

THE DUBAI INITIATIVE

برنامج دبي

Policy Brief

The Ties that Bind: The Dolphin Project and Intra-GCC Relations

Justin Dargin



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Dubai Initiative – Policy Brief

Justin Dargin

Research Fellow, The Dubai Initiative
Better Center for Science and International Affairs
Harvard University

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Qatar was the force behind the creation of the Dolphin Project (Dolphin), a much reduced form of the pan-GCC pipeline, envisioned at the November 1989 Gulf Cooperation Council (GCC) summit meeting as the most ambitious domestic Middle Eastern gas project ever undertaken. As originally conceived, a transnational pipeline was to weld the national gas grids of Saudi Arabia, Kuwait, Bahrain, and the UAE into a single integrated bloc. Qatar's enormous North Field, the largest associated natural gas field in the world, became the centerpiece of this vision.

Shell Oil discovered the North Field, which covers a majestic 6,000 sq. km, off Qatar's coast in 1971, and it was later recognized as the largest non-associated gas field in the world. The North Field has allowed Qatar to become both a major regional exporter and a major international gas player through liquefied natural gas (LNG) exports. It is also the keystone to Qatar's quest to establish an independent foreign policy beyond Saudi Arabian gravitational pull, and to create increased economic and political ties with the USA, Europe, and Asia.

Multifaceted in every sense of the word, Dolphin anticipates:

- the development of gas wells and installation of two platforms in Qatar's North Field gas structure
- the construction of two multiphase undersea sea lines from the gas wellheads to the processing plant in Ras Laffan
- an offshore pipeline shipping dry gas from Ras Laffan to Al-Taweelah in the UAE
- gas receiving terminals located in Al-Taweela
- export of 2 bcf/d of North field gas to UAE and Oman in the first phase.

Qatar's Emir, Hamad bin Khalifa Al-Thani, is the visionary who foresaw Qatar's vast natural gas resources as central to its security and economic development. His father, Khalifa bin Hamad Al-Thani, was far less aggressive in promoting the country's resource development. Not only might natural gas help Qatar avoid the impending collapse of oil production and the resulting foreign policy concerns, this resource could also enhance Qatar's global importance. As the far-sighted Hamad understood, Qatar's wealth was also its vulnerability, a fact that required reliance on the international community, and particularly on the USA, for security needs.

Qatar has made much progress in hoisting itself from an undeveloped emirate to one of the most progressive and advanced of the Gulf States. Its progress is integral to the peace and stability of the region, as well as to the future security of the global natural gas supply. An understanding of the Dolphin Project is therefore not only essential for regional development, but is also an essential tool for understanding the future of regional political integration.

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Economics and Pricing of Gulf Gas: The Story of Perverse Incentives

The trade press speaks about the 'gas crisis' or the 'demand crisis' that is imminent in many Gulf countries, most notably the UAE and Kuwait. These countries are actually facing 'a pricing crisis', where countries with massive gas reserves such as UAE and Iran are facing substantial gas deficits. Many of the Gulf countries have few incentives to invest in new gas production for their domestic markets due to the official pricing policy, which relies on providing gas to domestic industry at wellhead price. This disincentive to invest has only become apparent

with the rapid economic growth in the region and the increases in world oil prices, which have led to maximization of oil exports and pressure to substitute gas for oil in the domestic economy.

The Gulf Gas Market

Because the gas market is capital intensive, there may be a substantial lead time before projects come online. However, natural gas requires regular investment in exploration, development, production, and maintenance. The funding requirements of the GCC countries are generally met in three ways: (1) from internal resources derived from the national oil companies (NOCs); (2) from investments through the international capital markets (as exemplified in Qatar’s LNG projects); (3) and occasionally from foreign direct investment. While most GCC nations prohibit foreign equity participation in the upstream oil sector, they allow limited production sharing arrangements (as in the North Field).

