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The Potential for Gulf Energy Integration

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The Potential for Gulf Energy Integration

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Cooperation on energy issues has been rather tardy among the member countries of the GCC, but then international cooperation in the field of energy has proven extraordinarily difficult everywhere in the world. At the global level, we have no universal institution dealing with all energy sources – nothing like, for example, the World Trade Organization, or the International Labor Organization, or the World Health Organization, or the Food and Agriculture Organization. The International Atomic Energy Agency is designed to be universal – although several important countries are not interested in being members – but deals with only one kind of energy, i.e. nuclear; the more recently constituted IRENA is similarly restricted to renewable energy sources only. All other organizations are not meant to be universal (the International Energy Agency is restricted to members of the OECD; OPEC to oil exporters); and the World Energy Forum is just a Forum with a secretariat, not an organization. Within other regional groupings, energy cooperation has either not been attempted at all or is plagued by intense differences between member countries (as is the case in the European Union).

Yet, international energy cooperation could be very beneficial: this is true at the global as at the regional level, and for all regions. In this paper, I will focus on the potential benefits of energy cooperation between the GCC countries: I will not argue that this is imminent or even likely at all, but will just point to areas in which cooperation might take place and underline how beneficial such cooperation might be.

The discussion is organized according to the sources and forms of energy: cooperation in oil, gas, and power generation.

Cooperation in Oil Affairs

Within the GCC, Saudi Arabia, the United Arab Emirates (or, more precisely, Abu Dhabi) and Kuwait are major oil exporters and members of OPEC. Qatar and Oman are also significant oil exporters, yet not members of OPEC. Bahrain has very little oil left.

Oil Markets and Price Discovery

Notwithstanding their large share of global oil exports, the three main exporting countries in the GCC have only limited influence over prevailing oil prices and the way they are arrived at (price discovery). This is because they impose restrictions on trading of the oil they export[1]: consequently, price discovery reflects trading for the two global reference crude oils – Brent and WTI – notwithstanding the fact that these are relatively minor streams. Trading for these crude oils takes place in spot, forward physical, and futures markets, with most of the liquidity concentrated in the latter, which trade almost exclusively in paper rather than physical barrels. Furthermore, the physical base (i.e., the volume of production available for trading) of the Brent market has constantly been eroding (in contrast, the physical base of WTI has recently improved, thanks to the surge in production of Light Tight Oil in the US). The prevalence of paper over physical trading and the insufficient physical base of the reference crude oils are commonly identified as major causes of oil price volatility, which is a threat to oil investment and future demand.

Having reached a peak in 2008-09, oil price volatility has significantly subsided in more recent years thanks to various developments: the combination of stagnant economy in the OECD and uncertainty about supply following the Arab Spring and other geopolitical developments on the one side and the US tight oil production surge on the other has created conditions of uncertainty about the future, which are not conducive to the formation of a new bubble. Also, financial investors have withdrawn from the market. In these conditions, the coordinated action of the three main GCC exporters, led by Saudi Arabia, has contributed to stabilizing the market. The major

1. The main exporters, in particular Saudi Arabia and Kuwait, only sell to refiners and do not allow cargos of their crude to be resold after they are lifted. This means that there is no market for Saudi or Kuwaiti crude oils outside of the sales from the National Oil Companies, which are the exclusive producers, at prices linked to Brent, either directly or indirectly. The situation is only marginally different in Abu Dhabi. Omani crude is traded, and so is Dubai, but the latter is just a trickle.

Gulf producers have modulated their production and exports so as to compensate for global market disturbances originating from political events or conflicts: they have compensated for the decline in Iranian production following the tightening of sanctions; they have compensated for loss of supply from Libya following the revolt that successfully ousted Muammar Gadhafi, and, more recently, due to the widespread anarchy reigning in the country; they have compensated for losses due to conflict in Syria, Nigeria, and between North and South Sudan.

