



Energy As The Driver For Gulf Integration: The Gulf Power Grid

By - Justin Dargin*

Regional integration in the Gulf Cooperation Council (GCC), consisting of Bahrain, Oman, Kuwait, Qatar, Saudi Arabia, and the UAE, has been the subject of much speculation since the group was established in 1981. Although initially created to oppose Iranian and Iraqi hegemony in the Gulf, the GCC quickly became the preferred medium for promoting political, economic, energy and security cooperation among its member states. However, the quest to link these states more firmly together has experienced notable successes and setbacks over the years.

Despite moves towards integration, major hurdles remain. The much anticipated pan-GCC currency, intended to promote movement toward a cohesive regional monetary union, has met with numerous delays. The GCC has also delayed in complying with requests to both deploy sovereign wealth fund assets to inject liquidity into global financial markets, and release stabilization funds for poorer MENA countries that have experienced turbulence related to the Arab Spring.

In spite of these obstacles, however, the GCC nations have made great strides towards becoming a single commercial/trading bloc. For example, Qatar has successfully completed the mammoth Dolphin natural gas pipeline, which connects the Qatar's North Field with the UAE and Oman. Another example is the recent inauguration of the pan-GCC electricity grid. And lastly, cross-border Gulf renewable energy investment is becoming a reality with Masdar, the Emirati renewable energy investment vehicle, seeking to invest in Saudi Arabian solar potential.

Energy is clearly the basic building block for closer GCC integration and will ultimately serve as a catalyst for further economic, political and military collaboration.

On 6 November 2012 the GCC completed the Gulf Cooperation Council Interconnection Project (GCCIP), when Oman announced that it had successfully connected its national power grid to the network. The GCCIP is essentially a pan-Gulf power grid connecting all the members of the GCC across national boundaries (click here to see map). While the successful completion of the GCCIP showcased the potential of Gulf cooperation, this is not to say the process has been free of obstacles. The GCC constructed the conceptual building

blocks in 1990 when it commissioned a multi-country study to define the overall feasibility of an interconnected Gulf grid.

The study concluded that such a grid was technically, economically, and financially feasible, and would significantly increase the economic integration of the Arabian Peninsula. However, the development of the power sectors in the GCC member countries since the 1990 study meant that progress had been slow. Nonetheless a Saudi Royal Decree in 2001 resuscitated the project by formally establishing the GCC Interconnection Authority (GCCIA). One year later, in 2002, the GCCIA not only reaffirmed the viability of a pan-GCC power grid, but also prepared a plan for project finance and the development of legal agreements between the respective governments, paving the way for an implementation strategy and preliminary mechanisms to make the GCC power grid a reality. The GCC nations have realized that due to the extreme pressure on their energy sectors from rapid economic, industrial and population growth, they would derive a greater industrial and economic benefit if they restructured their power sectors to encourage a degree of privatization and coordinated power production, rather than having each nation attempt to develop its own autonomous energy strategy.

The early stage of power integration between the Gulf nations was confined to low voltage connections lines and low line capacity. These cross-boundary lines only connected the border areas for emergency support in the case of a power shutdown. To resolve this lack of regional cooperation, the GCC created the GCCIA to construct, operate and maintain the interconnection between the GCC member states. To fulfill its mandate, the GCCIA developed a staged model for the interconnection of the regional grid. Phase one interconnected the grids of Kuwait, Saudi Arabia, Bahrain and Qatar on 27 July 2009; phase two connected the UAE and Oman; while phase three interconnected all of the grids in early November 2012.