Domestic requirements for power generation, gas-based industry, or oil field reinjection divert gas that could otherwise be sold on international markets. Gas consumption in the Middle East and North Africa is expanding at a rate of 7.4 per cent a year, which is more than double the global rate of 2.6 per cent. This region had an 11 per cent share of the global demand in 2005, compared with six per cent in 1990. Rising domestic demand is likely to become an increasingly important limitation on exports in the midterm (2008–2015). Local usage is entirely appropriate in relation to national economic development. However, below-market domestic prices (see Table 1), which do not remunerate investments and which render domestic sales unattractive in relation to exports, may trigger “crises” in even the most richly endowed natural gas countries.

Table 1: Reported domestic Gulf feedstock prices¹

Country	Domestic Price
Egypt	US\$ 1.19/Mmbtu
Iran	US\$ 0.35/Mmbtu
Oman	US\$ 0.90/Mmbtu
Qatar	US\$ 0.87/Mmbtu
Saudi Arabia	US\$ 0.75/Mmbtu
UAE	US\$ 0.75/Mmbtu

Reserves of the Gulf Region and the North Field

The Gulf region, which includes among other nations, Saudi Arabia, Iran, Iraq, Qatar, UAE, Kuwait, and Bahrain, contains huge reserves of natural gas that represent over 40 per cent of the world’s total. Although Russia has the largest natural gas reserves, Iran, Qatar, Saudi Arabia, United Arab Emirates, and Oman respectively, hold the world’s second, third, fourth, fifth, and tenth largest reserves (see Table 2). Moreover, in 2006, 18 per cent of the world’s LNG originated in this region.

Gulf gas will become more important because of an anticipated increase in domestic usage and increased regional demand, in part due to Dolphin, but also

¹ Ibid. Table supplied by Natural Gas Market Review 2007.

because the region will significantly increase LNG exports in the near future. Despite these impressive reserves, the region's share of global production remains a fraction of its potential.

These statistics mean that the Gulf States' natural gas resources are not only underdeveloped, but under-utilized. However, this paradigm may soon shift, as in 2006 Qatar became the world's foremost LNG exporter.

Table 2: Gulf countries' natural gas statistics

Country	Reserves (Natural Gas Tcf) 2006	Production (Dry Natural Gas Tcf) 2005	Consumption (Tcf) 2005	LNG Exports (Tcf) 2005
Saudi Arabia	240	2.5	2.5	-
Iran	974	3.6	3.6	-
Iraq	112	>0.1	>0.1	-
Qatar	910	1.6	0.7	1.0
UAE	214	1.7	1.5	0.3
Kuwait	55	0.4	0.4	-
Bahrain	3	0.4	0.4	-
Total	2,509	10.3	9.1	1.3

Source: Cedigaz (Energy Information Administration)

The building blocks for Dolphin were laid by the UAE Offsets Group (UOG), which is a branch of the UAE Ministry of Defence. Dolphin Energy Limited (DEL) was created in 1999 to administer the project. The shareholders of DEL are the Mubadala Development Company (51 per cent), a wholly-owned subsidiary of the Abu Dhabi government, Total (24.5 per cent), and Occidental Petroleum (24.5 per cent).

Qatar Petroleum processes the natural gas at the industrial city of Ras Laffan, for shipment to power and desalinization centres in Oman and the UAE. The UOG agreed in 1998 that Qatar would serve as the exclusive supplier and marketer of Qatari gas in the UAE and Oman. With QP as the negotiating partner, the UOG completed initial memorandums of understanding (MOUs) with Qatar, Oman, and Pakistan, in June 1999.

While much of the impetus behind Dolphin was to improve political integration of the GCC nations, the project also had its bedrock commercial aspects. As noted above, if conditions continue, Oman and the UAE (Dubai and Abu Dhabi) face a significant gas shortage that will not be satisfied, even with increased imports from Qatar.

