



The GCC Infrastructure Guide



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The partnership potential

One of the most interesting trends to have emerged from the GCC projects boom over the past 10 years has been the development of public-private partnerships (PPPs), projects funded and operated through a partnership between the government and the private sector.

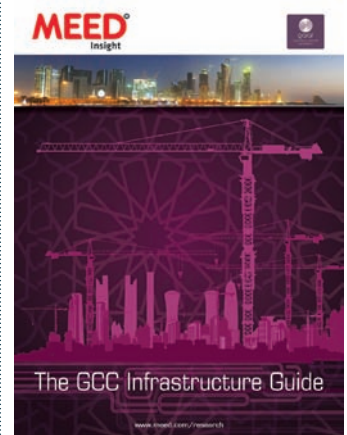
Since the Al-Manah independent power project (IPP) was launched in Oman in 1994, PPPs have gone from strength to strength in the region. By 2010, more than 50 projects had been developed using the PPP concept through long-term concession agreements.

The adoption of the PPP model for the projects sector has led to a natural growth in the project finance sector as companies have sought to obtain credit for project development from the banking community. Over the past five years, more than \$70bn worth of infrastructure schemes in the region have been project financed.

This MEED Insight report, published in association with the Qatar Financial Centre Authority (QFCA), examines the PPP and project finance sectors within the context of the development of the GCC infrastructure projects market as a whole, and more specifically Qatar. Its aim is to provide a unique reference tool for professionals involved in the region's infrastructure projects market.

This report focuses on infrastructure projects, and excludes the oil, gas and petrochemical sectors. The majority of data it contains is sourced from MEED Projects, MEED's proprietary online database of major projects in the region.

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Introduction

Of all the developments to have taken place in the GCC over the past decade, perhaps nothing is more remarkable than the transformation of its physical landscape. Since 2000, more than \$628bn worth of contracts were awarded in the infrastructure sector – non-oil, gas and petrochemical – in the GCC.

Supported by high oil prices and fast-growing population growth, the region's governments directed billions of dollars into massive capital investment programmes. From high-rise towers and theme parks, to new ports and roads, the region was enveloped by a frenzy of construction activity unprecedented in its history.

Unsustainable boom

Much of this was focused on the Dubai real estate sector. The 2002 decision to allow non-GCC nationals to own property in the emirate created one of the greatest real estate booms in history, with hundreds of billions of dollars worth of projects announced. Ultimately, however, this rapid growth proved unsustainable, and when the global economy began to slow in 2008, it brought the Dubai real estate sector down with it.

The result was a collapse in construction activity in the city state, and an equally devastating impact on the construction community which lost thousands of jobs as work came to a sudden halt. In all, more than \$500bn worth of projects were put on hold or cancelled in the UAE alone. Other countries, which were less exposed, also felt the impact but to a far lesser extent.

The Dubai real estate crash and the problems encountered by Dubai World have put a negative spin on the region's infrastructure sector. Yet, the actual picture – outside Dubai – could hardly be more different.

The fact remains that the underlying drivers governing the region's impressive growth over the past decade still remain. Oil prices continue to hover at the \$70 a barrel mark, more than enough for GCC states to run a budget surplus. At the same time, the population contin-



➤ Burj Khalifa: the icon of the Dubai boom

➤ “The hope is that infrastructure contract awards will soon be able to pick up again”

ues to grow ensuring an unabated rise in demand for infrastructure and utilities. Similarly, the governments of the region remain committed to opening up and modernising their economies, again ensuring that investment is being made in capital projects.

This combination of factors means that the infrastructure spending has remained relatively stable, with increased investments from Saudi Arabia, Kuwait and Qatar offsetting falls in the UAE. As the regional economy recovers and the oil price remains high, the hope is that infrastructure contract awards will soon be able to pick up again.

If there was one positive from the crisis it is that it focused minds on alternative methods of procuring projects. Historically, the region has been wedded to the conventional government procurement model whereby large capital projects are funded directly by the state. How-

ever, since the late 1990s, the region has adopted different approaches to delivering projects by partnering with the private sector.

After initially focusing on build-operate-transfer (BOT) and build-own-operate (BOO) concessions primarily for power, desalination and wastewater plants, the GCC has begun to embrace public-private partnerships (PPP) outside the utility sector. Since 2002, ports, schools, hospitals, airports and universities have all been developed through PPPs.

In all, there have been more than 100 projects structured as PPPs in the region over the past 15 years, entailing a total investment of more than \$50bn. And the indications are that this is just the beginning. Dubai and Kuwait, the two most reticent states, have embraced PPP for the first time since. Indeed, the latter is set to be one of the most active PPP markets in the region with more than 30 projects planned in partnership with the private sector, requiring an investment of some \$28bn.

Dubai, which has long resisted PPP initiatives even while its neighbour Abu Dhabi pioneered them, has taken the strategic decision to engage the private sector on its next major power project. PPPs are also being considered for a waste-to-energy project and a water transport scheme.

Rise in project financing

The rise of the PPP market has been matched by the growth in the project finance sector. Generally, the private sector has turned to the debt markets to finance their concession projects and with the growth in PPP so too has there been a rise in project financings. Since 2005, projects worth a total of \$70bn have secured funding from the private sector, with the total amount of debt raised passing \$55bn.

The value of project financings was understandably hard hit by the credit crisis, and activity has not yet returned to 2007 levels, when more than \$30bn worth of projects secured private sector finance. Just \$3.8bn worth of project finance deals has been

recorded in 2010 so far. But as the trend for PPPs continues to grow, the project finance market can only improve. With banks returning to the market and the Dubai World debt situation now resolved, optimism is rapidly returning.

Best performer

The GCC state that has perhaps been the best performer over the last decade has been Qatar. From an economic perspective, its rise over the period has been meteoric. Over the last five years, real gross domestic product (GDP) averaged 17 per cent a year, resulting in the economy almost doubling in size. Its GDP per capita today is among the three highest in the world, despite its population increasing by 80 per cent between 2005 and 2009.

There is little doubt over the secret of this success. Since the mid-1990s, Doha has steadily built up its liquefied natural gas (LNG) capacity, a programme that has accelerated since 2003. By 2011, its total LNG production capacity will be 77 million tonnes a year, making it by far the world's largest LNG producer.

This increase in gas export capacity has helped shield Qatar somewhat from the global slowdown. In real terms, its economy grew by nearly 9 per cent in 2009 while most countries were in a deep recession. But it is not the only reason for the state's impressive growth record. Growth in the non-oil economy has averaged 23 per cent over the last five years thanks to record investment in housing, infrastructure, and energy.

Helped by substantial budget surpluses, the government has been able to reinvest heavily back into the economy. In 2009, just under QR40bn was spent on capital projects, with the spending focus on upgrading and expanding the education, healthcare, transportation and utility infrastructure. Compared with capital projects expenditure of just QR2bn in 2000, it is clear to see why Qatar has boomed.

Investment levels

The rise in capital spending has helped Qatar maintain its position as the third largest infrastructure projects market in the GCC. Since 2004, more than \$75bn has been invested in its infrastructure sector as its population has grown. And while this spending dropped in 2009 compared with the \$20bn 2008 peak, Doha's substantial gas export income and infrastructure needs should ensure that investment levels pick up.

Unlike the UAE, Qatar has had a much reduced exposure to the real estate sector. While it was still the largest sector in terms of



NDIA: one of Qatar's largest and most impressive infrastructure projects

contract awards over the past six years, there was a much wider spread of contract awards in other sectors. Power, airports and water were especially active as the government developed the New Doha International airport and expanded utility provision to cope with the large increase in population.

The situation going forward is largely positive, with more than \$100bn worth of projects currently planned and unawarded in the state. The largest of these is the government's plan to build a new railway and metro network across the peninsula as part of the GCC railway network. Real estate, roads, utilities and ports are also earmarked for considerable investment over the coming years.

In terms of PPPs and project finance in Qatar, the state was actually one of the first in the GCC to look seriously at private sector participation. An independent water and power project (IWPP) was planned as far back as 1990, but it was not until 2001 that the first PPP was launched in Qatar in the guise of the Ras Laffan A IWPP.

Since then, a number of PPP projects have been awarded, including three other IWPPs. Such projects include the design, build and operation of the sewage transfer and treatment systems to serve both the Pearl Qatar and Lusail residential developments, and for the new Doha solid waste management system. Recently, real estate developer Mazaya won two build-operate-transfer (BOT) concessions to develop the QR1bn Marina Mall project and the QR500m Sidra hospital residences scheme.

Future PPP schemes include a management concession covering the state's wastewater networks, a new desalination plant to be implemented on a build-own-operate-transfer (BOOT) basis, and a series of solar-powered desalination facilities. While it is true that Qatar has not adopted PPPs to the same extent as some of its neighbours, the creation of a dedicated PPP directorate at the Business & Trade Ministry indicates that it is seriously looking at increasing the number of future schemes to be implemented in partnership with the private sector.

Global leader

It is a similar story with the local project finance market. While Qatar has been a global leader in the financing models for its ambitious LNG programme, just six project finance deals were completed in the state's infrastructure projects sector between 2005 and 2010. Five of those were in the power and water sector, with the lone exception being the financing for the Qatar Aluminium smelter scheme. All told, more than \$8bn of debt has been raised for Qatari infrastructure schemes.

Excluding oil and gas, the state is unlikely to launch many privately financed projects in the next two to three years as the government uses its massive liquidity to self-finance its infrastructure needs. However, its strong financial standing and track record in project financing should ensure that whatever privately financed schemes it does decide to go ahead with will be well received by the market.

The Qatari economy

Over the past decade, Qatar has witnessed an economic transformation. A massive increase in oil and gas production has fuelled record economic growth, record government surpluses and record investment in energy, infrastructure and housing. The stellar performance was acknowledged in July 2010 when Qatar became the highest rated GCC state by Standard & Poor's (S&P). In raising the state's long-term currency rating to AA from AA-, one notch above Saudi Arabia's and Kuwait's, the ratings agency stated: "In our opinion, Qatar's economy is weathering the global downturn well, with deflationary pressures and financial sector problems contained by the economic policy flexibility generated by new gas projects. Qatar is projected to be among the fastest growing economies in 2010."

High growth

High economic growth has been a feature of the Qatari economy for a decade and especially over the past five years. In the period 2005-09, real gross domestic product (GDP) growth averaged 17 per cent a year, resulting in the economy almost doubling in size. The oil and gas sector, which makes up just under half of the overall economy, experienced average real growth of about 17 per cent over the period as a result of a surge in production and exports of liquefied natural gas (LNG), crude oil and condensate. Growth in the non-oil economy was even higher, averaging almost 23 per cent a year, reflecting a sharp increase in public expenditure, a dramatic rise in real estate investment and a jump in industrial output. The upshot was that in 2009, the non-oil sector overtook the oil and gas sector in value for the first time in decades.

The strong growth has ensured that Qatar has continued to enjoy high GDP per capita income. Despite an 80 per cent increase in the state's population between 2005 and 2009, nominal GDP per capita rose over the period to \$60,000 from \$47,800, according to QNB Capital. With nominal GDP forecast to resume high growth once again after the dip in 2009, the

Table 2.1 - Standard & Poor's GCC sovereign ratings, July 2010

Bahrain	A
Kuwait	AA-
Oman	A
Qatar	AA
Saudi Arabia	AA-
UAE	na

* S&P only provides ratings for Abu Dhabi emirate and not the UAE
Source: S&P

Table 2.2 - Qatar's economic growth in real terms, 2005-09 (QRm)

	2005	2006	2007	2008	2009
Oil & gas sector	67,534	77,202	95,178	117,166	126,188
% change	7.6	14.3	23.3	23.1	7.7
Non-oil & Gas sector	56,543	69,959	91,361	116,801	128,006
% change	7.5	23.7	30.6	27.8	9.6
Total GDP	124,077	147,161	186,539	233,967	254,194
% change	7.6	18.6	26.8	25.4	8.7

\$1=QR3.64. Source: Qatar Statistics Authority

→ **“The strong growth has ensured that Qatar has continued to enjoy high GDP per capita income”**

bank forecasts that per capita GDP will jump to \$74,000 in 2010.

Doha now has one of the highest rates of per capita GDP anywhere in the world. Based on its own per capita GDP estimates, the IMF ranked Qatar as the third richest country in the world in 2009 after Luxemburg and Norway, and well above the UAE, which was the only other GCC state in the top 10.

GDP growth has been fuelled over the past decade by the huge expansion in the Qatari oil and gas sector. An estimated \$70bn investment programme, launched in 2003, focused primarily on further development of the world's largest non-associated gas reservoir, the offshore North field. The centrepiece called for 45 million tonnes a year (t/y) of new LNG capacity to be built by 2011, in a move that would not only

↳ “The intense activity in the gas sector has overshadowed developments in the local oil industry”

hike overall capacity five-fold to 77 million t/y, but also make Qatar the world’s largest gas exporter by ship. As of 2009, installed capacity had reached 54 million t/y, up from just 15 million t/y in 2003, with Doha exporting LNG to more than a dozen countries around the world.

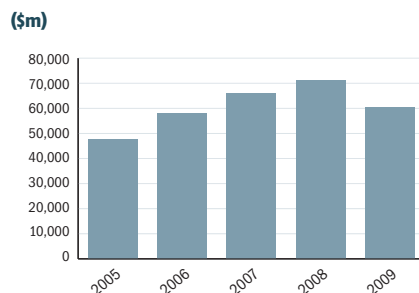
Leading centre

In tandem with the LNG programme, Doha set its sights on becoming the world’s leading centre for the nascent gas-to-liquids (GTL) industry, as part of plans to further monetise the North field reserves. In 2006, the world’s largest plant to date, Oryx GTL, was inaugurated at Ras Laffan with a design capacity of 34,000 barrels a day (b/d). It will be joined in 2011 with the start-up of the much larger Pearl GTL, which will have capacity of 140,000 b/d. North field gas has also underpinned a significant expansion in existing fertiliser, petrochemical and steel capacity, as well as the establishment of an aluminium capability for the first time.