The inauguration of the GCCIP underlines how far the Gulf countries have come in their plan for energy cooperation. At the time of the initial 1990 feasibility study, the Gulf power utilities were basically self-contained, government-owned and vertically integrated units. The Gulf States typically used their state-owned utilities as an instrument for the redistribution of wealth in a manner consistent with the regional social contract. Electricity pricing was generally administratively managed – in effect, subsidized by central govern-

ments which were reluctant to engage in full scale liberalization and privatization of their power sectors. On the one hand, they viewed energy as the best sector to employ large numbers of nationals as replacements for expatriates. On the other, these sectors were typically considered "strategic," that is vital to national security. The primary factors motivating Gulf States to rely heavily on state-owned utilities and limited privatization schemes were:

- The governments' desire to redistribute income from oil revenue in the form of services, especially electricity and other energy services;
- The traditionally government ownership of enormous oil and gas sectors, with limited participation by international energy companies;
- Government provision of below-market value natural gas to various sectors such as petrochemicals and aluminum plants to encourage economic diversification;
- Major revenue inflows from oil and gas sales, meaning that governments generally did not have to worry about expenditures or the efficient use of resources.

Gulf governments were thus able to play a major role in energy provision for the domestic market. Overall privatization in these countries is highly limited when compared to other Arab countries, such as Syria, Egypt and Algeria, or most Latin American and sub-Saharan African countries, and GCC governments realized that they needed some measure of power sector reform if integration were to become a reality. They therefore instituted partial power sector liberalization and allowed private power and desalination plants. Most GCC countries, at the time of writing, are in the process of unbundling their power systems into discrete generation, transmission, and distribution entities. Optimally, each discrete business segment would focus on its core area, without an overly broad mandate.

The principal benefits of having both public and private systems cohabiting arise from reserve sharing, which will reduce long-term investment costs and encourage the development of larger and more efficient power generation plants, resulting in lower operating costs. The joint grid will also provide transmission services to rapidly supply electricity to regions experiencing power disruption, as well as to encourage intra-regional energy trading. When the GCCIA creates trading services for the power sector,

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the GCC may become a regional energy trading center. If the Interconnection Project links with other Middle Eastern and North African (MENA) power grids, such as the Pan-Arab, Mediterranean and European Grids, the GCC could become a major global exporter of power. To all appearances, GCC leaders embarked on the Interconnection Project as a critical step towards an integrated regional economy (see Hassan K. Al-Assad, *The GCC Power Grid: Benefits and Beyond*, GCC Interconnection Authority).

The Gulf power grid will help the GCC as a whole to harmonize power production and minimize sectoral redundancies. This mission is all the more important in view of the GCC's massive power shortages, which periodically afflict Oman, the UAE, Kuwait, and Saudi Arabia. In fact, with the exception of Qatar, each Gulf nation desperately needs additional power to fuel industrial growth. Gulf power demand is high due to three factors: the demographic shift towards an increasingly younger and energy-hungry population, a booming construction sector and expanding heavy industries. While power consumption is expected to increase by 50% by the end of the decade, regional power generation will likely meet only 30% of the expected demand growth. The GCC will require a possible \$50bn investment to increase capacity by 60gw, but additional funding is also required to completely modernize the aged system. Given the major demands on the region's natural gas production, there is much uncertainty as to from where the fuel for additional power generation will come. To meet the energy challenge, most GCC energy plans consider a cocktail of renewable energy, coal, unconventional natural gas production, imported natural gas and nuclear energy.

A pan-GCC energy network contributes significantly to developing an efficient regional energy network. The ancillary effects of the GCC Interconnection Project spread far beyond the energy sector. To set the stage for integration, the GCC members passed enabling legislation and harmonization regulations governing the various power sectors. They also invited regional financial entities to coordinate and take a lead role in funding. The GCC took an important step on 8 July 2009 when it signed the Power Exchange and Trading Agreement (PETA) to facilitate daily grid operations. The agreement also establishes the regulatory structure and the framework for electricity exchange and trading during normal operations and emergencies. Seen in this light, the PETA is an important document that clearly articulates the political will to achieve intra-regional energy trading.

At the time of writing, most GCC countries are major power consumers who have little capacity to sell additional electricity.

Kuwait and some of the Emirates have to deal with crippling brownouts during the peak demand summer months. By linking the GCC countries through transmission lines the Gulf grid may leverage the GCC's efforts in the direction of a substantive shift to renewable and nuclear energy development. An early example of this was the UAE's enormous investment in renewable energy development and the establishment of the International Renewable Energy Agency in Abu Dhabi, as well as the ambitious \$109bn Saudi plan to install 41gw of solar power by 2032.