As home to the fifth largest reserves of natural gas in the world, and the fourth in the Gulf region at 214.4 tcf, there is a measure of irony in the UAE's inability to meet domestic demand. In 2006 and 2007 the UAE resorted to using small amounts of coal for domestic power generation, and is completing feasibility studies to determine if coal will become a larger part of the energy mix. The UAE is engaged in plans to develop nuclear energy and to use renewable fuel sources

as a mechanism to save oil and gas, but it is likely that they will soon realize that gas provides a more price and energy efficient means of producing power than alternative sources of energy. The crux of the problem stems from the fact that low domestic gas prices discourage investment in upstream production.

Dubai, Abu Dhabi, and Oman face substantial energy demands from oil-field reinjection, consumer and industrial power use, and small consumer use. While the 2 bcf/d natural gas shipments from Dolphin will allow Oman and the UAE breathing space, figures suggest this will relieve the demand pressure for only two or three years. Dolphin Gas will increase gas availability in the UAE by nearly 50 per cent after 2006. The UAE leadership believes it is better to pipe gas from Qatar, rather than supply local gas from Abu Dhabi National Oil Company (ADNOC). A shortage in supplies in the UAE has caused Abu Dhabi to redirect gas that was earmarked for oil field reinjection, to power plants. The redirected gas will be available for oil field reinjection once Dolphin starts. Dolphin gas will also serve as substitute fuel oil and gas oil, which is fuelling certain UAE power plants. Abu Dhabi's 'sour' gas requires treatment and expensive corrosion-proof pipes. 'Sour' gas has a high content of both carbon dioxide (CO₂) and hydrogen sulphide (H₂S). ADNOC's general policy is to use that gas for reinjection into oil and gas reserves to optimize oil recovery and increase sweet gas for domestic use and possible export.

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It is not feasible for the UAE to increase indigenous gas production with subsidized domestic gas prices. The fact that neither IOCs nor ADNOC view the development of domestic sour gas reserves as profitable, lends more weight to the case for domestic gas price increases. Much like other Gulf countries, the UAE wants economic diversification through energy-intensive industries, such as fertilizer and aluminium, supplied with inexpensive, heavily subsidized fuel sources, including gas. As illustrated in Table 1 above, domestic gas prices in the UAE are \$1.00/Mmbtu. If the UAE wanted to increase domestic gas production and remain compliant with the WTO prohibition against 'unfair government subsidies', it will be compelled to make difficult choices about the development and funding of priority sectors.

Rising Market Confidence

The financial details behind Dolphin are not only interesting, but also consistent with the rising market confidence that the company engenders. This contradicts the initial scepticism that greeted it. When first announced, Dolphin was considered a failure in the making, principally because it involved stakeholders from neighbouring Gulf countries who often had regional squabbles.

There was initial concern about how prices would be negotiated, and concern that UOG, a defence procurement firm with little experience in the oil and gas sector, would find itself unable to negotiate Abu Dhabi's bureaucracy. Many IOCs were initially alarmed at the absence of a sovereign guarantee. Many in the project finance sector also thought that a large undertaking such as Dolphin should have a state-backed loan guarantee. However, in relation to large projects such as Dolphin, lack of a sovereign guarantee is not a hindrance if it is a viable project and the economics work, the figures work, the forecast is quite good and has been checked by a technical advisor.

As soon as Qatar Petroleum signed the term sheet with UOG for the upstream portion of Dolphin at the Fourth Doha Conference on Natural Gas on 14 March 2001, the energy industry quickly modified its view, as Dolphin had become a reality and the IOCs were eager to be involved. However, there remained some obstacles: pricing and the ultimate question of who had ownership rights to the valuable condensates.

Financing

Unlike revenue and profitability, financing played a large part in Dolphin's birth. In its embryonic stages, Dolphin had difficulty in securing outside financing. Because of the difficulty in locating appropriate funding, the equity partners assumed responsibility of funding the project's early expenditures.