The intense activity in the gas sector has overshadowed developments in the local oil industry. Considered to be in terminal decline in the mid-1990s, the oil sector has experienced something of a renaissance over the past decade. With the assistance of international oil companies (IOCs), the state’s oil reserves jumped to 25.3 billion barrels from just 3.7 billion barrels in the decade up to 2009, while production capacity doubled to an estimated 1 million b/d over the period. As a result of Opec quotas, actual output was somewhat less, averaging 798,000 b/d in 2009.

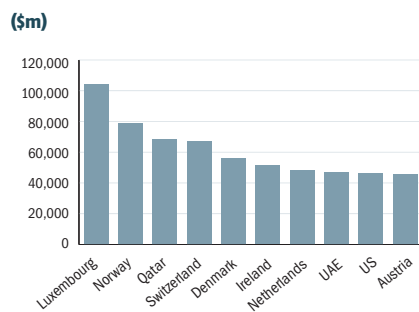
The sharp increase in oil and gas production, coupled with generally high energy prices, has had a dramatic impact on Qatar’s trade balance and public finances. In the five years to 2008, the value of exports jumped three-fold to QR206 bn, with petroleum products and gas sales accounting for 90 per cent of the total. The surge was more than enough to cover a quadrupling in the value of imports, sucked in to service the state’s investment

Table 2.3 – Nominal GDP per capita, 2005-09



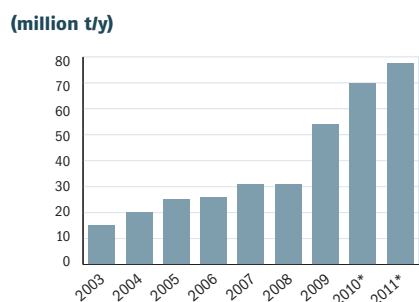
Sources: Qatar Statistics Authority; QNB Capital

Table 2.4 – The top 10 global GDP per capita



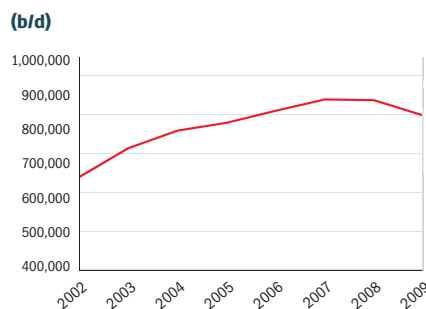
Source: IMF

Table 2.5 – Qatar’s rising LNG output, 2003-11



*estimate; t/y=tonnes a year. Source: IMF

Table 2.6 – Qatar’s daily oil production, 2002-09



b/d=barrels a day. Source: IMF

drive and growing population: over the period, the trade surplus ballooned to QR114bn in 2008 from just QR20bn in 2004. The yawning trade balance in turn fed through to ever healthier current account and balance of payment surpluses.

Widening surpluses

The transformation in public finances has been even more marked. Throughout the 1990s, the government ran up deficit after deficit as it struggled to finance the first phase of its LNG programme. Since 2000, however, budget surpluses have become the order of the day, with the state accruing a total of \$46bn over the period. At the root of the widening surpluses has been the sharp rise in revenues from increased oil and gas sales, coupled with higher energy prices. In the 2000 fiscal year, government revenues totalled just QR23bn; by fiscal year 2008, they had reached QR136bn.

Surging revenues have allowed the government to significantly up capital expenditure. In 2009, an estimated QR38.5bn was spent on capital projects with the spending focus on upgrading and expanding the education, healthcare, transportation and utility infrastructure. This compared to capital expenditure of just QR2bn at the start of the decade.

Despite the sharp increase in expenditure, public finances have delivered consistently high surpluses in recent years, reaching an estimated QR26.5bn in fiscal 2009/10. The surpluses were initially used to pay off loans early that had been secured to bankroll the state’s oil and gas investment programme. However, in recent years, they have been increasingly channelled into the sovereign wealth fund, administered by the Qatar Investment Authority (QIA).

High growth is set to remain a strong feature of the Qatari economy in 2010 and 2011 as a result of an expansion in both the energy and non-energy sectors. In nominal terms, oil and gas GDP is forecast to increase by 42 per cent in 2010 and by a further 35 per cent in 2011, according to QNB Capital, with the main drivers being the addition of 23 million t/y of LNG capacity and an estimated 150,000 b/d of condensate production, and higher energy prices. Nominal growth in the non-oil sector will be more subdued but still high at 15.8 per cent in 2010 and 15 per cent in 2011, on account of new industrial capacity coming on stream and continuing high public expenditure by the government.

In real terms, QNB Capital forecasts that the economy will expand by 14.5 per cent in 2010, up from 8.7 per cent in 2009. The forecast is slightly ahead of S&P’s projection of 11 per cent.

Table 2.7 – Qatar's foreign trade, 2004-08 (QRm)

	2004	2005	2006	2007	2008
Exports	68,013	93,774	123,945	152,953	205,997
Imports	19,691	32,992	53,911	72,158	91,492
Trade balance	48,322	60,782	70,034	80,795	114,505
Current account surplus	27,489	27,235	34,430	38,024	57,802
Balance of payments surplus	14,295	16,320	19,800	46,094	49,530

\$1=QR3.64. Source: Qatar Statistics Authority

Table 2.8 – Qatar government budgets, 2007/08-2010/11 (QRm)

	2007/08*	2008/09*	2009/10**	2010/11***
Total revenues	117,850	136,278	128,500	127,500
Total expenditure, of which:	84,900	97,422	102,000	117,900
Current	50,969	64,560	63,500	74,400
Capital	33,931	32,862	38,500	43,500
Surplus	32,950	38,856	26,500	9,600

* actual; ** QNB Capital estimate; *** budget

Sources: Finance & Economy Ministry; QNB Capital

Table 2.9 – Qatar GDP, 2009-11 (QRm)

	2009*	2010**	2011**
Nominal oil & gas GDP	165,325	235,000	318,650
% growth (decline)	(23.1)	42.4	35.3
Nominal non-oil & gas GDP	192,535	223,025	256,590
% growth	2.4	15.8	15.0
Total GDP (nominal)	357,860	458,526	575,240
Nominal GDP growth (decline) (%)	(11.2)	28.1	25.5
Real GDP growth (%)	8.7	14.5	17.0

* estimate; ** forecast

\$1=QR3.64. Sources: Qatar Statistics Authority; QNB Capital



Standing tall: Qatar's banks have grown fast

Growth is expected to slow post 2011, with the IMF forecasting real growth averaging 3-4 per cent a year. A moratorium on the further development of the North field is in place, pending the outcome of reservoir studies, and is not expected to be lifted until 2014/15. As a result, there will not be another large-scale ramp-up in LNG capacity, which in turn will mean only modest growth in oil and gas GDP. Growth prospects in the non-oil economy are brighter given the planned investment in new petrochemical, transportation, education and healthcare projects.

High inflation

One of the consequences of consistently strong economic growth has been the emergence of high inflation in Qatar for the first time. In the 1990s, inflation was minimal, ranging between 0.5-1 per cent a year. Even in the period 2000-04, when the economy was starting to expand rapidly, it remained subdued, averaging just 2.5 per cent a year. However, in the period 2005-08, it reached a record high of 15 per cent in 2008. Over the period, government officials maintained that high inflation was an unavoidable consequence of a booming economy and a fast-growing population. The argument was that Qatar simply did not have sufficient capacity to cope with demand, resulting in rocketing rents and sharp price increases in household goods, education services and food-stuffs. Some relief finally came in 2009 when the global economic downturn, combined with a flood of new accommodation onto the market, resulted in the state experiencing deflation of 4.9 per cent. The trend continued into 2010 with the rate of deflation dropping to 2.5 per cent in the first five months of the year. And while inflation is expected to return in the period 2011-15, the IMF forecasts that it will be relatively modest in the range of 3-4 per cent.

↳ “The influx of workers to work on the state’s major projects has had a dramatic impact on the employment landscape”

The lack of spare capacity partly reflected the minimal investment in infrastructure in the 1990s. However, even if there had been significant investment, it is highly unlikely that Qatar’s existing infrastructure would have been able to cope with the record increase in the state’s population. Between the official censuses of 2004 and 2010, the population more than doubled to 1.69 million from 744,029, with growth averaging a staggering 21.3 per cent a year as labourers and professionals were recruited to support the state’s rapid growth.

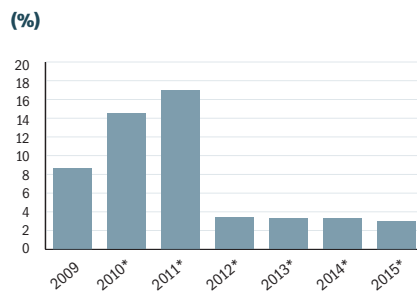
The influx of workers to work on the state’s major projects has had a dramatic impact on the employment landscape. In the five years from 2004, Qatar Statistics Authority (QSA) estimated that the number employed in construction jumped to 560,000 from 117,000. In fact, by 2009, construction accounted for 44 per cent of all employment, way ahead of the next largest employer, wholesale and retail trade, at 11 per cent. The surge in construction activity also resulted in a major demographic shift. In 2007, males made up two-thirds of the population; by 2010, the figure had jumped to 76 per cent.

High growth

All the major urban centres experienced substantial growth in the period 2004-10, which contributed to increasing traffic congestion, a shortage of school places and rising rents. The population of Doha municipality more than doubled to 806,577 from 339,847 in 2004, Al-Wakra’s quadrupled to 136,600, while Al-Khor’s increased more than six-fold to 198,271. The strong growth in the latter two municipalities reflected the huge investment in the state’s two industrial cities, Mesaieed in the south and Ras Laffan in the north.

Completion of the state’s major gas projects in 2011 is expected to result in a slowdown in the high population growth rate, as a result of

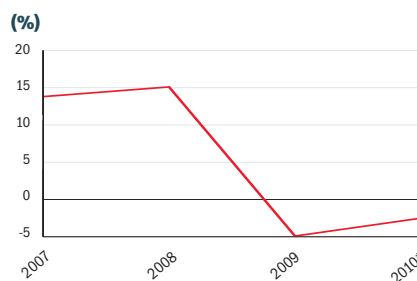
Table 2.10 – Qatar real GDP growth, 2009-15



*forecast

Sources: Qatar Statistics Authority; QNB Capital; IMF

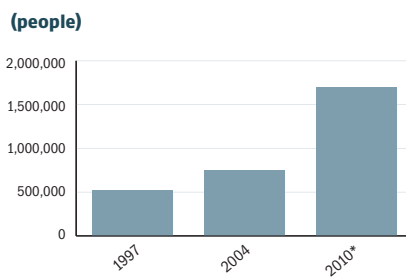
Table 2.11 – Qatar inflation rate, 2007-10



* January-May 2010

Source: Qatar Statistics Authority

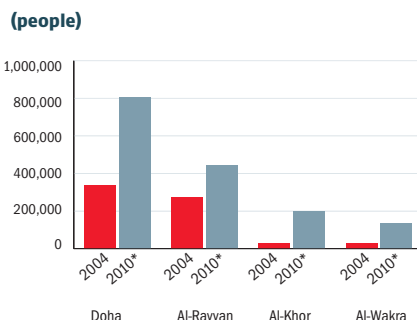
Table 2.12 – Population censuses, 1997-2010



* Preliminary

Source: Qatar Statistics Authority

Table 2.13 – Largest municipalities by population



* Preliminary

Source: Qatar Statistics Authority

contractors repatriating workers. However, growth is still likely to average 5-10 per cent a year in the period 2011-15.

Government policy

For the past 20 years, government policy has been shaped by the need and desire to diversify the economy. In the 1990s, the diversification focus was very much on developing the North field and the state’s gas capabilities as a means of reducing dependence on the volatile oil markets. Three different segments of the gas market were targeted to monetise the state’s vast reserves. LNG and GTL were selected to deliver North field gas into the international market, while pipelines were chosen to supply much-needed gas to neighbouring states. The success of the strategy was underlined in 2009, when gas overtook oil for the first time to become the largest single contributor to GDP.

With the gas investment programme well on track, the diversification drive shifted to the non-oil and gas economy at the start of the new millennium. Although it was recognised that energy would remain the bedrock of the economy, there was an acknowledgement that considerable potential existed for other key sectors to play a much greater role in Qatar’s development and provide both employment and business opportunities for Qataris. Transportation, tourism, financial services, and education were all targeted and have made rapid strides since.

Transportation

National carrier Qatar Airways is playing a pivotal role in the new Qatar, raising the state’s international profile and establishing Doha as a major aviation hub. Relunched in 1997 with just four aircraft, it is now one of the world’s fastest growing airlines with year-on-year growth averaging about 40 per cent. As of June 2010, the airline had a staff of 15,000, operated more than 80 aircraft, and had a further 200 on order, with a total list price of \$40bn. It serves 90 destinations and plans to increase its network to 120 by 2013. Qatar Airways’ meteoric growth has been the primary driver behind the construction of the new Doha International Airport, at an estimated cost of \$11bn. The airport’s first two phases are due to open in 2012 with capacity of 25 million passengers a year, a figure that will rise to 50 million in 2015 on completion of a third phase.

Tourism

Development of the tourism sector is a priority for the government, with the state having allocated some \$17bn in the period 2008-13 to tourism-related infrastructure. Qatar Tourism

Authority (QTA) has set a target of 20 per cent growth in the sector up to 2013, which it hopes to achieve by leveraging off the expansion in the oil and gas, aviation, education and health-care sectors. The tourism focus is very much on the meetings, incentives, conferences and exhibitions (MICE) sector and the cultural and sporting markets, with a major goal being to host the 2022 football world cup. Doha has experienced rapid expansion of its hotel infrastructure in recent years with the number of rooms climbing by a quarter to 8,500 in 2009 alone. The growth is expected to continue with QTA estimating a further 70 hotels and an additional 13,000 rooms forecast to be completed by 2013.

Financial services

In 2005, the Qatar Financial Centre (QFC) was opened in a drive to attract international banks and firms to Doha. The timing was opportune. Coming against the backdrop of a vibrant economy and an estimated \$140bn capital investment programme, the demand for a broad range of financial services had never been greater. As of mid-2010, more than 100 financial institutions were licensed to operate in the QFC.

