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hydraulic fracturing, also known as fracking, has been a topic of debate for over 65 years in the United States and other countries worldwide. The process involves drilling beneath the earth's surface to extract natural gas and oil, using hydraulic pressure to expand existing cracks and inject water, sand, and chemicals to facilitate the flow of fossil fuels. Fracking: A Divided Viewpoint on its Impacts The need for a single fracking activity is questioned due to increasing extreme weather conditions brought by global warming. Droughts are common in most US states, affecting water supplies. Contamination of drinking water is a major concern, despite the EPA's report that the water is safe. One issue is the potential health risks associated with contaminated water. Reports from households complaining of chemical contamination highlight the problem. Poor water treatment and leaks on pipes may be responsible for this issue. Fracking can also cause seismic activities, such as small earth tremors detected during drilling test wells in England. An investigation put the project on hold. Proponents argue that conventional mining poses more threats than fracking. Drilling activities are hazardous to the environment, causing noise and air pollution. The high number of tankers on roads emitting carbon and burning fossil fuels is a significant concern. Local residents will be exposed to noise from drilling for most of the day. The use of over 600 chemicals in fracking raises concerns about their carcinogenic effects. Health issues are also a problem, as workers may be exposed to hazardous substances without proper protection. Some argue that oil companies are not adhering to safety regulations and neglecting worker health. In conclusion, both supporters and opponents have valid points regarding the impacts of hydraulic fracturing. While there are benefits, risks cannot be ignored. Leaders must consider the health and safety of people and the environment during fracking activities. The science behind fracking is often politicized, pitting energy needs against children's health and future. Fracking has been hailed by some as a modern miracle that has helped America regain its energy independence, but others have raised concerns about the environmental and health impacts of this practice. According to proponents, the oil and gas boom in the US has led to a significant decrease in pump prices and has helped reboot the economy. However, critics point to safety issues and unproven techniques as major concerns. The fracking debate is further complicated by varying regional responses, with some areas experiencing improved air quality while others have yet to see significant benefits. Fracking: A Mixed Bag for Environmental Benefits A growing concern is whether fracking, a primary source of natural gas, can be considered a purely clean and renewable energy source due to its relative benefits compared to other fossil fuels like coal. The main issue with fracking is that the extraction process results in some greenhouse gas emissions leakage. On the other hand, proponents of fracking argue that it produces significantly fewer greenhouse gas emissions than coal when burned at power plants, with some estimates suggesting a reduction of up to 50%. Additionally, research suggests that methane, a potent greenhouse gas, has a relatively short global warming potential over a 100-year time horizon. Therefore, the focus should be on reducing reliance on coal. However, critics point out that leaking methane from wells undermines the benefits of natural gas derived from fracking and fuel leaks during transportation and distribution will only exacerbate this issue. Moreover, falling natural gas prices may lead to increased energy consumption, undermining any potential "clean" benefit of gas. Furthermore, the environmental impact of fracking on human health is a significant concern, with contaminated drinking water supplies being a major issue. While well-maintained operations are unlikely to cause harm, such operations at 50,000 feet of drilling require extra attention to prevent leaks. The key takeaway is that while fracking has some benefits, its drawbacks outweigh them, particularly when it comes to greenhouse gas emissions leakage and human health concerns. The issue with fracking goes beyond just environmental concerns; it's also a matter of integrity and transparency. While it's not a deal-breaker, there are legitimate issues that need addressing. One such concern is the presence of flammable water, which was indeed a reality in some areas 100 years ago but can be exacerbated by fracking activities, though this is relatively rare and often caused by leaks from other sources. In terms of disclosure, many chemicals used in fracking are listed on data sheets available to first-responders, but this information is not always readily accessible. A recent study confirmed that high-volume hydraulic fracturing techniques can contaminate drinking water, and there have been numerous reports of fouled tap water across the country. Well blowouts have occurred, posing a significant environmental hazard. The companies involved in fracking cannot be trusted to self-regulate, as roughly one in five chemicals used are still classified as trade secrets. Even well-intentioned disclosure efforts like FracFocus.org fall short in providing sufficient information. Given the economic incentives driving this industry, enforcement has limited impact. One major issue with fracking is its proximity to populated areas, which can have devastating consequences for local environments and communities. While proponents argue that water intensity is lower for fracking compared to other fossil fuels, this doesn't necessarily address concerns about local aesthetics and quality of life. A significant proportion of Americans live within a mile of a fracking operation, and while the operations are temporary, they can still have lasting impacts on local infrastructure and budgets. The sheer number of heavy trucks involved in drilling activities takes a toll on roads and communities, creating an industrial feel that diminishes quality of life for those living nearby. Ultimately, the issue at hand is not just about fracking itself but also about poor planning and the lack of transparency in the industry. It's essential to reevaluate our approach to this complex problem and consider the long-term effects on both the environment and local communities, at its worst. It often disregards local residents' preferences. Low-impact fees are charged, but little funding is allocated to mitigate future problems as wells age and cleanup becomes necessary. This is the opposite of a sustainable solution, as production tends to drop sharply after initial fracking. Within five years, wells may produce just 10% of what they did initially. In short order, tens of thousands of sealed and abandoned wells will be scattered across the US landscape, many needing monitoring, reinforcement, and maintenance. It's an unfunded scheme. ISSUE: Fracking wells can alter geology in a potentially negative way, leading to earthquakes. PRO FRACKING: Earthquakes are naturally occurring phenomena, and even in instances where fracking contributed to them, they were minor. There have been tens of thousands of wells drilled over many years, with practically zero incidents impacting citizens. Research suggests potential earthquake risk can be mitigated through safeguards. CON FRACKING: We're just beginning to understand the impact on local geologies, which is dangerous. A 2014 Annual Reviews of Environment and Resources paper notes that between 1967 and 2000, there was a steady background rate of 21 earthquakes of 3.0 Mw or greater in the central United States per year. Starting in 2001, when shale gas began to grow, the rate rose sharply. New research suggests risky and unknown changes. It's not smart policy to rush headlong into massive-scale fracking without understanding the consequences first. Natural Gas Plays Crucial Role in Low-Carbon Economy Transition, but Faces Challenges The use of hydraulic fracturing for shale gas extraction is hindered by lack of social licenses to operate and inadequate regulatory environments. To meet Sustainable Development Goal 7 by 2030, natural gas should be a key player in transitioning away from fossil fuels and towards low-carbon energy. Shale gas offers advantages such as reduced CO2 emissions compared to coal and lower storage costs than renewable energy sources. However, its use also comes with disadvantages like the release of harmful CO2 when burned and higher global warming potential due to methane's shorter atmospheric lifespan.

The local economic and welfare consequences of hydraulic fracturing. Explain an environmental consequence of hydraulic fracturing. What are some consequences of hydraulic fracturing. One environmental consequence of hydraulic fracturing. What are some cons of hydraulic fracturing. Explain one environmental consequence of hydraulic fracturing. What is the most serious consequence of hydraulic fracturing. Environmental consequence of hydraulic fracturing. Explain a different environmental consequence of hydraulic fracturing. Pros and cons of hydraulic fracturing. Consequences of hydraulic fracturing. A different environmental consequence of hydraulic fracturing.