

Global Energy Change: Increased Use of Natural Gas and LNG

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Global energy change through increased use of natural gas and liquefied natural gas (LNG) has been the focus of this week's [World Gas Conference](#) (WGC). The WGC, sponsored by the International Gas Union, has convened these conferences once every three years since 1931. This year's meeting is being held in the U.S. for the first time since the natural gas boom that has occurred over the past ten years. The U.S. is now the world's largest producer of natural gas and has begun to export LNG (a dramatic change from only a few years ago, when the U.S. imported both gas and LNG).

Natural gas in the U.S. now generates more electricity than coal, as a result of the rapid transition from coal to natural gas as a primary fuel for electric utilities in recent years. To date, that change has been largely due to market trends; gas has been cheaper than coal. But gas is also considerably cleaner to burn than coal and touted by many to be a logical transition fuel to the growing availability of renewable energy sources.

One of the principle themes under discussion at this week's WGC is that the benefits of gas extend beyond market economics. One of the presentations noted, for example, that increased use of natural gas in China is driven more by national goals to improve air quality than for market reasons. Other countries are expanding gas for logistical and supply source reasons.

A common concern expressed at the Conference is the recent market intervention tactics by the Trump Administration to provide financial support to the coal and nuclear industries, ostensibly on grounds of national security (ensuring a broader mix on uninterruptible energy sources). The Administration's request that the Federal Energy Regulatory Commission (FERC) require subsidized rate support for coal and nuclear was quickly and unanimously rejected by the Commission. As a result, the White House recently directed the Department of Energy to pursue another track to provide support for the coal and nuclear industries. Conference speakers roundly criticized that approach, and Secretary of Energy Rick Perry avoided the topic by acknowledging that natural gas "is the cleanest fossil fuel and one of the most abundant natural resources on the planet," while also insisting that the Administration supports an "all of the above" energy mix, stating that "we must honor the right of every nation to responsibly use every fuel at its disposal."

Another topic receiving considerable attention is the release last week of a [study](#) led by the Environmental Defense Fund (EDF) on methane emissions from natural gas systems. The EDF sponsored study found that methane emissions from natural gas production have been under

estimated by the U.S. Environmental Protection Agency (EPA) by a significant degree, potentially as much as 60%. The EDF data shows that the discrepancy between its study and EPA data on methane emissions is also primarily an artifact of undercounting abnormal operations, especially at the production/wellhead. EDF and EPA [methane emission estimates](#) from natural gas pipelines are fairly consistent, however, reflecting significant voluntary emissions reduction efforts undertaken by the gas pipeline industry in recent years.

The EDF report on natural gas methane emissions suggested that the bulk of these emissions could be reduced fairly easily, at little cost. The industry has acknowledged that further reductions can be made, but one of the WGC speakers noted that the hidden cost in pursuing further reductions lies in doing site specific audits to locate issues. All commenters agree that additional reduction of methane releases from gas production is possible and feasible, and the EDF report does acknowledge that natural gas is a cleaner alternative to other fossil fuels.

An issue likely to linger beyond the triennial WGC meeting, specific to the U.S., is whether voluntary measures or additional regulation would be most effective in further reducing methane emissions from gas production. Some commentators at the Conference noted that without some additional regulation, there would be no competitive advantage for a company to work on further reducing emissions.

The World Gas Conference highlighted the fact that natural gas has proven to be increasingly preferred as a source for electric generation in both the U.S. and globally. In the U.S., increased use of natural gas has followed market trends. The current U.S. Administration is attempting to interfere with market economics, in a manner limiting gas usage, but the trend toward further expansion of gas and LNG is likely to continue, both for market reasons and as a cleaner alternative among energy sources.