Education

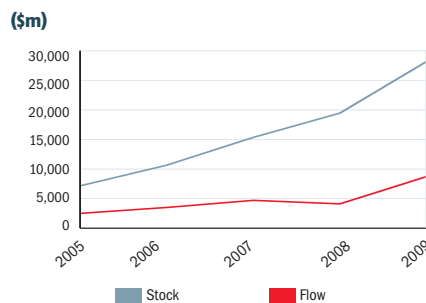
Located on the outskirts of Doha, Education City is being developed by the Qatar Foundation, with the aim of making the state a leader in education and research. Branches of six US universities, including Weil Cornell, Texas A&M and Carnegie Mellon, have been established since 1998, offering graduate and undergraduate courses. In addition to the universities, Education City is home to the Qatar Science & Technology Park (QSTP) which has attracted a host of international companies including ExxonMobil Corporation, Royal Dutch Shell, Rolls Royce and EADS to undertake research and development.

In recent years, a new front has been opened up in the diversification push. Through sovereign wealth fund the QIA, the proceeds of consistently high budget surpluses have been invested in a broad range of overseas assets that will offset fluctuations in energy prices and provide income for the government in the post-oil era. QIA has taken stakes in numerous companies, including France's Cegelec and the UK's Harrods. Through its wholly owned subsidiary Qatari Diar, it has also been an active investor in real estate in Europe, as well as at home, where it is developing the vast Lusail project.

Traditionally, foreign direct investment (FDI) played a minor role in the Qatari economy: in 1990, total FDI was estimated at just \$63m.

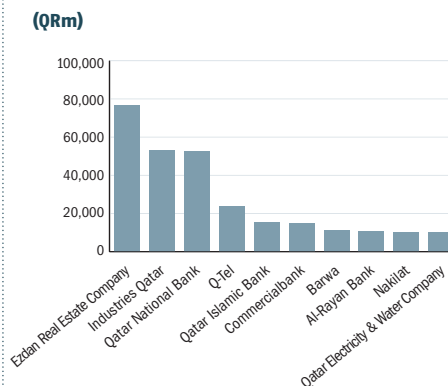
→ “Demand for a broad range of financial services had never been greater”

Table 2.14 – Foreign direct investment (FDI) in Qatar



Source: Unctad

Table 2.15 – QE top 10 listed firms by market capitalisation *



*as of June 2010. Source: QE

However, the launch of the first oil and gas investment programme later in the decade resulted in a significant increase, with Qatar Petroleum (QP) actively seeking international oil companies (IOCs) as partners on major projects. ExxonMobil, Occidental Corporation, Maersk Oil & Gas, and ChevronPhillips all entered the market in the 1990s and were joined later by Royal Dutch Shell and ConocoPhillips. Their impact on FDI was dramatic. In 2009, FDI inflows reached a record \$8.7bn, taking total foreign investment up to \$28bn.

The overwhelming majority of foreign investment has gone into the oil, gas and petrochemical sectors. However, other areas of the economy have started to attract key inflows.

Since 2001 and the launch of the privatisation programme in the power and desalination sector, foreign developers have participated in four privately backed projects, costing almost \$8bn. Heavy industry has also seen its fair share of FDI, with the Qatalum aluminium joint venture being the largest single recipient.

To encourage foreign investors into the non-oil sector, the government has taken a number of steps. In 2000, an Emiri decree was issued allowing 100 per cent foreign ownership in healthcare, education, hotels and power projects. In 2010, the list was extended to include IT, cultural, sports and leisure services, business consulting and distribution. At the same time, the Qatar Science & Technology Park (QSTP) operates as a free zone and offers 100 per cent foreign ownership, a model that is expected to be applied to other designated areas in the state. Finally, legislative changes have been made to allow 100 per cent foreign ownership in selected real estate projects such as the Pearl Qatar, and for non-Qataris to invest in companies listed on the Qatar Exchange (QE), provided they don't exceed 25 per cent of the traded shares.

Local capital markets

Qatar was a relative latecomer to capital markets. It only opened an official exchange in 1997 with just 17 companies listed and a market capitalisation of QR6bn. Even then, it was another five years before trading on the Doha Securities Market (DSM) became fully electronic. However, in 2005, a new law was issued paving the way for the DSM to be converted into a shareholding company, known as Qatar Exchange (QE) and owned by Qatar Holding, a wholly owned subsidiary of the QIA. In June 2009, QE came into existence with the mandate to diversify the products traded, introduce state-of-the-art infrastructure and trading systems, and become a world-class exchange. To achieve its goals, Qatar Holding signed a strategic partnership with NYSE Euronext, which in addition to taking a 20 per cent stake in QE, agreed to install its next-generation trading technology, Universal Trading Platform.

The DSM and subsequent QE have played an important part in the government's push to increase private sector involvement in the economy and distribute some of the state's new found wealth to nationals. Ever since the listing of Q-Tel in 1998, there have been a series of initial public offerings (IPOs) in new or existing government-owned companies. These have taken place in some of the largest listed companies, including Industries Qatar, Al-Rayyan Bank, Qatar Electricity & Water Com-

pany, and gas shipper Nakilat. The steady flow of new listings has resulted in a significant increase in the size of the exchange over the past decade. As of June 2010, there were 42 companies listed, with market capitalisation of QR365bn. The largest in terms of market capitalisation were Ezdan Real Estate Company, followed by Qatar National Bank and Industries Qatar. Together, the three accounted for half of the total market.

Services

The largest sector by market capitalisation was services, which takes in telecoms, real estate, transportation and utility companies. It was followed by banking and industry.

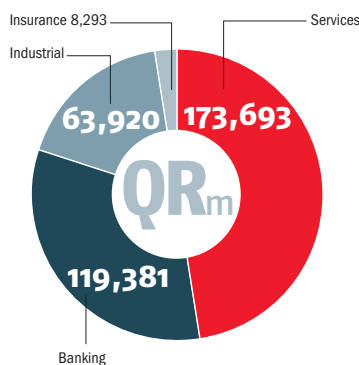
Like most other GCC stock markets, Qatar's has experienced volatility over the last decade, which reflects both the lack of tradable stock and investor mentality. After high growth in 2003 and 2004, the price index reached a peak of 11,000 points in 2005, before dropping by 35 per cent in 2006. A recovery took place in 2007, but was shortlived: the onset of the global credit crisis saw a further collapse in the index in 2008. QE experienced less volatility in 2009 and the first half of 2010 with the index rising by 1.1 per cent and then falling by 0.9 per cent, respectively. The calmer market conditions coincided with a significant drop in the total value of shares traded, which fell by 47 per cent in 2009 and a further 32 per cent in the first six months of 2010.

Resources

The demands on Qatar's infrastructure have been unprecedented over the past 10 years. With the economy consistently delivering double-digit growth and a population that has expanded by over 20 per cent a year, the state's infrastructure has come under severe strain. Whether it be schools, roads, hospitals or housing, there has been insufficient capacity at times to cope with the demands of such a booming economy. The pressure on infrastructure was particularly acute in the period 2005-08, but has eased in recent years as a result of much-needed capacity being commissioned.

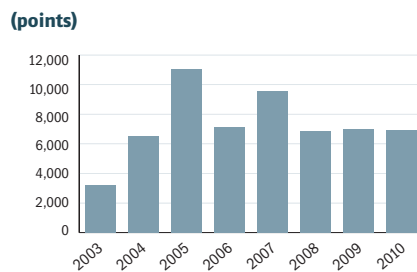
Any state would have had issues handling such high growth, but in Qatar's case there were additional challenges to overcome. For much of the 1980s and the early 1990s, investment in the state's infrastructure was minimal. In part, large-scale investment was not warranted as economic activity was subdued and population growth, comparatively low. In any case, the government could not afford to invest heavily in infrastructure due to its huge financial commitments related to the initial develop-

Table 2.16 – QE's market capitalisation by sector*



*as of June 2010. Source: QE
\$1=QR3.64.

Table 2.17 – QE index, 2003-10*



* With the exception of 2010, the index is for the last day of each year. For 2010, it is for the last day of June
Source: QE

ment of the North field and the LNG industry. Capital expenditure on infrastructure was tiny: in the late 1990s, the Municipal Affairs & Agriculture Ministry, which was then the main infrastructure provider, was estimated to have spent less than \$100m a year on capital projects.

The result was that when the upturn in economic fortunes began in 2000/01, existing infrastructure was ill-equipped to handle the sudden surge in demand. Not only was there little spare capacity to absorb the growth, much of it was antiquated and nearing the end of its life. For the government, there was no quick fix solution to the problem.

While it increasingly had the funds available, it did not have experienced executing agencies, contractors or resources on hand to deliver the additional infrastructure. Most importantly, time was not on its side, given that new infrastructure projects take a minimum of two-three years to implement.

The government's first step was to overhaul its infrastructure providers. Qatar General Electricity & Water Corporation (Kahramaa) was formed in 2000 to take over the responsibilities of the Electricity & Water Ministry and to introduce private investors for the first time.

Four years later, the Public Works Authority (Ashghal) was established, being handed the remit from the Municipal Affairs & Agriculture Ministry to deliver government buildings and wastewater and road infrastructure. For the largest infrastructure projects, such as the new Doha International Airport and the new Doha Port, dedicated steering committees were set up.

Roadshows

In a bid to attract international contractors into the market, the likes of Ashghal undertook international roadshows, providing details of their vast spending plans; in Ashghal's case, it announced a QR20bn investment programme. At the same time, several agencies introduced new and improved contract terms, while others promised far greater bidding transparency.

Despite the changes, the new agencies still faced the huge capacity challenge presented by the sharp economic and population growth. And in retrospect, the overwhelming majority performed creditably. A case in point was Kahramaa. It managed to keep the lights on and the taps flowing in the most testing of circumstances: peak demand growth for both electricity and water has consistently been over 10 per cent a year since 2005, while its customer base has soared by 100,000 to 232,000 in just a decade. Kahramaa has averted power and water shortages by undertaking an unprecedented expansion drive. In the period 2000-10, it oversaw investment of over \$15bn in the sector. This resulted in desalination capacity increasing to 215 million gallons a day (g/d) in 2009 from just 61 million g/d in 1997, power capacity jumping to 5,100MW from just 1,500MW, and a significant expansion in the power and water transmission networks.

Spiraling demand has been the primary driver for infrastructure investment, although in some sectors, other factors have also come into play. Through landmark projects such as the new Doha International Airport and Education City, the government hopes that Qatar will become an international centre for aviation, academia and healthcare, which in turn will assist the drive to diversify the economy away from energy. An additional spin-off from such investments will be job creation and the development of human resources. The new airport is expected to generate up to 50,000 jobs, while Education City is a key initiative in nurturing Qatari talent to meet the needs of the new Qatar. Finally, establishing state-of-the-art infrastructure can only benefit Doha's ambitions to become a major host of sporting events such as the football world cup, which will consolidate Qatar's position on the international stage.

A regional perspective of the GCC infrastructure market

The rapid growth in the GCC infrastructure projects market has been one of the most impressive and salient aspects of the regional economic boom over the past decade. Between 2000 and the third quarter of 2010, more than \$628bn worth of contracts were awarded in the infrastructure sector in the GCC, more than 80 per cent of which were let from 2005 onward. This created boom conditions for contractors, suppliers, and associated service providers such as legal firms, banks and project consultants, especially in Dubai, the primary hub of construction activity until late 2008.

Oil prices

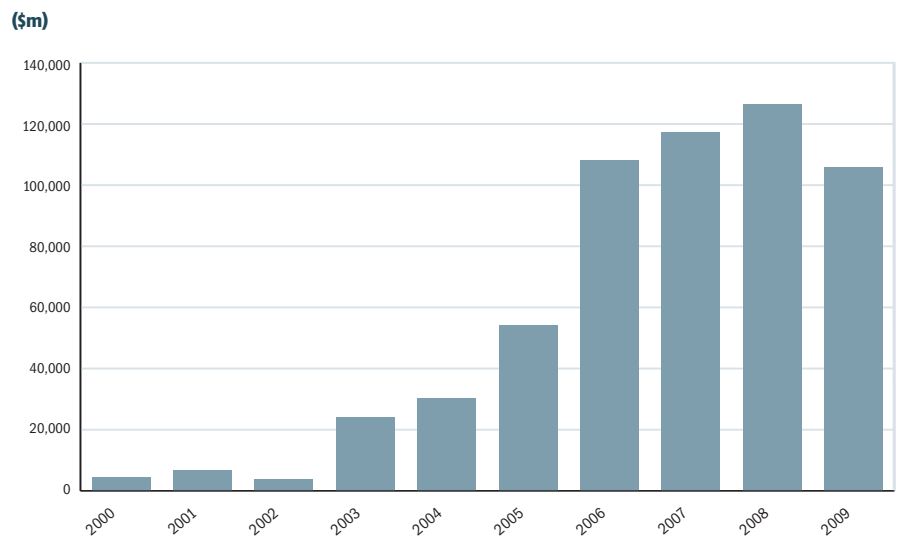
Rising oil prices were the main driver behind this growth. Real oil prices rose from an average of \$27.50 a barrel in 2002 to over \$91 a barrel in 2008, peaking at an all-time high of \$147 a barrel in July the same year. For the region's crude exporters, this resulted in record budget revenues providing them with the financial firepower to fund their capital project plans.

At the same time, there was recognition among a new generation of leadership in the GCC that it had to take advantage of the benign economic conditions to invest in their nations' infrastructure. With local populations growing rapidly, there was a realisation that existing infrastructure was insufficient to cope. The explosion in transportation, education and healthcare project activity has been a direct consequence of this demographic growth.

Likewise, as the economies and populations have grown, so too has the demand for utilities. This massive increase in power and water spending has been directly driven by demand that has at times outstripped supply.

