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Gas Exporting Countries Forum (GECF): Cartel Lite?

Background on the GECF

From 2013 and 2017, global natural gas production and consumption grew about 9%. However, as part of the overall fuel mix, which rose 5%, the contribution of natural gas has declined 1 percentage point to 23% during the same time period, because renewable energy grew more.

The Gas Exporting Countries Forum (GECF) was founded in 2001 for the purpose of maximizing the value of natural gas; developing short-, medium-, and long-term analysis and forecasting; facilitating cooperation on issues of common interest among members; promoting natural gas as a fuel; and positioning the GECF as an internationally recognized organization. Members of the GECF—*Algeria*, Bolivia, Egypt, Equatorial Guinea, *Iran*, *Libya*, *Nigeria*, *Qatar*, Russia, Trinidad and Tobago, *United Arab Emirates*, and *Venezuela* (seven GECF members, italicized above, are also members of the Organization of the Petroleum Exporting Countries [OPEC])—hold about 62% of the world's natural gas reserves, control about 38% of production, and supply 43% of exports. (See **Table 1** for a country breakdown of exports.) Russia is overall the world's largest exporter of natural gas, mostly by pipeline, and Qatar is the largest exporter of liquefied natural gas (LNG), which is a way to economically transport large quantities of natural gas long distances, when pipelines are not feasible.

Table 1. GECF Natural Gas Exports, 2017

Country	Exports (bcm)	% of World Exports
Russia	230.9	20%
Qatar	121.8	11%
Algeria	53.0	5%
Nigeria	27.8	2%
Bolivia	14.9	1%
Trinidad and Tobago	13.4	1%
Iran	12.5	1%
United Arab Emirates	7.7	1%
Equatorial Guinea	4.8	<1%
Libya	4.4	<1%
Egypt	1.2	<1%
Venezuela	0.0	0%

Source: BP Statistical Review of World Energy, 2018.

Note: Units = billion cubic meters (bcm).

Several key natural gas exporters and natural gas producers are not members of the GECF, with the United States being the most prominent as the world's largest producer and consumer of natural gas. The United States is also a fast-growing exporter of LNG. Australia, the second-largest LNG exporter and 7% of the overall natural gas export market, has also elected not to join the GECF. Turkmenistan, the fourth-largest natural gas reserve holder and the major supplier to China, is also not a member of the GECF. Azerbaijan, a key regional supplier, and Norway, the third-largest natural gas exporter with 10% of the market, are nonmember GECF observers, as are five other countries.

Functions of the GECF

The GECF acts as a forum for collecting information and disseminating it to member states. In line with this goal, the GECF performs four main tasks:

- First, the GECF collects data on member states. It publishes an annual *Statistical Bulletin* in December of each year that details the production, trade, and natural gas reserves of member states. The *Statistical Bulletin* also includes economic and demographic information about member states. The first *Statistical Bulletin* was published in December 2017 and contained data from 2016.

- Second, the GECF produces reports that project gas market outlooks for member states. The GECF releases an annual *Gas Outlook* report that forecasts the state of the natural gas market through 2040. The GECF also publishes reports focusing on short-term projections.

- Third, the GECF collects and publishes a number of papers, lecture reports, expert commentary, presentations, and speeches that it makes available to representatives from member countries. The reports cover a number of technical issues pertaining to the global gas trade.

- Finally, the GECF holds annual ministerial meetings, attended by the energy ministers of member countries, and gas summits, attended by the heads of state of GECF member countries. The GECF also hosts a number of lower-level meetings involving specialized bodies of the GECF. All three types of meetings facilitate discussion on issues pertaining to gas production, best practices, and the international gas trade. The GECF also hopes to promote joint investment in natural gas projects among members.

Comparison with OPEC

Both OPEC and the GECF have similar stated missions. Both purport to coordinate the policies of member states and to ensure that there is a healthy market for petroleum and natural gas exports, respectively. However, the means used to achieve these goals differ between the two international organizations. OPEC, which has been described as a cartel by many Western observers, regularly attempts to influence the global price of oil by imposing production quotas on its members. These quotas can be used to encourage members to either limit or increase production based on the production targets of the organization. For example, OPEC imposed production cuts on its members during the first half of 2018, resulting in an end to the global glut in oil supply. (See CRS Insight IN10892, *OPEC and Non-OPEC Crude Oil Production Agreement: Compliance Status*, by Phillip Brown.)