Thus the policy of influencing prices from "behind the scene", while not openly taking responsibility for the outcome, has been quite successful. Nevertheless, it remains a state of affairs in which the financial and employment benefits of trading remain concentrated in London or New York, while they could contribute to the drive towards economic diversification of the GCC.

Attempts at establishing a more important role for the region in the trading and price discovery of oil have been centered on Dubai: the Platts Dubai partials market and the Dubai-based DME Oman crude oil contract have been struggling to gain traction and attract liquidity because they have not been taken up by the major GCC exporters as the basis for pricing their crude oils.

A restructured GCC crude oil market designed to price all major crude oil qualities exported from the GCC member countries, and to attract layers of forward and futures trading, would allow taking the center of the global oil market back to where it belongs – in the Gulf.

Oil Governance

All GCC countries face unresolved issues of oil industry governance, notwithstanding the fact that they have adopted quite divergent models: Oman, Qatar, and the UAE allow foreign companies to invest in the upstream, albeit under quite different terms; Kuwait and Saudi Arabia maintain national oil company monopolies, but the relationship between the government and the company is not managed in the same fashion.

Managing the relationship between the national oil company and the government is a difficult task to which no easy solution can be dictated. The presence of foreign investors forces sharing some revenue but offers the benefit of competition and easier access to technology and finance. Granting the national oil company a monopoly on national resources raises some dangers: either the national oil company ends up being suffocated by excessive bureaucratic controls and political interference, or the company may de facto become entirely autonomous and exercise undue power

– primarily through control of oil-related information – and turning into "a state within the state."

Further integration within the GCC offers an opportunity to let the model of corporate governance evolve. For example, the national oil companies might be allowed to cross-invest and partner in the development of hydrocarbon resources. In a future scenario of greater regional integration, some of the national oil companies might be partially privatized and their relationship with their respective governments established on more of an arms-length basis – similar to the relationship between Statoil and the Norwegian government, or Petrobras and the Brazilian government. Thus the GCC as a whole may end up nurturing three or four oil companies of global importance whose ownership would be shared between governments and private investors.

Another area of oil governance in which greater integration may facilitate needed change is the management of domestic oil products prices. Today, prices of gasoline and diesel are administratively set at levels much below international prices and with considerable differences from one country to the next. This leads to massive contraband trade and illegal exports, primarily from Saudi Arabia, where prices are the lowest, to neighboring countries. This is obviously not a desirable state of affairs, and greater integration between the GCC countries might be both an opportunity for more cost-reflecting oil products prices and a trigger for uniformly higher products prices, allowing for competition and trade in refined products which might be beneficial to the optimal functioning of the retail market.

Oil Industry Backward and Forward Linkages

A third area in which greater GCC oil industry integration might be highly beneficial is in the maximization of backward and forward linkages to promote regional industrialization and economic diversification. Backward linkages refer to the possibility of encouraging the establishment of industries and services catering to the needs of the oil industry; forward linkages refer to the potential for developing industrial activities downstream of crude oil production, beginning with refining and petrochemicals, and branching out into products made out of petrochemical raw materials and other energy-intensive manufacturing industries.

All GCC countries are interested in both backward and forward linkages and pursue them mostly in competition with each other. This has been logical and probably inevitable in an early phase; yet, by now all GCC members are well advanced in the establishment of their respective national champions, and the time has come when major benefits might be obtained from horizontal cooperation between different GCC players in establishing new ventures or exploiting smaller streams of intermediate products.

The petrochemical industry tends to cluster geographically because of the benefits offered from pooling feedstock or certain common facilities. In the end, there might be no good reason to establish national clusters with no links between them rather than progressively moving towards a larger GCC cluster which would play a leading role globally.

It should be noted that a Gulf-wide industrial association, the Gulf Petrochemical and Chemical Association (GPCA), was created in 2006 and is very dynamic, setting the stage for greater regional industry integration.