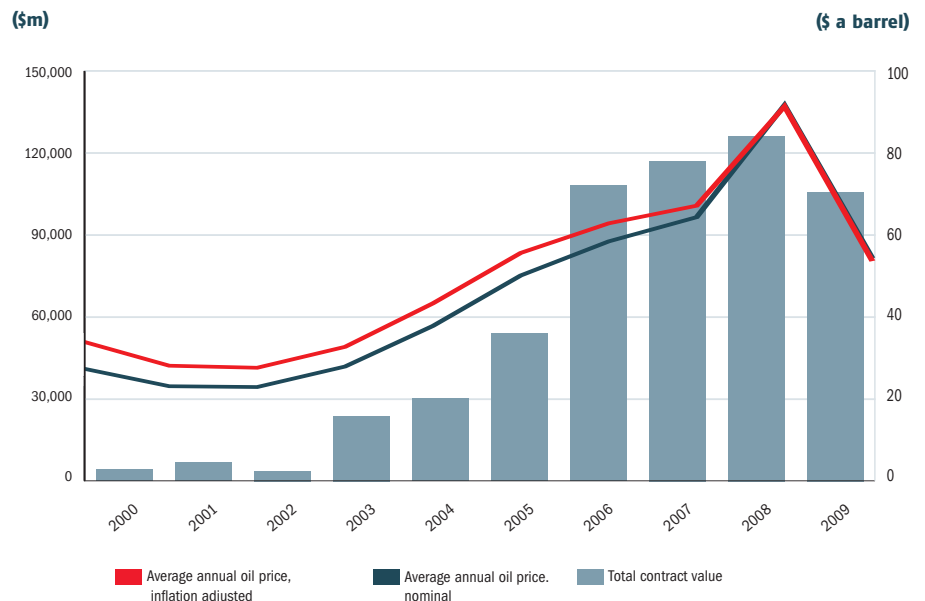
In parallel, Dubai's decision in 2002 to allow non-GCC nationals to own real estate in the emirate kick-started a real estate boom that saw scores of public and private real estate developers enter the market. As house prices rose,

Table 3.1 – Infrastructure contract awards in the GCC, 2000-09



Source: MEED Projects

Table 3.2 – Comparison of the oil price with GCC contract awards, 2000-09



Source: MEED Insight

→ “The long-term outlook for the GCC infrastructure market is still bullish”

the region found itself an increasingly attractive investment destination. Thousands of families around the world made the region their home. Unsurprisingly, the real estate sector constituted by far the largest of all the infrastructure sectors in the region.

This combination of factors created a perfect storm for investment in infrastructure. And although the global economic crisis has slowed growth and the real estate market, the underlying need for infrastructure investment remains. With oil prices above \$70 a barrel, the population continuing to grow, and the governments committed to opening up their economies, the long term outlook for the GCC infrastructure market is still bullish. For companies and investors operating in this sector, many opportunities remain.

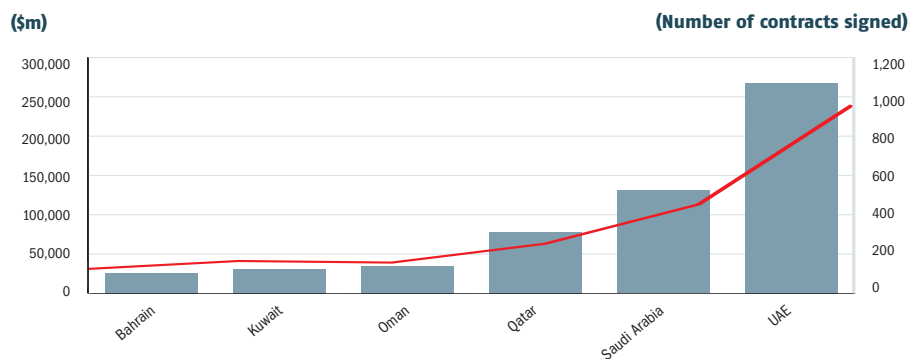
The 2008 crisis and the path to recovery

In late 2008 the global economic crisis hit the region. Initially thought to be immune thanks to the insulation of oil sales, events soon disabused this notion. By far the most obvious result of the world slowdown was the collapse of Dubai's real estate sector. After growing dramatically and somewhat unsustainably it had run the risk of overheating for some time. Nonetheless, its abrupt crash caught many by surprise as house prices fell by more than 50 per cent over the next 18 months.

As real estate constituted the vast majority of current and future projects in the region, there was considerable fear that the overall projects market would suddenly dry up. Hundreds of schemes were put on hold or cancelled outright as the demand outlook for housing shifted almost overnight. The UAE, and Dubai in particular, was by far and away the worst hit due to its exposure to the sector, with more than \$500bn worth of projects cancelled or put on hold.

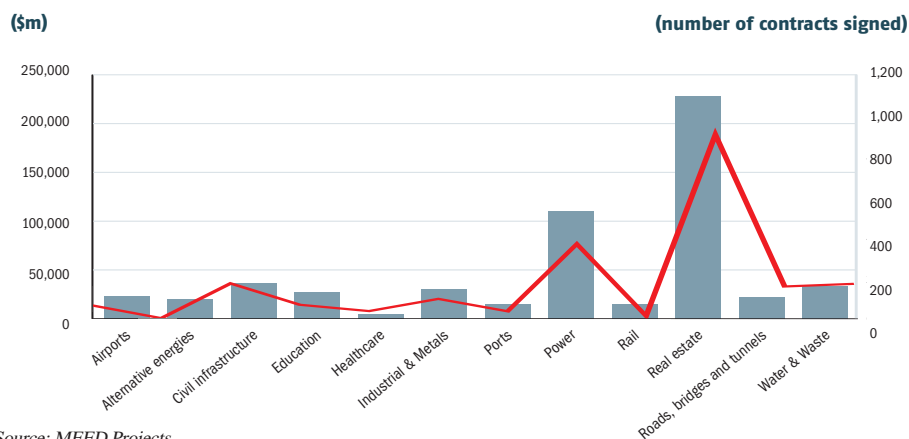
Because the other GCC states were less exposed to real estate, the value of projects cancelled or postponed outside the UAE was considerably lower. Moreover, these schemes were primarily based on demand rather than specu-

Table 3.3 – GCC infrastructure contract awards by country, 2000-09



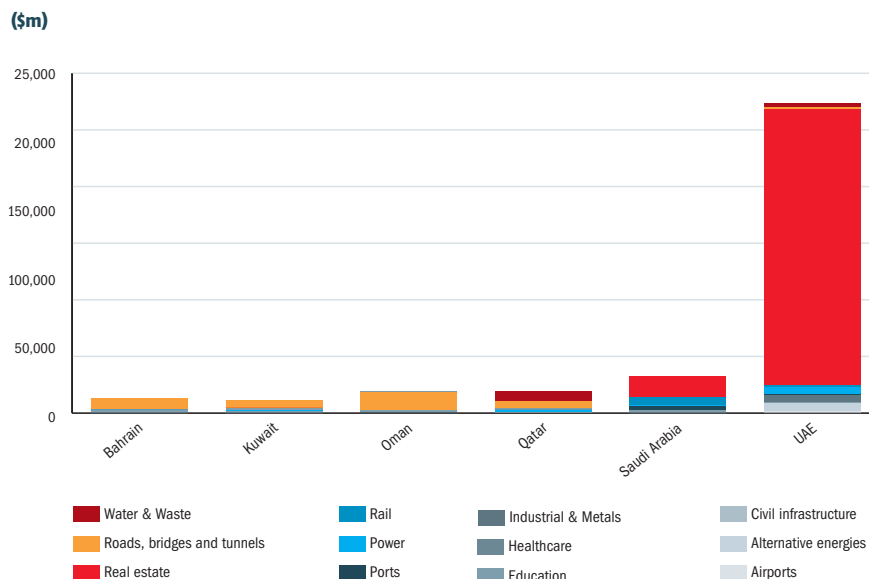
Source: MEED Projects

Table 3.4 – GCC infrastructure contract awards by sector, 2000-09



Source: MEED Projects

Table 3.5 – GCC infrastructure contract awards by country and sector, 2000-09



Source: MEED Projects

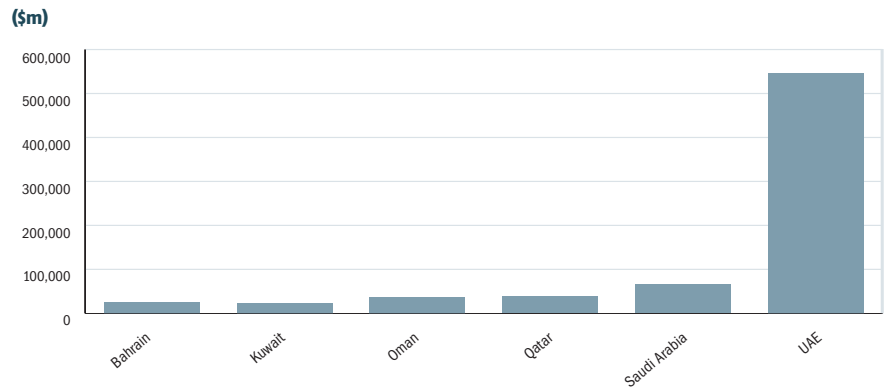
→ “For companies involved in the regional project business there is still a very large market in the region”

lation, and as such were less prone to short-term market contractions.

Other sectors have also largely remained unaffected. Rising population growth and a commitment to diversification of the economy has meant that governments have continued to push ahead with their capital investment plans. And with the oil price still high, they have the revenues to do so.

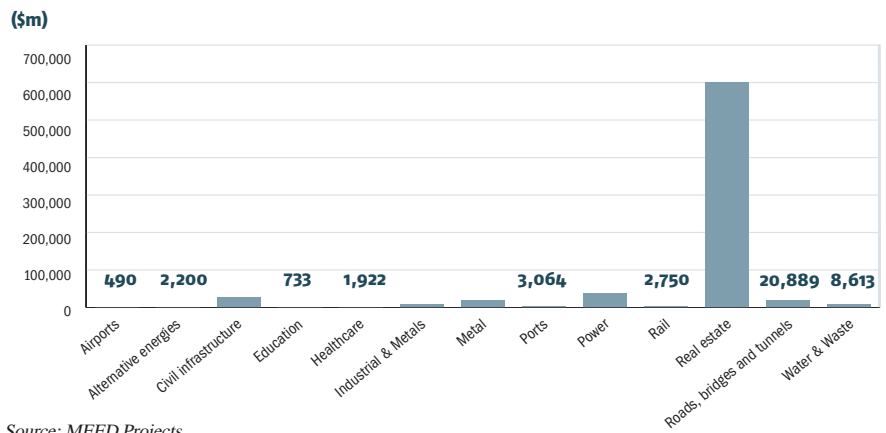
Thus, for companies involved in the regional project business, be it as a supplier, contractor, financier or other service provider, there is still a very large market in the region as a whole despite the collapse of the Dubai projects sector.

Table 3.6 – Value of GCC projects on hold or cancelled



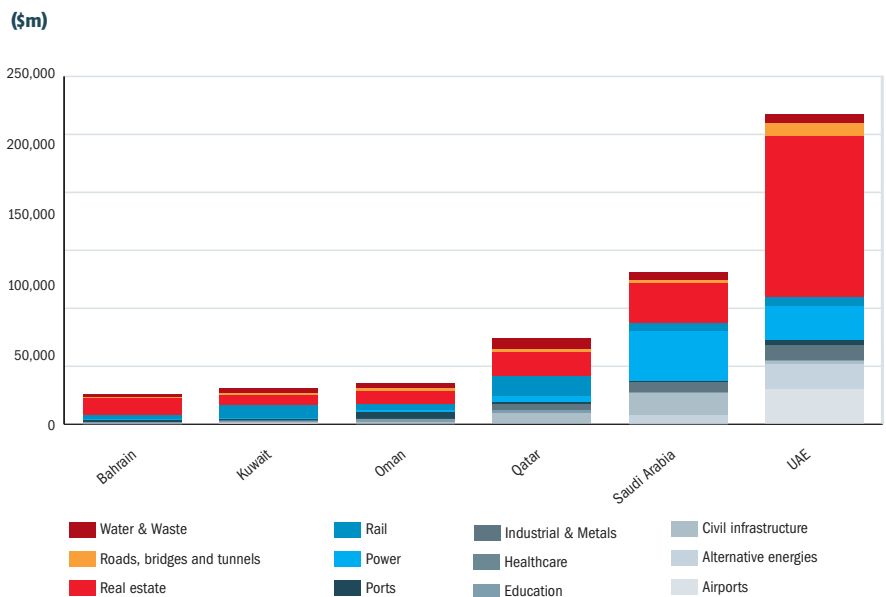
Source: MEED Projects

Table 3.7 – Value of GCC projects on hold or cancelled by sector



Source: MEED Projects

Table 3.8 – GCC infrastructure contract awards, 2000-09 by country and sector



Source: MEED Projects

Table 3.9 – Selected delayed or cancelled projects in Bahrain

Project name	Sector	Budget value (\$m)
GFH - Two Seas	Real estate	3,000
Eskan Bank - Bander Al Seef	Real estate	2,700
AAJ Holdings - Uptown Development Bahrain	Real estate	2,650
Ithmaar Development Company - Aljazayer Beach Resort	Real estate	1,500
Manara Development Company - Al Nurana Mixed-use Development	Real estate	1,000
Sama Dubai - Salam Beach Resort & Spa	Real estate	1,000
Marina West Real Estate Company - Marina West	Real estate	700
KFH - Power & Desalination Plant	Power	600
EHRC - Horse-Race Track	Real estate	550
Ministry of Works & Housing - New Social Housing Scheme	Real estate	500
First Bahrain Real Estate Development Company - Manama Seef District Development	Real estate	450
Al-Enma'a House for Real Estate - Gilgamesh	Real estate	400

Source: MEED Projects

Table 3.10 – Selected delayed or cancelled projects in Kuwait

Project name	Sector	Budget value (\$m)
Khabary Holding - Khabary City	Real estate	5,500
MPW - Kuwait Small Islands Development	Civil infrastructure	3,300
Hydra Al Aqeelah Development Company - Aqeeq Al Marina	Real estate	3,000
MEW - Subiya Emergency Power Plant II	Power	2,000
KNPC - IGCC Power Plant	Power	1,500
Al-Asima Real Estate Company - Al-Asima Project	Real estate	821
MEW - Doha East Power & Water Distillation Plant: Steam Boilers	Power	630
Al-Mal Investment Company - Media City	Real estate	400
TSCD - Mall of Kuwait	Real estate	350
CRC - Mahabella Complex	Real estate	320
Al-Shaya Group - Gate of Kuwait	Real estate	260
PAI - Shuaiba Seawater Cooling & Pumping Plant D	Water & Waste	250