DEL's partners, who wanted a better rate on equity holdings, knew that financing difficulties would plague Dolphin until the project fundamentals were in place. To facilitate funding, DEL entered into a \$2.45 billion bridge loan in 2004 with a consortium of 20 local, regional, and international banks, which structured the bridge loan as a classic multitranche deal with non-recourse project financing, bonds, and Islamic financing, covering construction costs up to the 2006 completion date.

Challenges to Dolphin

All Gulf countries face difficult gas challenges in the coming years. A combination of rising domestic demand due to surging economic growth, government sponsored industrialization, and low domestic gas prices have contributed to a crisis of gas availability. Despite huge reserves, in the majority of the Gulf countries low gas prices are constraining upstream investment for supply to the domestic market and, at the same time, hugely increasing domestic demand for gas. While different countries, including the three Dolphin partners, are in somewhat different positions, action or inaction on domestic gas prices will drive much of future development of gas in the Gulf, including the future of Dolphin.

The Importance of the Dolphin Project

Although a Dolphin conjures up the image of speed and wisdom, the implementation of the project has been anything but rapid. Dolphin has seen setbacks due to political squabbles, territorial disputes, and obstacles made by self-interested parties. Even though political disagreements—and specifically the objections of Saudi Arabia—spelled the end of the GCC Gulf gas pipeline concept, and hindered the implementation and proposed extension of Dolphin, politics also encouraged a settlement when rival parties might not otherwise have come to a mutually agreeable conclusion.

Dolphin may be considered the progenitor of intra-Gulf developments that could lead to greater economic and political integration, and even the development of a single currency.

Dolphin’s success will be a benchmark for gas projects in the region, and will also serve as a trial run for the emergence of Islamic finance in oil and gas projects. It may also spur intra-regional gas trade, depending on Qatar’s future export policy and the pace of domestic price reform in Gulf countries. Dolphin may be considered the progenitor of intra-Gulf developments that could lead to greater economic and political integration, and even the development of a single currency. Dolphin intends to be the first step of many in forging a common bond between the Gulf countries. A starting point is the creation of a common Gulf currency, which will further bind the GCC nations. If it reaches its vision, the image of a Dolphin rising from the deep will be an apt comparison after all.

THE DUBAI INITIATIVE

The Dubai Initiative is a joint venture between the Dubai School of Government (DSG) and the Harvard Kennedy School (HKS), supporting the establishment of DSG as an academic, research, and outreach institution in public policy, administration, and management for the Middle East. The primary objective of the Initiative is to bridge the expertise and resources of HKS with DSG and enable the exchange of students, scholars, knowledge and resources between the two institutions in the areas of governance, political science, economics, energy, security, gender, and foreign relations related to the Middle East.

The Initiative implements programs that respond to the evolving needs of DSG and are aligned with the research interests of the various departments and centers of HKS as well as other schools and departments of Harvard University. Program activities include funding, coordinating and facilitating fellowships, joint fellowships with DSG, internships, faculty and graduate research grants, working papers, multi-year research initiatives, conferences, symposia, public lectures, policy workshops, faculty workshops, case studies, and customized executive education programs delivered at DSG.

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The Dubai School of Government (DSG) is a research and teaching institution focusing on public policy in the Arab world. Established in 2005 under the patronage of HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, in cooperation with the Harvard Kennedy School, DSG aims to promote good governance through enhancing the region's capacity for effective public policy.

Toward this goal, the Dubai School of Government also collaborates with regional and global institutions in its research and training programs. In addition, the School organizes policy forums and international conferences to facilitate the exchange of ideas and promote critical debate on public policy in the Arab world.

The School is committed to the creation of knowledge, the dissemination of best practice and the training of policy makers in the Arab world. To achieve this mission, the School is developing strong capabilities to support research and teaching programs including

- applied research in public policy and management;
- master's degrees in public policy and public administration;
- executive education for senior officials and executives; and,
- knowledge forums for scholars and policy makers.