The GECF has repeatedly denied that it has intentions of natural gas price setting. Shortly after the signing of the charter of the GECF in December 2008, then Russian Prime Minister (and current President) Vladimir Putin called accusations that the GECF would become an OPEC-like cartel "baseless." However, at a joint press conference with President Trump on July 16, 2018, Putin suggested Russia and the United States as two major producers should cooperate on managing natural gas prices. To date, the GECF has not imposed production quotas on member states, and its charter does not have any provisions that would give the body the authority to introduce such quotas.

Structural Constraints on a Natural Gas Cartel

There are two main structural aspects of the global natural gas market that make it difficult for the GECF to act like OPEC. First, the global natural gas market is not truly global. Natural gas is a regional commodity, and prices vary between regions. This is because it is expensive to transport natural gas long distances, so most of it is consumed relatively close to where it is produced. Gas is cheaper in regions with more readily accessible gas. For example, the United States has one of the lowest gas prices in the world. Natural gas shipped between markets where pipelines cannot reach (for example, between North America and Europe) must be liquefied first. Converting gas to LNG, which contracts the volume some 600 times, requires cooling the gas to -260°F and storing it in specially constructed tanks. The costs of liquefying and transporting natural gas as LNG are key factors in the pricing of imported LNG in different markets. The price of imported LNG in a market also depends on the regional and seasonal level of demand in the market, storage capacity, and other factors. Unlike the oil market, where increases in the price of oil generally affect all regions, price spikes in the natural gas market are often confined to a single region. As a result of differences in the price of natural gas between markets, cutting production in one market does not guarantee higher prices in another market.

Second, the majority of natural gas produced and sold is done so on the basis of long-term supply contracts between producers and consumers. LNG projects have high capital costs, and new LNG projects have historically been built after securing 20-year take-or-pay contracts requiring a buyer to purchase an annual quantity of LNG for a price indexed to the price of oil. Despite some increases in the amount of LNG traded on the spot market, these long-term contracts still make up the majority of LNG trade.

Concerns for Congress

Some in the United States may be concerned with the membership overlap between the GECF and OPEC. While some of the overlap can be attributed to many oil-producing states also having reserves of natural gas, Congress may want to consider the political influence that OPEC may have over the GECF. The energy ministers from states that are OPEC and GECF members attend meetings for both organizations, and could attempt to push a unified agenda.

There are two factors that will likely limit the influence of OPEC members in the GECF who may aim to make the GECF more like OPEC. First, Russia plays a significant role in the GECF as the largest gas producer and exporter in the forum. Russia is not a member of OPEC, and although it has been cooperating with the cartel on oil production, Russia may use its influence to block actions not in its interests. Second, the previously discussed structural limitations on forming a natural gas cartel outlined above act as a natural damper on the ambitions of OPEC members in the GECF seeking to replicate the modus operandi of OPEC.

U.S. natural gas exports may benefit from a more mature international gas market. If the GECF is successful in promoting infrastructure for importing natural gas or is able to create greater demand for natural gas by convincing countries to make investments in natural gas power plants and other sectors, for example, then U.S. exporters may have a larger market for their natural gas. One possible downside for U.S. exporters is that if the GECF's efforts to promote the use of natural gas in importing countries is accompanied by a successful drive to increase the ability of GECF member states to export more natural gas, U.S. gas exporters may face more competition. Given the long-term nature of contracts, U.S. companies could be blocked from certain markets for many years.

The United States may want to consider the potential impact that joint investments by GECF members may have on the LNG markets. Significant investments in liquefaction capacity announced by the GECF could signal that LNG production of GECF members involved would be expected to increase in the near to medium term. While such co-investment may also signal greater cooperation, some may fear the potential for collusion among GECF members.

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