Source: MEED Projects

Table 3.11 – Selected delayed or cancelled projects in Oman

Project name	Sector	Budget value (\$m)
Essdar Capital - Al Madina Al Zarqa: Phase I	Real estate	20,000
Oman Power & Water Procurement Company - Duqm IWPP	Power	2,000
Yenkit Tourism Development/ Majid al-Futtaim Group of Companies (MAF) - Integrated Tourism Complex	Real estate	2,000
Dhofar Tourism Company - Mirbat Beach Development: Phase III IV & V	Real estate	1,798
Sama Dubai - Salam Yiti Resort & Spa	Real estate	1,700
Al Qurum Properties (AQPL) - Qaryat Qurum	Real estate	1,226
Majan Development Company - Healthcare City	Real estate	1,030
Oman Power & Water Procurement Company - Al Ghubrah IWPP	Power	900
Dhofar Tourism Company - Mirbat Beach Development: Phase II	Real estate	800
Sama Dubai - Shinas Mixed-Use Development	Real estate	750
Oman Tourism Development Company (Omran) - Ras Al Hamra Resort & Retreat	Real estate	700
Sohar International Development & Investment Company: Oman Heritage Village	Real estate	500

Source: MEED Projects

Table 3.12 – Selected delayed or cancelled projects in Qatar

Project name	Sector	Budget value (\$m)
Qatar and Bahrain Causeway Foundation (QBCF) - Al Mahaba Causeway	Roads, bridges and tunnels	4,000
QEWC - West Coast IWPP	Power	3,000
Masraf Al Rayan - Smart Industrial City	Real estate	2,000
GREIC - Mesaieed Industrial City Housing Project - Phase II	Real estate	2,000
Qatari Diar Real Estate Investment Company (QDREIC) - Doha Convention Tower	Real estate	1,500
QASCO/Essar - Mesaieed Steel Plant	Metals	1,250
ADIH - Porta Moda	Real estate	1,200
QP - Ras Abu Aboud Development	Real estate	1,000
Barwa Al Doha - Barwa Al Doha Development	Real estate	824
Al Jaber Group - Abu Dhabi Mixed-use Tower	Real estate	700
Higher Committee for the Co-ordination & Pursuance Executive Committee - Doha Port Relocation	Real estate	500
QNHC - Lusail Twin Towers	Real estate	500

Source: MEED Projects

Table 3.13 – Selected delayed or cancelled projects in Saudi Arabia

Project name	Sector	Budget value (\$m)
Emaar - Jeddah Hills	Real estate	11,200
Saudi Commission for Tourism and Antiquities (SCTA) - Al-Uqair Tourism Development	Real estate	10,000
JEC - Jizan Economic City - Industrial Zone - Aluminium Complex	Metals	4,000
Grand Real Estate - Riyadh Marriland Leisure Park	Real estate	3,000
Tiran Causeway (Saudi Arabia - Egypt)	Civil infrastructure	3,000
EMSASG - Core Venture I: Jubail Power & Desalination Plant	Power	3,000
Sumitomo - Jubail Power & Water Plant	Power	2,200
Malaysian Resources - Transport & Property Development Hub	Real estate	2,000
Royal Commission for Jubail & Yanbu - Jubail Phase I Power & Desalination Plant	Power	2,000
Arabian Cement Company / Italcementi - Labuna Cement Plant	Industrial	1,000
Sredco - North Jeddah Housing Development	Real estate	1,000
RCJ&Y - King Fahd Industrial Port - Petrochemical Berths (Jubail Industrial City II)	Ports	1,000

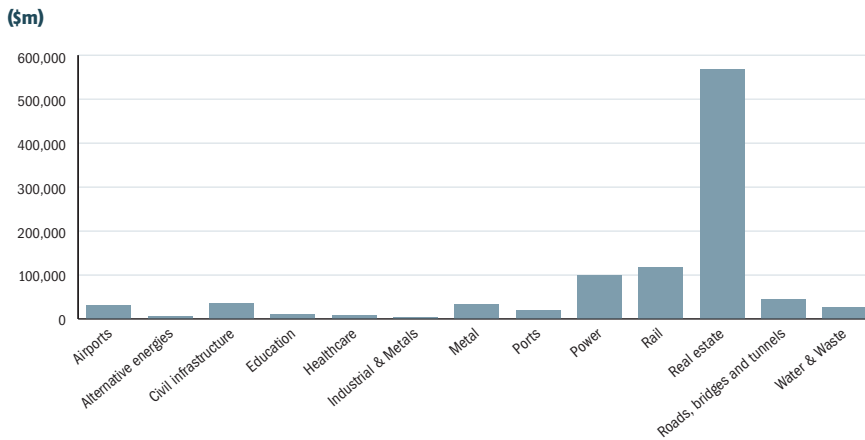
Source: MEED Projects

Table 3.14 – Selected delayed or cancelled projects in the UAE

Project name	Sector	Budget value (\$m)
Nakheel - Nakheel Harbour & Tower	Real estate	95,000
Tatweer - Dubailand: Bawadi	Real estate	54,450
International Capital Trading - Ghantoot Green City	Real estate	15,000
Dubai Properties - Mudon (Dubailand)	Real estate	13,864
Dubai Properties - Al-Jadaf Area Redevelopment: Culture Village (Arabian Bays)	Real estate	13,500
Al Qudra - Ain Al Emarat Development	Real estate	10,900
Limitless - Arabian Canal (Dubai Waterfront)	Real estate	8,900
Cathay Consortium - Amber Islands	Real estate	5,000
Oqyana (The World)	Real estate	5,000
ADBIC - Ruwais Aluminium Smelter (Phase I)	Metals	5,000
Tanmiyat - Dubailand: Living Legends	Real estate	3,500
Al-Hashemi Group/ Al-Salem Group - Dubai Mountain City	Real estate	3,400

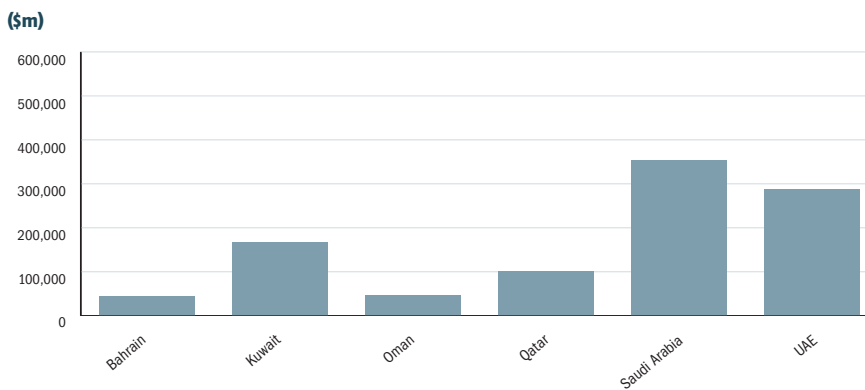
Source: MEED Projects

Table 3.15 – Value of active, un-awarded projects in the GCC by sector



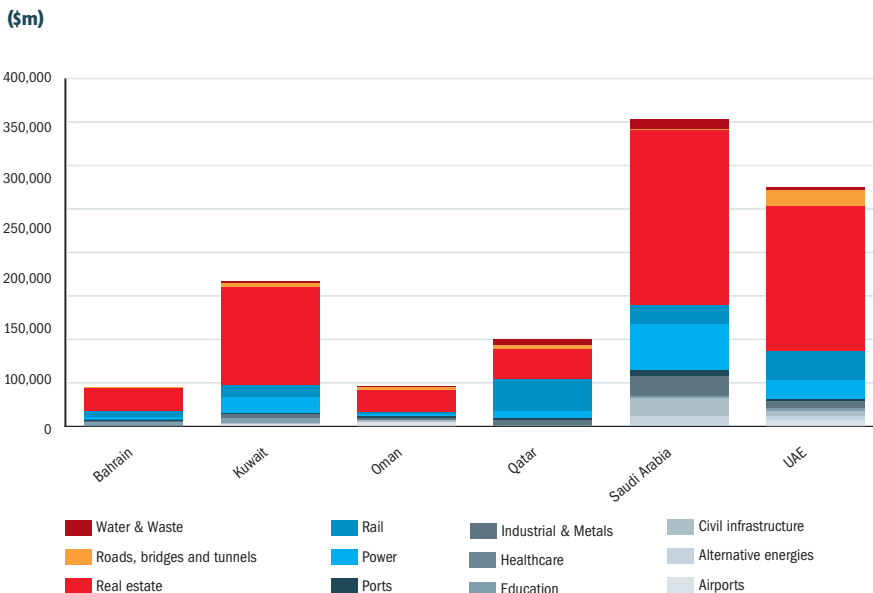
Source: MEED Projects

Table 3.16 – Value of active, un-awarded projects in the GCC by country



Source: MEED Projects

Table 3.17 – GCC infrastructure contract awards by country and sector, 2000-09



Source: MEED Projects



Construction crunch: many projects are now on hold

Looking to the future

Regardless of the number of projects that have been cancelled or postponed, there are still more than enough un-awarded projects in the region to keep those dependent on it busy. The main difference going forward is that these projects will be focused on sectors outside UAE real estate.

Key to this is the fact that the underlying drivers for project development remain. The oil price is still high enough to provide the financial backing that the capital investment programmes require, while the governments for their part remain committed to investing in their infrastructure. Just as importantly, high population growth ensures a continual need for more utility, housing, education and health-care supply.

Even with the Dubai housing crash, the real estate sector is still far and away the largest in the region. Rail, thanks to the GCC railway and a number of metro schemes, is the next largest sector, with more than \$100bn worth of projects. Power is also a major sector, as countries struggle to ensure enough generating capacity to meet demand.

While real estate is the clear sector leader in terms of future projects, there is a much more balanced profile for countries. Saudi Arabia has overtaken the UAE as the country with the most planned projects. With the largest economy and population, this is its natural position. However, the UAE is still a major projects market and is expected to provide a lot of work in the years to come.

Kuwait has the third most projects planned. The state has lagged behind its neighbours in terms of project spending over the last decade due primarily to political issues. With the introduction of its \$100bn five-year plan, the hope is that it can proceed with its large number of delayed schemes. Qatar, with its massive gas wealth, has the financial capability to fund its future project plans, while Bahrain and Oman, with much smaller economies, also have some ambitious schemes in the pipeline.

→ “The bulk of projects have been in the utility and industrial sectors”

Bahrain

As the smallest economy in the GCC, Bahrain also has the smallest infrastructure projects market. Nonetheless, it has still been active, with a number of schemes developed over the last decade. The bulk of projects have been in the utility and industrial sectors as the kingdom, which has relatively few oil and gas resources, seeks to continue its economic diversification programme.

In terms of future projects, real estate is the clear leader thanks to a number of large building schemes including Albilad’s Water Garden City, the Marsa al-Seeif Development and the Central Market. Outside real estate, the largest projects are the upgrade of the international airport, a sixth-phase expansion of Aluminium Bahrain’s aluminium complex, and the second phase of the Addur independent water and power project (IWPP). Bahrain’s monorail network, which will link up to the planned GCC railway, will also constitute one of the largest portions of project spending in the kingdom going forward.

Kuwait

Despite its considerable financial wealth, Kuwait has been slow to meet its undoubted potential. Politics and slow decision making has seen many of its projects such as the Subiya Causeway, the development of Failaka island and Bubiyan Port stalled for years. The result is that project spending over the last five years has lagged far behind its neighbours. However, with the launch recently of a new five-year, \$100bn development plan it looks set to finally push ahead with many of its long-delayed infrastructure schemes.

These include the City of Silk project, which at \$94bn is the largest scheme in the region, plans for a metro and rail network, the development of Failaka island, and new desalination and power plants, including the Al-Zour North IWPP, the first of its kind in the state.

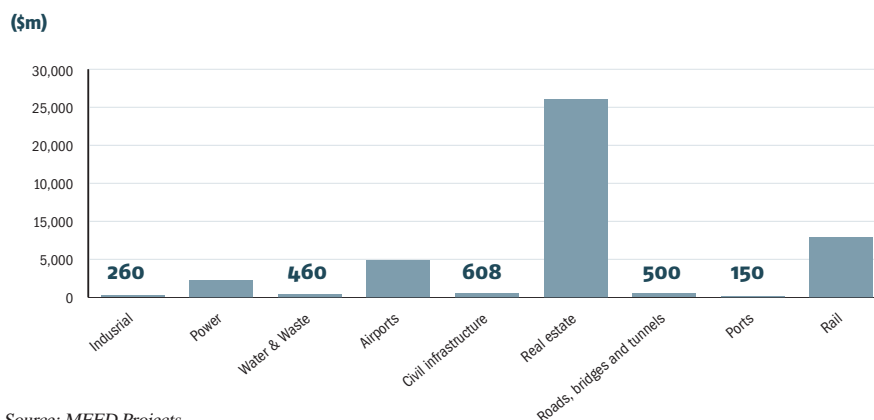
Kuwait was one of the first of the GCC states to introduce public-private partnership (PPP)

Table 3.18 – Selected awarded Bahraini infrastructure projects, 2000-10

Project name	Sector	Contract value (\$m)	Project status	Award date
Ministry of Works - North Bahrain New Towns (NBNT) - Infrastructure Works	Civil infrastructure	2,700	Execution	2009
MEW/MOF - Addur IWPP (Phase I)	Power	2,000	Execution	2008
MEW - Bahrain International Investment Park (Phase I)	Real estate	1,600	Execution	2007
Alba - Aluminium Plant Expansion - Phase V	Industrial	1,000	Complete	2002
Lulu Tourism Company - Reef Island Development (Buildings)	Real estate	800	Execution	2007
Ministry of Works & Housing - Waste Incineration Plant	Water & Waste	796	Execution	2008
HPC - Hidd III Desalination Plant (Package WP1)	Water & Waste	740	Complete	2005
SULB - Hidd Steel Mill: Meltshop and Rolling Mill	Industrial	700	Execution	2010
BFH Holding Company - Bahrain Financial Harbour (Phase II)	Real estate	700	Complete	2004
GIIC - Hidd Pelletising Plant Expansion	Industrial	600	Complete	2007
SULB - Hidd Steel Mill: DRI Plant	Industrial	500	Execution	2010
Al-Ezzel - Hidd IPP	Power	500	Complete	2004
Durrat Khaleej Al Bahrain Company - Civil infrastructure Works	Civil infrastructure	450	Execution	2006
KFH - Diar Al-Muharraq Mixed-Use Development: Dredging Works	Real estate	400	Execution	2008
Tameer - Bahrain Investment Wharf (Phase II): Industrial & Business Park	Real estate	400	Execution	2007
Gulf Holding Company - Bahrain Financial Harbour: Villamar	Real estate	380	Execution	2007

Source: MEED Projects

Table 3.19 – Value of active, un-awarded projects in Bahrain by sector



Source: MEED Projects

into its projects with the 2002 Sulaibiya wastewater treatment plant. However, it failed to capitalise on this early initiative and subsequent PPP schemes were few and far between. All this is set to change with a raft of private infrastructure projects under the five-year plan that will incorporate PPP frameworks. As such, the state is set to become a hub for private infrastructure investment over the coming years if all goes according to plan.