An integrated Gulf grid will not only allow expanded funding for renewable energy projects, but will also ensure a guaranteed market in the GCC and perhaps beyond. This will help the GCC to overcome its natural gas shortage and preserve valuable oil and gas for export. Extension of the GCC grid to other regional grids, such as "EJILST" (Egypt, Jordan, Iraq, Lebanon, Syria and Turkey), the "UCTE" (Europe) or the Maghreb grid, will provide an opportunity to export surplus power to other regions.

Whatever the case, the net beneficiaries of the GCC Interconnection Project – or for that matter of the GCC trading bloc – will be Gulf electricity consumers (both industrial and residential), who will enjoy reliable electricity through a system that should ensure lowered costs.

The creation and support of similar industries in each GCC member country is not only redundant and counterproductive, but also illustrates how little economic coordination there is regionally. The GCC should therefore pursue energy coordination as a means to achieve deeper integration and maximum international impact. Cooperation, however, does not necessarily preclude all competition. Competition under an overall mantle of coordination would allow the region to maximize its competitive advantages. Intra-GCC rivalry between Bahrain and Dubai in the financial services sector motivated each country to improve these services. These rivalries increase the region's overall vitality, because each country seeks to improve the quality of its offerings in order to attract foreign direct investment (FDI) and world class companies.

In the absence of pan-GCC economic and energy coordination, each individual Gulf country seeks to maximize its national comparative advantage through economic nationalism. In the long run this could lead to political hostility, since countries consider it to be a zero-sum contest. Regional cooperation and coordination are absolutely essential to prevent all GCC states from, for instance, constructing aluminum smelters and cement plants, when market realities only justify specific numbers of plants in certain countries. But despite the residual competitive strains, the GCC has long recognized the viability of cooperation and coordination, as opposed to competition. The foundations of

pre-GCC Gulf industrial cooperation were laid during the 1970s, with the formation of such organizations as the Gulf Organization for Industrial Consulting, which was intended to develop strategies to coordinate economic and industrial plans

This preliminary cooperation also found expression in the creation of the Organization of Petroleum Exporting Countries (OPEC) and the Organization of Arab Petroleum Exporting Countries (OAPEC) to coordinate the policies of the oil producing countries and promote their national interests in the global energy market. Four Gulf States – Qatar, Kuwait, the UAE, and Saudi Arabia – are members of OPEC, and all the Gulf States except Oman are members of OAPEC. Further coordination between the GCC energy sectors could promote GCC goals within these bodies and within international bodies in which OPEC and OAPEC have member or observer status. Furthermore, the modernization of national power sectors in the GCC will lower energy intensity rates in the region, which are some of the highest in the world. A net reduction in energy intensity will allow the GCC to preserve its economic competitiveness as energy-intensive industries begin to relocate to the US to take advantage of low priced natural gas inputs.

In pragmatic terms, the emergence of GCC economic cooperation has numerous regional advantages. The creation of a larger and more integrated debt market with the 'GCC brand' suggests that the regional market will be heavily influenced by Islamic financial norms. A unitary GCC bloc will also assist the group's emergence as a modern economic system and provide an alternative market-of-choice for global investors. A 'spillover' benefit of a strong GCC market will be an increased role for regional banks in intra-GCC multi-billion dollar oil and gas investments that have been nearly the exclusive province of Western (or Japanese) financial institutions.

Conventional wisdom states the Iran-Iraq War was the primary impetus for the GCC's creation. On more pragmatic grounds, the war merely expedited a process that was already under way. Due to common regional interests and major regional concerns, Gulf States would likely have established the GCC in the absence of any regional conflict. Each step towards integration, whether in the financial, military, economic or energy sector, will encourage deeper integration and collaboration in other sectors. In the age of an ever-connected and integrated world, the Gulf countries cannot afford not to work together for the common good. ♦♦

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