

Natural Gas

Enticing, Yes, but a Panacea?

Excerpt from *Powering Our Future: An Energy Sourcebook for Sustainable Living*. The text was modified to fit the website.

Methane, in its pure form, is a clear, odorless gas. It is a natural chemical compound that can easily evade our notice. However, when flame meets methane, it sets off an explosive fire that provides an enticing source of energy. Natural gas, composed primarily of methane, took a prime position in the spotlight during the 1990s as the fastest-growing primary energy source throughout the world. The appeal of natural gas hinged on the fact that it burns cleaner than coal and oil, yet is less controversial than nuclear power. Unfortunately, despite this hubris, natural gas reserves closely mimic the petroleum story. The U.S. peak of gas production shortly followed the nation's peak of oil production. The peak of global natural gas production is expected to begin by 2020, roughly a decade after oil begins its descent. Supply shortages of natural gas and a fourfold price increase during the winter of 2000 in the United States provided a foretaste of the days that may lie ahead. Will we heed the warnings and move forward sensibly, conserving this precious resource? Or will we linger in a state of complacency until necessity forces us to confront the folly of our apathy? The choices we make today will ultimately determine our fate.

Natural gas is extremely popular due to its convenience of being a fossil fuel without the high emissions of other fossil fuels. Oil and coal have complex molecular structures with a high ratio of sulfur, nitrogen, and other non-hydrocarbon elements. These toxic impurities are not easily removed and consequently are largely released into the atmosphere when burned. In contrast, natural gas is primarily composed of simple, relatively pure methane particles, which emit carbon dioxide, water vapor, and a small amount of impurities. This gaseous hydrocarbon emits roughly one-fifth of the nitrogen oxides released by coal and oil. Natural gas is not a significant contributor of sulfur dioxide, particulates, ash, or mercury emissions. Furthermore, natural gas combustion emits approximately 30 percent less carbon dioxide than oil and nearly 45 percent less than coal. At a time when global warming and poor air quality are on the rise, natural gas offers the convenience of fossil fuels at a relatively low cost to the atmosphere. Unfortunately, while natural gas may be less harmful than other fossil fuels, it still is a major contributor to our polluted skies and climate change.

Source

<http://www.naturalgas.org/environment/naturalgas.asp>, accessed November 11, 2004. This informative Web page, sponsored by the Natural Gas Supply Association (NGSA) is titled "Natural Gas and the Environment."