Oman

Along with Bahrain, Oman has the smallest projects market in the GCC. Its limited oil and gas production means it does not have the same kind of financial firepower as its neighbours, while its real estate sector has been more restrained and targeted at a more specific audience.

The profile of projects awarded over the last decade is more diverse than in other GCC states. Industrial, transport and utility schemes comprise the majority of the major projects under construction in the sultanate. Industrial development has been focused on Sohar as part of the diversification and jobs creation programme. Sohar's centrepiece is the aluminium complex, which is the source of business for many associated downstream industrial schemes at the site.

Power has been an increasingly important sector thanks to growing demand in the sultanate. Oman was the first GCC state to adopt private power and has awarded a number of IWPP contracts over the past five years, including two in 2010 alone.



❖❖❖ Ras Abu Fontas: one of Qatar's largest power and desalination plants

As with other countries in the region, real estate comprises the bulk of future schemes, although not all are expected to come to fruition. Transport-related projects will be key to future project development. The sultanate has an ambitious road development programme as it seeks to improve transport links and encourage investment in rural areas. Its airports are also undergoing a large expansion programme that includes the modernisation of the Salalah and Muscat international airports.

Oman will also have one of the longest sections of the planned GCC railway. Companies

are already bidding for the consultancy contracts on the first section of the project in the Batinah region, while further sections are expected to be tendered over the coming years. As the population continues to grow, investment levels in power and water projects will continue to increase.

But the largest future project in any sector will be the estimated \$20bn development of Duqm. Designed to be the key investment hub of the underinvested central region, it will feature extensive industrial facilities, including a grassroots refinery, and a new residential zone.

Table - 3.20 - Selected un-awarded Bahraini infrastructure projects

Project name	Sector	Budget value (\$m)	Award date
Government of Bahrain - Bahrain Monorail Network	Rail	7,900	2012
Albilad Real Estate Investment Company - Water Garden City	Real estate	6,600	2012
Bahrain Airport Company - Bahrain International Airport Upgrade	Airports	4,700	2011
KFH - Diar Al-Muharraq Mixed-Use Development (Phase I): Urban Development	Real estate	2,700	2011
Manama Municipality - Central Market	Real estate	2,650	2011
Global Real Estate Development Company (Gredco) - Marsa Al Seef Development	Real estate	2,500	2011
Alba - Aluminium Plant Expansion - Phase VI	Industrial	2,000	2011
MEW/MOF - Addur IWPP (Phase II)	Power	2,000	2011
Ithmaar Development Company - Dilmunia Health Island	Real estate	1,531	2011
Marina Durrat Al-Bahrain for Development Real Estate - Durrat Marina	Real estate	1,300	2011

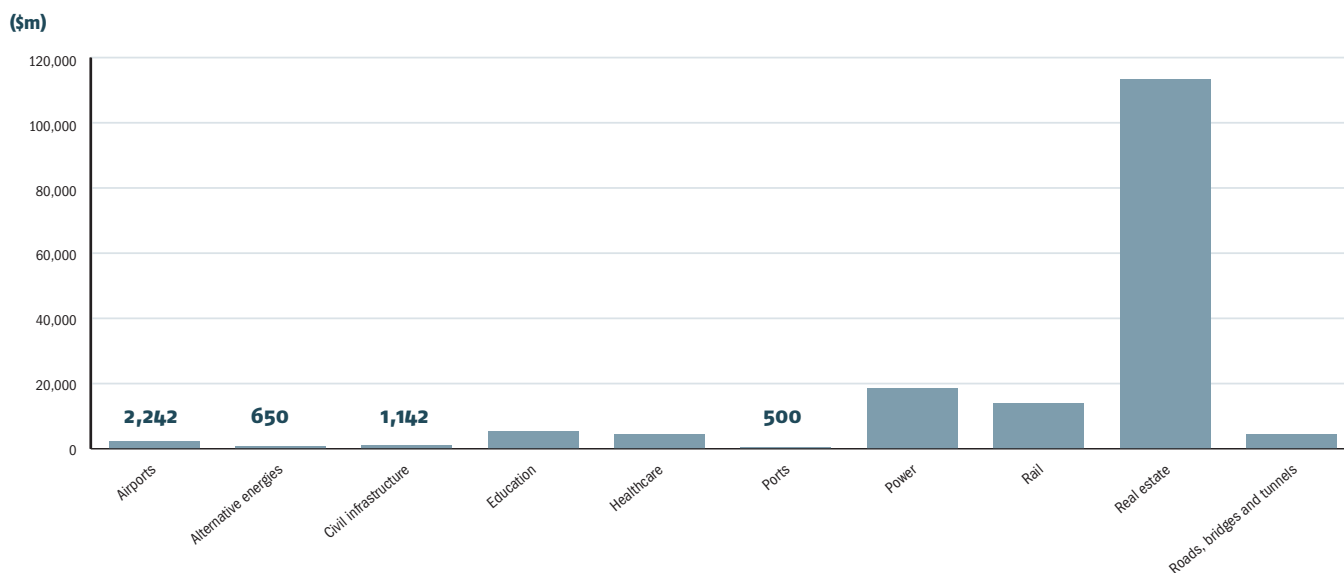
Source: MEED Projects

Table 3.21 – Selected awarded Kuwaiti infrastructure projects, 2000-10

Project name	Sector	Contract value (\$m)	Project status	Award date
MEW - Subiya Power Plant	Power	2,650	Execution	2009
MEW - Shuaiba North Power & Desalination Plant	Power	1,260	Complete	2007
Ministry of Public Works (MPW) - Bubiyan Seaport Project: Phase II: Port Works	Ports	1,100	Execution	2010
Ministry of Health - South Surra Jaber Ahmed al-Jabber al-Sabah Hospital	Healthcare	1,000	Execution	2008
Ministry of Public Works (MPW) - Al-Jahra Road Upgrade	Roads, bridges and tunnels	965	Execution	2009
MEW - Al Zour South Simple Cycle Power Plant	Power	960	Complete	2007
MEW - Al Zour South Power Plant Conversion	Power	935	Execution	2007
MEW - Al Zour Emergency Power Plant	Power	900	Complete	2006
Public Authority for Housing - Jahra Housing Project: Villas (202 nos.)	Real estate	700	Execution	2007
Public Authority for Housing - Jahra Housing Project: Villas (248 nos.)	Real estate	700	Execution	2007
MEW - Subiya Emergency Power Plant I	Power	700	Complete	2007
Public Authority for Housing Welfare - Jaber Al Ahmed Township: Residential Scheme	Real estate	689	Execution	2010
Kuwait Port Authority - Shuwaikh Port Upgrade	Ports	503	Execution	2008
MEW - Doha & Subiya Power Plant Expansion	Power	500	Complete	2007
Public Authority for Housing Welfare - Sabah Al Ahmed Township: A1, A2, A3 Sector	Real estate	461	Execution	2010
Public Authority for Housing Welfare - Sabah Al Ahmed Township: A4, A5 Sector	Real estate	441	Execution	2010

Source: MEED Projects

Table 3.22 – Value of active, un-awarded projects in Kuwait by sector



Source: MEED Projects

Table 3.23 – Selected un-awarded Kuwaiti infrastructure projects

Project name	Sector	Budget value (\$m)	Award date
Tamdeen/Ajial - Madinat Al-Hareer (City of Silk)	Real estate	94,000	2012
Government of Kuwait - Kuwait City Metro System - Phase I	Rail	7,000	2011
Government of Kuwait - Kuwait City Metropolitan Rapid Transit	Rail	7,000	2011
Ministry of Public Works (MPW) - Bubiyan Island	Real estate	6,000	2011
Kuwait Ministry of Health: Kuwait Hospital Towers	Healthcare	4,000	2011
Ministry of Public Works (MPW) - Subiya Causeway	Roads, bridges and tunnels	3,700	2011
MEW - Al Zour North Power and Desalination Plant - Phase I	Power	3,140	2010
MEW - Doha East Power and Desalination Plant	Power	3,000	2013
Ministry of Public Works (MPW) - Failaka Island Resort	Real estate	3,000	2011
MEW - Al Zour North Power and Desalination Plant - Phase II	Power	2,690	2010
Public Authority for Housing & Welfare - Al-Mutlaa City	Real estate	2,434	2011
Ministry of Finance - Al Zour IWPP	Power	2,000	2011
KOC - Mina Al-Ahmadi Township Redevelopment	Real estate	2,000	2010
MEW - Shuaiba South Power and Desalination Plant	Power	1,800	2013
DGCA - Kuwait Airport Expansion: Phase I: Infrastructure & Utilities	Airports	1,750	2011
MEW - Al Zour North Power and Desalination Plant - Phase III	Power	1,370	2011

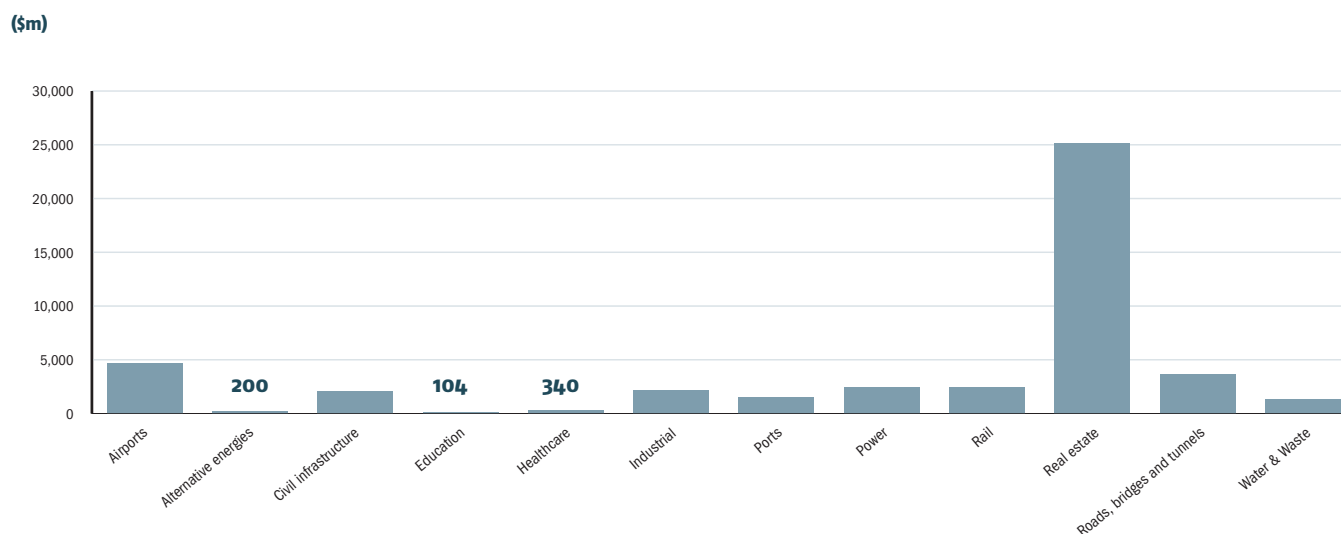
Source: MEED Projects

Table 3.24 – Selected awarded Omani infrastructure projects, 2000-10

Project name	Sector	Contract value (\$m)	Project status	Award date
Muriya Tourism Development Company - Salalah Beach Resort	Real estate	2,000	Execution	2008
Sohac - Sohar Aluminium Smelter	Industrial	2,000	Complete	2005
Vale - Sohar Port Iron Ore Pelletising Plants	Industrial	1,356	Execution	2008
Ministry of Transport & Communication - Muscat & Salalah International Airport Expansion: Airside Facilities & Civil Works (MC1)	Airports	1,300	Execution	2007
Omage Inc - Omagine Project: Residential & Commercial Building	Real estate	1,200	Execution	2007
Sembcorp Salalah Power & Water Company - Salalah IWPP	Power	1,000	Execution	2009
Al Madina Real Estate - Tilal Al Khuwair	Real estate	1,000	Execution	2007
Omran / Saraya Holdings - Saraya Bandar Jissah (Phase I)	Real estate	1,000	Execution	2006
The Wave Muscat - The Wave Development: Phase I	Civil infrastructure	1,000	Execution	2006
Alfa - Journey of Light Beach Resort	Real estate	950	Execution	2007
Port of Al Duqm - Duqm Port: Marine Works	Ports	870	Execution	2007
Oman Power & Water Procurement Company - Barka 3 IPP	Power	850	Execution	2010
Oman Power & Water Procurement Company - Sohar IPP	Power	850	Execution	2010
SMN Barka Power - Barka 2 IWPP	Power	800	Complete	2006
Port of Al Duqm - Duqm Port: Ship Repair Yard & Drydock Complex	Ports	800	Execution	2008
Majan Gulf Properties - Khasab Resort	Real estate	780	Execution	2008