With respect to backward linkages, there are cases in which the dimension of each national oil industry taken individually does not justify the establishment of local facilities of major global providers, but the GCC market is interesting enough to attract just about any player. Dubai has long played the game of offering convenient facilities and an attractive business environment to encourage service providers to set up shop in the emirate, yet more could be done in the context of tighter Gulf oil industry integration.

Cooperation in Gas Affairs

Greater cooperation with respect to natural gas exploitation and trade is badly needed in the GCC and would be greatly beneficial. Except in Qatar, gas in the GCC is mostly found in association with oil. Non-associated gas is available, but its cost of production significantly exceeds the low administered prices that characterize all GCC domestic gas markets.

Except Qatar, all GCC member countries suffer from a shortage of natural gas, including countries that are locked into long-term export contracts, such as is the case for Abu Dhabi and Oman. In both of these countries, gas is simultaneously imported and exported. Imports have taken place primarily through the Dolphin pipeline from Qatar, but growing demand is forcing the importation of LNG from possibly distant origins, which would be totally irrational. Dubai and Kuwait already are importing long-distance LNG.

In these conditions, the creation of a GCC pipeline network, which might serve as a platform for the establishment of a unified and competitive gas market, with prices arrived at by the normal interplay of demand and supply, would be an obvious solution.

A GCC gas pipeline network was proposed decades ago but has made no progress. The major GCC oil producers have resisted the idea of becoming dependent on their neighbors for their gas supplies, and have ended up either suffering from chronic gas shortage or depending on distant and expensive LNG supplies. This is patently irrational, and more damaging than is normally recognized.

An integrated gas market would allow the optimal allocation of regional gas resources to the highest-value consumers and generate prices at which regional supply might significantly increase. The latter applies to both conventional and unconventional gas resources, whose extent in the region remains largely unmapped because companies have little interest in exploration as long as prices offer no hope of achieving profit or, in fact, even recovering costs.

Cooperation in Power Generation

The third area for potential cooperation is power generation. Electricity consumption in all the GCC countries is increasing rapidly, and attempts at promoting more rational use will show results only slowly and through a reduction, rather than a turnaround, of the rate of growth. Faced with huge investment bills in new power generation facilities, as well as with the need to diversify away from exclusive reliance on hydrocarbons for power generation, the GCC countries may greatly benefit from tighter integration in several areas.

Power Grids Integration

Considerable progress has already been made towards the integration of GCC power grids, which is an obvious opportunity for improving grid stability and reliability. The Gulf Cooperation Council Interconnection Authority (GCCIA) was established in 2001, and interconnections now exist between all national GCC grids, albeit with insufficient transmission capacity to achieve the full potential. In some cases, national grids are not sufficiently interconnected within their respective country to allow for full benefit of regional grid integration. Nevertheless, this is an area in which integration is firmly in the books and will presumably be deepened in any case.

Cooperation in Nuclear Energy

The idea of a joint GCC nuclear energy program was originally launched in 2007 but has been pushed aside by the reality of national initiatives in the nuclear field in some GCC countries (notably the UAE and Saudi Arabia) and lack of interest in the other members.

While the launch of nuclear energy programs might be more expeditiously pursued at the national level, it is clear that regional cooperation has a lot to offer in this area. Nuclear energy requires specific governance that needs to be established on the basis of international best practices and should be harmonized and coordinated between GCC countries.

Nuclear energy also raises a set of well-known challenges, whose solution might best be sought at the regional level:

- Fuel procurement and progressive internalization of the fuel cycle under regional and international control; this includes the possibility of recycling, which is also a tool to address the issue of waste; for residual waste, a joint storage solution should be sought;
- Policies for achieving maximum possible safety and security – requiring coordination of safety standards and cooperation in tackling potential threats, such as terrorism;
- Education and training of national technicians and sharing of research resources and results.

In short, individual GCC member countries may move separately to procure their first nuclear power plants, but putting in place a complete nuclear energy industry could certainly be achieved more efficiently at the regional level.

