousands of heavy truck trips, operating 24/7. These trucks compete with regular traffic for road space. Damage to roads and bridges can reach to billions of dollars, and taxpayers are often stuck with a portion of that bill. The destroyed roads impact everything from emergency vehicles to school buses to normal community life. Traffic accidents and fatalities increase significantly.

Water pollution: Methane, fracking fluids and other drilling chemicals have been documented as entering waterways via leaking wells, spills, pipeline breaks, well blowouts, truck accidents and floods. In addition to rendering water wells undrinkable and causing illnesses, contaminated waters have killed farm animals, wildlife, fish and vegetation.

Air pollution: Many studies have linked illnesses to density and nearness of gas wells, some documenting problems up to 4km from wells. Nearby residents complain of nosebleeds, burning eyes, headaches, hair loss, breathing problems. Air pollution has emerged as one of the primary public health concerns. Shale gas chemicals have been documented over 300 km from the source, aggravating asthma, respiratory diseases and irreparable lung damage.

Climate Change: Methane, the main ingredient in natural gas is 86 times more powerful than carbon dioxide (CO_2). Because large amounts leak into the atmosphere from every stage of shale gas development, transport and usage, shale gas is considered to be one of the fastest growing causes of climate change and worse for the climate than burning coal.

The Problems with the process of Hydraulic fracturing ('Fracking'):

Fracturing of rock using water and pressure to release gas has been long used in conventional gas wells, but to get gas trapped in hard shale rocks, a new combination of techniques began to be used about 15 years ago. Wells are drilled horizontally for many kilometres, and massive volumes of water, sand and toxic/carcinogenic chemicals under enormous pressures are used. Thousands of wells are eventually drilled, creating an industrialized landscape.

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Water usage: Fracking, on average, uses more than 28 times more water than it did 15 years ago, guzzling up to 9.6 million gallons of water per well. Each shale gas well pad can have up to 20 wells. Each well can be 'fracked' a dozen times or more. A developed gas field can have thousands of wells. The water needs are enormous and compete with society's other needs for the water.

Wastewater: The amount of wastewater left after a frack is highly toxic and sometimes radioactive. It cannot be safely used for other purposes. NB, as yet, has no approved method for disposal.

Chemicals: Living near a shale gas well is to be a guinea pig in the largest uncontrolled chemical experiment in the world. And the people running it don't have to tell you the chemicals to which you are being exposed. Roughly 650 chemicals are used in fracking and we have no information whatsoever of the health or environmental effects of half of them. Those that have been studied are associated with cancer and/or damage to the brain and nervous systems, immune and cardiovascular systems, kidneys, liver, eyes, skin, respiratory tract, gastrointestinal tract and reproductive system. There is no information how they react when mixed with each other or with naturally occurring toxic elements in the earth. The industry says the percentage of chemicals mixed with water is small, but a frack using 9 million gallons of water, of which only 1% is made up of chemicals, still results in 90,000 gallons of chemicals injected into the earth.

The Industry: With hardly an exception, shale gas companies are mired in debt and, with historically low prices for gas, have little hope for profit no matter how much gas they produce in order to pay their bills. Many have gone bankrupt and more will likely follow as the world moves away from fossil fuels. The poor economic state of the industry makes it more likely to flaunt regulations and safety.

Jobs: The gas industry has never been a source of many permanent jobs, especially when compared to clean energy and energy efficiency industries. But now, because the industry is in deep debt, they're cutting costs by eliminating jobs and replacing people with machines. Automation means that experienced workers from elsewhere will fill the remaining specialized jobs. Locals will get temporary jobs such as truck drivers and security guards. Ironically, NB businesses already have many such job openings that they can't fill.

Abandoned Wells: Places like Alberta and Saskatchewan already have many tens of thousands of abandoned wells, many of which were not closed down properly or at all, thus continuing to leak methane and toxic air and water. The auditor of Saskatchewan estimates this will cost $4 billion, while in Alberta the amount may be $48 billion. The industry was never asked to put aside anywhere near enough money to cover this, and because of the poor financial status of the industry many companies are bankrupt or nearly so. It's likely that the federal government – meaning taxpayers – will have to bear some responsibility for this.