Source: MEED Projects

Table 3.25 – Value of active, un-awarded projects in Oman by sector



Source: MEED Projects

Table 3.26 – Selected un-awarded Omani infrastructure projects

Project name	Sector	Budget value (\$m)	Award date
Daewoo Shipbuilding & Marine Engineering Company / Oman Tourism Development Company - Duqm New Town	Real estate	20,000	2011
Ministry of National Economy - Batinah Railway	Rail	2,500	2011
Oman Power & Water Procurement Company - Sur IPP	Power	2,000	2011
Ministry of Transport & Communication - Muscat & Salalah International Airport Expansion: Passenger Terminal (MC3)	Airports	2,000	2010
Sohar Freezone LLC - Freezone Sohar	Civil infrastructure	2,000	2011
Bandar Raya Developments Berhad (BRBD)/ Amouage Hotels and Resorts LLC - Naseem A'Sabaa	Real estate	1,500	2011
Ministry of Finance - Turtle Island Bridge	Roads, bridges and tunnels	1,500	2011
Muriya Tourism Development Company - City Complex	Real estate	850	2011
Ministry of Transport & Communication - Redevelopment of Salalah International Airport (MC5)	Airports	712	2010
JFE Steel Corporation/Foulath - Salalah Pelletizing Plant	Industrial	700	2010
ZSC - Sur Steel Plant Phase I	Industrial	665	2011
Supreme Committee for Town Planning - Batinah Coastal Road Project: Phase 2	Roads, bridges and tunnels	600	2011
Salalah Port Services Company (S.A.O.G) - Salalah Port Expansion: Phase III: Berths 7, 8 and 9	Ports	525	2011
Ministry of Transport & Communication - Bidbid to Sur Dual Carriageway	Roads, bridges and tunnels	500	2010
Oswal Group - Salalah Caustic Soda Plant	Industrial	400	2011

Source: MEED Projects

Table 3.27 – Selected awarded Saudi infrastructure projects, 2000-10

Project name	Sector	Contract value (\$m)	Project status	Award date
Rayadah Investment Company - Riyadh King Abdullah Financial District: Towers: Phase II	Real estate	3,700	Execution	2009
Marafiq - Jubail IWPP	Power	3,360	Complete	2006
Ministry of Finance - Princess Nora bint Abdulrahman University for Women: Package I	Education	3,332	Execution	2009
Jiwar Real Estate - Abraj Al-Bait Complex	Real estate	3,000	Execution	2003
SEC - Riyadh PP10 Power Plant	Power	2,991	Execution	2008
SEC - Shoaiba Power Plant Stage III	Power	2,880	Execution	2008
Ministry of Finance - Princess Nora bint Abdulrahman University for Women: Package II	Education	2,666	Execution	2009
Ministry of Defence & Aviation - Northern Border Security Fence: Phase II	Civil infrastructure	2,600	Execution	2009
SEC / ACWA Power / Kepco - Rabigh IPP	Power	2,500	Execution	2009
Sino Saudi Jizan Aluminium - Jizan Economic City - Power Plant	Power	2,500	Execution	2008
Ministry of Hajj - Prophet's Mosque Expansion	Real estate	2,500	Execution	2006
Shuaibah Water & Electricity Company - Shuaibah-III	Power	2,430	Complete	2005
Ministry of Higher Education - King Saud University: Girls College	Education	2,400	Execution	2008
Ministry of Finance - Princess Nora bint Abdulrahman University for Women: Package III	Education	2,133	Execution	2009
Darmaa Power Company - Riyadh IPP (PP11)	Power	2,100	Execution	2010
Shuqaiq Water & Electricity Company - Shuqaiq-II IWPP	Power	1,870	Execution	2007
SEC - Conversion of Qurayyah Power Plant to Combined Cycle	Power	1,800	Execution	2009
SRO - Haramain High-Speed Rail Network (HHR): Phase I: Package 1	Rail	1,800	Execution	2009

Source: MEED Projects

Saudi Arabia

While Saudi Arabia is now the largest projects market, it has been relatively slow historically in terms of awarding schemes. A restricted real estate sector has meant that building projects were driven by local demographic growth demand rather than the private sector, speculative-driven growth seen in Dubai.

The real estate schemes that did go ahead were primarily government-backed masterplan projects, such as the King Abdullah Financial District, that have a specific objective. Private sector projects have overall been much smaller in scale.

The majority of projects in the kingdom over the past 10 years have been driven by popula-

tion growth either directly or indirectly. Riyadh has to build more than 4,000MW a year for the next 10 years just to keep up with electricity demand, and this is reflected by the sheer number of power projects awarded or planned.

Just as importantly for the government is the need to provide healthcare and education for its growing number of citizens. Education is a particular priority. The fast-track \$10bn Princess Nora bint Abdulrahman University for Women, awarded in 2009, is the largest of the higher education projects under construction as the kingdom aims to provide its youth with the best education opportunities.

As with all other GCC states, real estate dominates the future project profile in the kingdom.

Saudi Arabia has been slow to kick-start its buildings programme but demographic pressure will ensure that it accelerates over the coming years. This includes the enormous economic cities programme, which will require investment of more than \$100bn as the government seeks to create housing and job opportunities in less developed regions.

This same high demographic growth will also continue to ensure a steady flow of water and power projects. The supply of cheap and uninterrupted electricity and water is one of the key criteria on which Gulf nationals judge their governments.

In parallel, the state is planning a widespread upgrade of its airport network to

Table 3.28 – Value of active, un-awarded projects in Saudi Arabia by sector

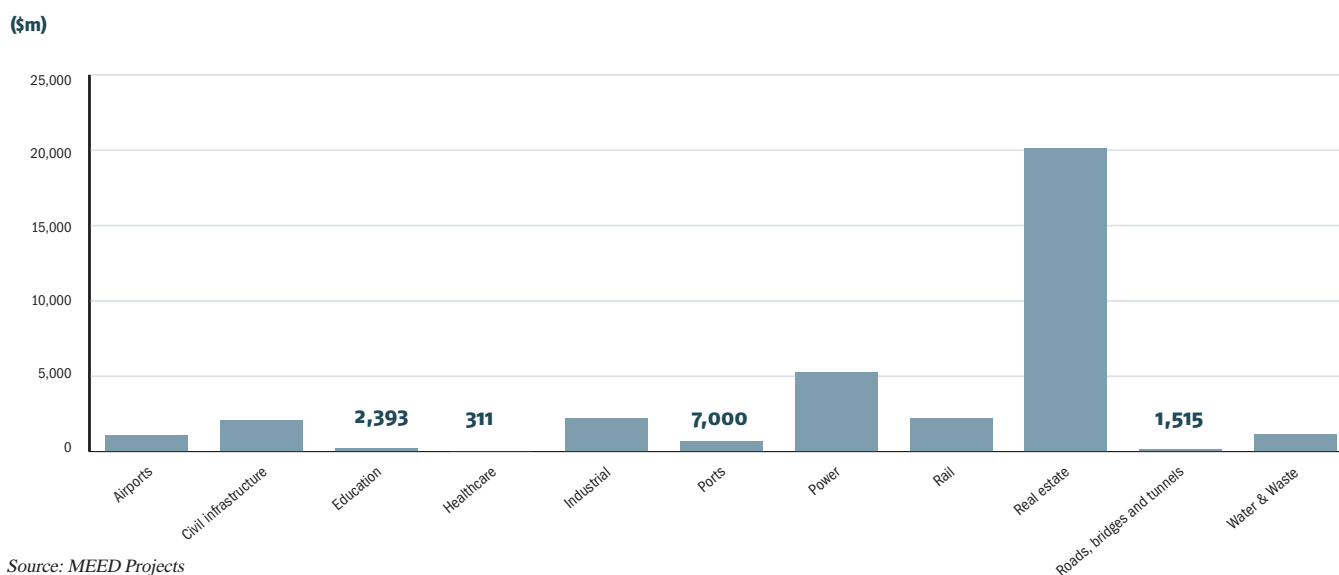


Table 3.29 – Selected un-awarded Saudi infrastructure projects

Project name	Sector	Budget value (\$m)	Project status	Award date
SAGIA - Tabuk Economic City	Real estate	30,000	Study	2011
Private Developers - Ras Al Zour Resource City	Real estate	25,000	Planned	2011
Kingdom Holding/ Emaar Properties - Kingdom Tower	Real estate	15,000	EPC bid	2010
Saudi Industrial Property Authority (MODON) - Sudair Industrial City: Civil infrastructure Works	Civil infrastructure	14,000	Design	2011
Khuzam Real Estate Company - Qasr Khuzam	Real estate	13,331	Design	2011
Al-Shamiyah Urban Development Company - Al-Shamiyah Mecca Development	Real estate	9,300	Design	2011
Governments of Egypt & Saudi Arabia - Pan-Arab Grid (Saudi Arabia-Egypt Undersea Link)	Power	8,500	Study	2011
City Center Development Company - Jeddah Central Development Project	Real estate	8,000	Design	2011
Al-Shoala Group of Establishment / Emaar Properties - Rawabi Rumah Mixed-used Development	Real estate	7,188	Planned	2011
Kingdom Holding - Riyadh Multi-Purpose Scheme	Real estate	7,000	Design	2011
SAR - Saudi Landbridge	Rail	7,000	EPC bid	2010
Al-Shoala Holding Group / Land Company / Al-Rajhi Development - Riyadh Ajmakan	Real estate	6,200	Design	2011
Emaar, The Economic City - King Abdullah Economic City: Industrial District	Real estate	6,000	Design	2011
Emaar, The Economic City - King Abdullah Economic City: Millennium Seaport	Ports	6,000	Design	2011
Maaden / Alcoa - Aluminium Project: Ras Al-Zour Aluminium Smelter	Industrial	5,000	EPC bid	2011
Arriyadh Development Authority - Metropolitan Development Strategy for Arriyadh (MEDSTAR)	Real estate	5,000	Study	2011
Emaar/EMAL - King Abdullah Economic City: Aluminium Smelter	Industrial	5,000	Study	2012

Source: MEED Projects

Table 3.30 – Selected awarded UAE infrastructure projects, 2000-10

Project name	Sector	Contract value (\$m)	Project status	Award date
Enec - Nuclear Power Plants	Alternative energies	20,000	Execution	2009
EMAL - EMAL Project: Phase I: Aluminium Smelter	Industrial	4,000	Complete	2007
Dubai RTA - Dubai Metro: Green Line	Rail	3,811	Execution	2005
Dubai RTA - Dubai Metro: Red Line	Rail	3,811	Execution	2005
Ruwais Power Holding Company - Shuweihat 2 IWPP	Power	3,200	Execution	2008
Taweelah Asia Power - Taweelah B IWPP	Power	3,000	Complete	2004
Union Properties - Motorcity (Dubailand)	Real estate	3,000	Complete	2006
FAPCO - Fujairah F2 IWPP	Power	2,800	Complete	2007
Emaar - Mohammed Bin Rashid Housing Programme	Real estate	2,700	Complete	2006
Pearl Dubai FZ LLC - Dubai Pearl: Towers	Real estate	2,400	Execution	2008
Aldar Properties - Al-Falah Development: Villas (2069 nos.)	Real estate	2,000	Execution	2008
Aldar Properties - Al-Falah Development: Villas (2218 nos.)	Real estate	2,000	Execution	2008
Nakheel Corporation - The World - Dredging & Reclamation	Real estate	2,000	Complete	2003
Tameer Holding - Tameer Towers (Shams Abu Dhabi - Al Reem Island)	Real estate	1,900	Execution	2009
Mizin - Remraam (Dubailand)	Real estate	1,850	Execution	2008
Sorouh Real Estate - Shams Abu Dhabi (Al-Reem Island) - Gate District	Real estate	1,700	Execution	2008
Al Futtaim Group - Dubai Festival City - Masa Al Khor	Real estate	1,650	Complete	2007
Abu Dhabi Future Energy Company (Masdar) - Masdar City: Civil infrastructure Works (Phase I)	Civil infrastructure	1,640	Execution	2009
DEWA - Jebel Ali M Plant: Power Plant	Power	1,640	Execution	2007

Source: MEED Projects

increase passenger capacity as well as build new airports in areas not yet served by air transportation. Industry is also key in the kingdom as it ultimately seeks to diversify its economy. As their operational costs are heavily dependent on power consumption, the steel, aluminium and copper sectors are all set to see significant investments in future to take advantage of one of the world's lowest electricity supply tariffs. This low energy cost gives industry a significant cost advantage over competition elsewhere.

UAE

Over the past 10 years, the UAE has been by far the most active projects market in the region. Dubai in particular was the central hub of activity as it enjoyed a real estate boom that saw its population swell and an unprecedented amount of construction. Backed by its oil wealth, Abu Dhabi also invested in its real estate sector albeit in a less speculative fashion than its neighbour.

Such was the explosion in real estate activity that at one point there were more than \$1 trillion worth of projects alone in Dubai. Notable projects included the Burj Khalifa, the world's tallest tower, the Dubai Mall, the world's second largest mall, and the Dubai Marina and Business Bay, both enormous masterplanned developments. In Abu Dhabi, plans were announced for the development of several islands including Reem, Sadiyat and Yas, as it sought to increase housing stock for its growing population.

As the population in both emirates grew, so too did the need for infrastructure. Dubai built the Green and Red lines of its metro, the first of its kind in the region. Traffic congestion was a major problem, and more than \$10bn was invested to expand and modernise the road network. The city's airports and ports were also upgraded.

Similarly, the rapid rise in population caused huge demand growth in electricity and water demand. Despite huge investment in new power, wastewater and desalination plants, it was clear that a better solution needed to be found. Ultimately, Abu Dhabi decided that nuclear energy was the best way forward, and in 2009 awarded a \$20bn contract to build the Arab world's first atomic facility.

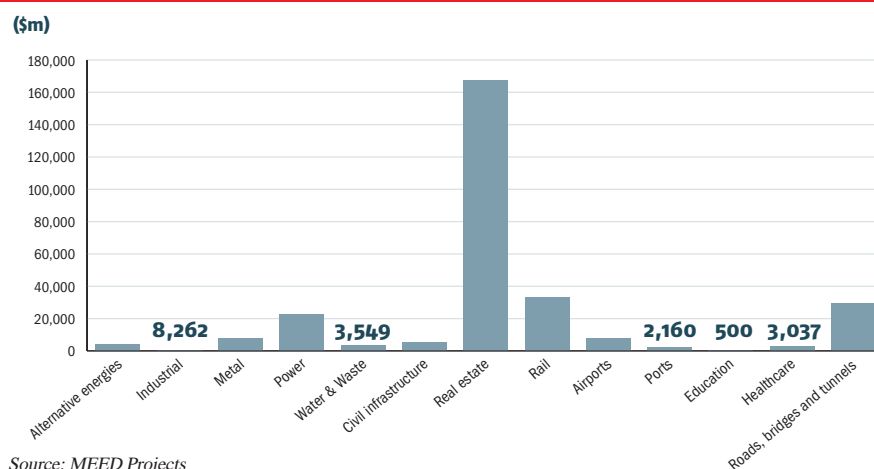
However, the rapid increase in real estate prices resulted in a massive credit-fuelled bubble that burst when the global financial crisis hit in late 2008. Prices since then have fallen by more than 50 per cent and construction activity has ground to a halt. More than \$500bn

worth of projects in the UAE are now on hold, most of them in Dubai.