A last consideration is about the possible sharing of some nuclear power plants: the limited area of some GCC members (notably Bahrain) and the large power generation discontinuities associated with any optimal size nuclear program (individual power units are very large in size, and normally more than one unit is clustered in the same location to save on civilian infrastructure) may suggest that sharing of facilities might be a rational solution, especially in the initial stages. Bi- or tri-national power parks would also strengthen regional grid integration, as discussed previously.

Cooperation in Renewable Sources

Renewable energy sources are mostly small scale and as such of local rather than international interest. However, there are areas in which regional cooperation might be highly beneficial.

Two such areas are technology adaptation and governance best practices. With respect to technology adaptation, experience has shown that the harsh environment in the Arabian Peninsula is quite challenging for renewable energy sources, notwithstanding the abundance of insolation and, at least along the coast, favorable wind conditions. Technology developed in the temperate countries cannot purely and simply be deployed: it requires significant adaptation and solution of several practical problems.

With respect to governance, the key issue facing renewable sources is how to promote their uptake considering their decentralized nature and the low prevailing prices for electricity. Renewable sources require financial support and subsidization even in countries where the price of electricity is high: private investors are unlikely to be attracted to renewable energy projects unless they are supported by very significant explicit subsidies in the GCC environment. How to tailor and graduate subsidies in order to achieve the desired targets without excessive cost for the state is a common problem, and each country has a lot to learn from the experience of others.

Finally, the regional dimension can also be very beneficial when it comes to compensating for the intermittent nature of the relevant renewable sources. In particular with respect to solar, the distance between the Gulf and Red Sea coasts of the Arabian Peninsula could be leveraged to maximize the hours of useful exploitation of photovoltaic or concentrated solar power installations – although the significant distances involved certainly would require a quantum jump in the availability of long-distance transmission capacity.

Conclusion

The potential benefits of tighter regional integration in energy are important indeed. Obstacles to reaping these benefits are only too clear and, as we noted, are not to be found in the GCC exclusively. Energy is an area in which cooperation, albeit rewarding, remains very difficult, because low cost and security of supply are viewed as essential components of national development, hence sovereignty.

Yet, as the GCC states continue to place emphasis on medium- to long-term development and sustainability, the need to loosen some of the sovereignty restrictions by promoting energy integration is indeed a small price to pay in exchange for much greater benefits.

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Prof. Giacomo Luciani is Scientific Director of the Master in International Energy of the Paris School of International Affairs at SciencesPo and a Princeton University Global Scholar attached to the Woodrow Wilson School and the Department of Near Eastern Studies. He is also a visiting professor at the Graduate Institute of International and Development Studies in Geneva and co-director of the Executive Master in Oil and Gas Leadership. He is Senior Advisor to the Gulf Research Center and in this context served as the Team Leader in the EU-GCC Clean Energy Network Project. He was also actively involved in the POLINARES FP7 research project. From 2007-10, he was Director of the Gulf Research Center Foundation, Geneva. In 1997-2010, he was Adjunct Professor of International Relations at the SAIS Johns Hopkins University Bologna Centre. From 2000-06, he was Professor of Political Economy and co-director of the Mediterranean Programme of the Robert Schuman Centre for Advanced Studies at the European University Institute. In this time, he directed the EUROGULF project within the SYNERGY program and participated in several other EU-supported projects (INDES, ENCOURAGED, MEDSUPPLY, EUROGULFHCT). His research interests include the political economy of the Middle East and North Africa and the geopolitics of energy. His work has focused primarily on the economic and political dynamics of rentier states and issues of development in the GCC countries. He is a member of the Oxford Energy Policy Club, the Geneva Petroleum Club, and the Energy, Oil and Gas Club of the Institut Français du Pétrole (IFP). He is a frequent speaker at conferences and events organized by leading institutions in the field of energy affairs.