Yet apart from real estate, the situation is still relatively healthy. The UAE remains a prime investment destination and the government is still committed to attracting investment and improving its infrastructure. Abu Dhabi in particular, with its vast oil wealth, has the ability to stick to its long-term plans to transform the emirate into a cultural, business and entertainment hub.

As such, the outlook is promising outside real estate. Demographic growth will ensure stable levels of healthcare, education, power and water spending. Real estate will not return to the same heady peaks witnessed in 2005-08, but will nonetheless form a considerable portion of future project investments.

Table 3.31 – Value of active, un-awarded projects in the UAE by sector



Source: MEED Projects

Table 3.32 – Selected un-awarded UAE infrastructure projects

Project name	Sector	Budget value (\$m)	Project status	Award date
Aldar - Mina Zayed Port Redevelopment	Real estate	15,000	Design	2011
Dubai Properties - Mohammed Bin Rashid Gardens: Bait Al Hikma	Real estate	13,750	Design	2013
Dubai Properties - Mohammed Bin Rashid Gardens: Commerce House	Real estate	13,750	Design	2013
Dubai Properties - Mohammed Bin Rashid Gardens: Humanitarian House	Real estate	13,750	Design	2013
Dubai Properties - Mohammed Bin Rashid Gardens: Nature House	Real estate	13,750	Design	2013
Union Railway Company - Shah Sulphur Railway	Rail	11,000	Planned	2011
NTA - Railway Network Project (The Trans-Emirates Rail Network)	Rail	10,890	Design	2011
Reem Investments - Al Reem Island: Najmat Abu Dhabi	Real estate	7,910	Design	2011
Abu Dhabi Airports Company - Abu Dhabi Airport: Midfield Terminal Complex	Airports	6,800	EPC PQ	2010
Al Barari Development Company - Dubailand: Al Barari Development: Phase II	Real estate	6,400	Design	2011
DEWA - Lehab Power Plant	Power	5,500	Study	2011
Sorouh Real Estate - Shams Abu Dhabi (Al-Reem Island)	Real estate	5,100	EPC bid	2011
EMAL - EMAL Project: Phase II	Industrial	5,000	Study	2011
Burooj Properties - Sharjah Marina	Real estate	4,100	Design	2011
ADBIC - ICAD: Abu Dhabi Polymer Park	Real estate	4,000	Planned	2011
DEWA - Station Q	Power	4,000	Planned	2014
Dubai RTA - Palm Deira: Metro Line & Tram System	Rail	4,000	Planned	2011
Mizin - Majan(Dubailand)	Real estate	3,900	EPC bid	2011
Abu Dhabi Future Energy Company (Masdar) - Masdar City: Civil infrastructure Works (Phase I)	Civil infrastructure	1,640	Execution	2009
DEWA - Jebel Ali M Plant: Power Plant	Power	1,640	Execution	2007

Source: MEED Projects

PPPs in the GCC

Public-private partnership (PPP) agreements have been used extensively around the world for more than 20 years. While there are many different forms of PPPs, they all share a common principle: the belief that by combining the known strengths of public and private bodies, infrastructure can be delivered in the most efficient manner.

Advocates of the PPP model argue that properly structured PPPs can provide considerable benefits for governments. These include:

- Tapping non-public funding sources for infrastructure development, which means that precious government funds can be allocated to other areas of need
- More efficient project delivery especially as private investors will not normally receive any payment until a facility is complete, which mitigates against cost and time overruns
- Higher quality of facility as the private sector generally has a vested interest not just during construction but throughout the life of a project
- The transfer, or at the very least sharing, of project risk with the private sector

At first sight, the GCC may not appear an obvious candidate to embrace the PPP model, given its vast energy reserves and the traditionally dominant economic role played by the public sector. However, the six states have extensive infrastructure needs driven by strong economic and population growth. All have also had issues with project delivery in the past. Finally, it is a stated goal of governments across the GCC to encourage greater private sector investment at home.

The history of PPPs in the GCC

The GCC is a relative newcomer to the PPP model. It was not until 1994 and the signing of the Al-Manah independent power project (IPP) in Oman that the region had its first infrastructure PPP. Even then, it was another four years before the GCC's inaugural PPP programme was successfully launched in Abu Dhabi.

The restructuring of the Abu Dhabi utility sector proved to be a watershed for PPPs in the Gulf. At a stroke, the newly created Abu Dhabi



Al-Ain: Home to the new UAE university PPP

Water & Electricity Authority (Adwea) succeeded in removing many of the myths surrounding the build-operate concept in the Gulf. Through the Taweelah A-2 independent water and power project (IWPP), it proved that PPPs do not have to take an inordinate amount of time to implement: from the start of developer prequalification to the signing of the key project agreements, it was less than a year. Moreover, the process demonstrated that private power does not necessarily mean more expensive power: the electricity tariff on A-2 was roughly half the cost of existing power production costs in the emirate. Finally, the privatisation programme demonstrated that for PPPs to succeed, a robust and legal framework had to be in place, along with a transparent and competitive tendering process.

The Adwea model had a profound impact on the GCC utility sector, becoming the template for private power. Oman relaunched its own utility privatisation programme in 1999 and was followed in 2000 by Qatar and in 2003 by both Bahrain and Saudi Arabia. In 2009 and 2010, the last two bastions of state generation, Kuwait and Dubai, announced their intention to pursue the private power route.

Ever since the Taweelah A-2 experience, governments have looked to extend the PPP model into other areas of infrastructure delivery. In 2002, the region's first sewage treatment plant (STP) PPP was awarded at Sulaiibiya in Kuwait. Since then, Ajman, Fujairah, Abu

Dhabi and Bahrain have signed STP contracts, while Saudi Arabia and Oman have started to outsource the management of the water and wastewater networks in selected areas.

Management contracts

In recent years, the PPP model has attracted interest in the education sector. Abu Dhabi was the first to embrace the model, awarding government-owned Mubadala Development a 27-year contract in 2006 for a new campus at the UAE University site in Al-Ain.

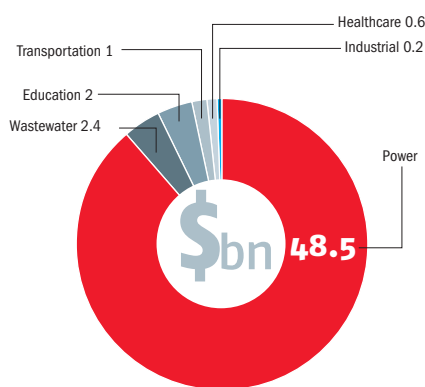
More recently, design-build-finance-operate (DBFO) contracts have been let for the grass-roots New York University and Paris Sorbonne campus projects in the emirate. Since 2006 and the establishment of the Abu Dhabi Education Council (Adec), PPP management contracts have been employed extensively on its school improvement programme. Abu Dhabi has also been at the forefront of PPP development in the healthcare sector. Abu Dhabi Health Services Company (Seha) has taken the first steps along the PPP route signing management agreements with international companies for all the emirate's major hospitals.

Away from utilities, education and healthcare, the PPP model has been employed sparingly. Only Saudi Arabia has successfully concluded PPP agreements in the aviation sector. The region's first airport PPP was signed in 2007 for the Hajj terminal refurbishment project in Jeddah and was followed a year later by the award of three management contracts for airports in Jeddah, Riyadh and Dhahran. The model was also used for the Red Sea gateway port project in Jeddah in 2008 and for a series of industrial cities in Abu Dhabi in 2006.

Despite the evident advances in PPP-structured projects, a considerable number have failed to get off the ground. Initially, the failure rate was high. In the 1990s, unsuccessful PPP projects ranged from the Hidd power plant in Bahrain and the Shuaiba North refurbishment in Kuwait to the Muscat and Salalah wastewater schemes in Oman. These were followed at the start of the new millennium by the demise

of the proposed airport privatisation in Oman and the Failaka, Boubiyan and Subiya causeway PPPs in Kuwait. More recently, the global bank crisis in 2008 derailed another round of projects, with proposed PPPs for Abu Dhabi International airport, the Saudi Landbridge rail scheme, and the Ras al-Zour power and water complex all being restructured as conventional, state-funded engineering, procurement and construction (EPC) contracts.

As of August 2010, however, projects worth over \$50bn had been successfully structured as PPPs in the GCC. The power and desalination sector dominated the market, accounting for over 90 per cent of all PPP transactions and having a total value of \$48.5bn. PPP activity in other sectors was far more subdued with both wastewater and education each delivering

Table 4.1 – PPP deals by sector


Source: MEED Insight

deals worth about \$2bn and transportation, an estimated \$1bn.

In the 16 years since the Al-Manah IPP, the GCC has signed off 35 private power and desalination projects and contracted some 36,000MW of generating capacity and 1,700 million gallons a day (g/d) of desalination from the developer market. This represents just over 40 per cent of installed power and desalination capacity, as of late 2009. All the privately backed projects have been based on a single buyer model with the electricity and water offtake agreements extending for 15 to 25 years, depending on the client. The majority have been structured as build-own-operate (BOO) contracts, although there have been a handful of build-own-operate-transfer (BOOT) agreements in Oman, Saudi Arabia and Qatar.

Table 4.2 – Power and desalination PPPs in the GCC, August 2010

Country	Project	Client	Estimated cost (\$m)	Power capacity (MW)	Desalination capacity (million g/d)	Date of award	Full commissioning	Duration of PWPA/PPA (years)	Type of contract	Shareholders (%)
Bahrain	Al-Ezzal IPP	Finance Ministry	500	966	0	Q3 2004	Q2 2007	20	BOO	GDF Suez (45), Gulf Investment Corporation (45), Bahrain Pension Fund (10)
	Hidd IWPP*	Finance Ministry	1,250	910	90	Q1 2006	Q4 2007	20	BOO	International Power (40), GDF Suez (30), Sumitomo (20)
	Addur 1 IWPP	Finance Ministry	2,500	1,234	48	Q3 2008	Q2 2011	25	BOO	GDF Suez (45), Gulf Investment Corporation (25), Capital Management House (15), GOSI (10), Instrata
Oman	Al-Manah IPP	OPWP	350	289	0	Q2 1994	Q2 1996*	20	BOOT	MENA Infrastructure Fund (33), local private investors (67)
	Al-Kamil IPP	OPWP	200	285	0	Q3 2000	Q2 2002	15	BOO	International Power (65), local private investors (35)
	Salalah power system	OPWP	260	240	0	Q2 2001	Q2 2003	20	BOOT	Malakoff (20), GCC Energy Fund (13), local private investors (67)
	Barka I IWPP	OPWP	420	427	20	Q4 2000	Q2 2003	15	BOO	ACWA Power (58), local private investors (42)
	Sohar IWPP	OPWP	500	585	33	Q2 2004	Q2 2007	15	BOO	GDF Suez (45), four Omani partners - Sogex, Pension Fund, WJ Towell and Zubair Corporation (20), private and institutional investors (35)
	Barka II/Rusail IWPP*	OPWP	900	1343	26	Q4 2006	Q2 2009	15	BOO	GDF Suez (47.5), Mubadala (47.5), local private investor (5)

Table 4.3 – Power and desalination PPPs in the GCC, August 2010 – continued

Country	Project	Client	Estimated cost (\$m)	Power capacity (MW)	Desalination capacity (million g/d)	Date of award	Full commissioning	Duration of PWPA/PPA (years)	Type of contract	Shareholders (%)
	Sur IWP	OPWP	150	0	17	Q1 2007	Q1 2009	22	BOO	Veolia (52), Galfar (48)
	Salalah IPP	OPWP	1,000	445	15	Q4 2009	Q2 2012	15	BOO	Sembcorp (60), Oman Investment Corporation (40)
	Barka 3 IPP	OPWP	850	744	0	Q2 2010	Q2 2013	15	BOO	GDF Suez (46), Bahwan (22), Shikoku (11), Sojitz (11), Public Authority for Social Insurance (10)
	Sohar 2 IPP	OPWP	850	744	0	Q2 2010	Q2 2013	15	BOO	GDF Suez (46), Bahwan (22), Shikoku (11), Sojitz (11), Public Authority for Social Insurance (10)
Qatar	Ras Laffan A IWPP	Kahramaa	700	750	40	Q4 2001	Q2 2004	25	BOT	AES (55), GEWC (25), QP (10), GIC (10)
	Ras Laffan B IWPP	Kahramaa	900	1,025	60	Q1 2005	Q1 2008	25	BOOT	International Power (40), GEWC (55), Chubu (5)
	Mesaieed IPP	Kahramaa	2,300	2,000	0	Q2 2007	Q2 2010	25	BOOT	Marubeni (40), GEWC (40), QP (20)
	Ras Laffan C IWPP	Kahramaa	3,900	2,730	63	Q1 2008	Q1 2011	25	BOOT	GEWC (45), GDF Suez (20), QP (15), Mitsui (10), Chubu (5), Shikoku (5)
Saudi Arabia	Sadaf IPP	Saudi Petrochemical Company	230	250	0	Q3 2003	Q3 2005	20	BOT	National Power Company (75), Taqa (25)
	Tihama ISPP	Saudi Aramco	750	1,074	0	Q4 2003	Q4 2006	20	BOO	International Power (60), Saudi Oger (40)
	Rabigh IWSP	Petro-Rabigh	1,400	600	40	Q2 2005	Q2 2008	25	BOOT	Marubeni (30), JGC (25), Itochu (20), ACWA Power (24)
	Shuaibah IWPP	WEC	2,500	900	194	Q4 2005	Q2 2009	20	BOO	ACWA Power (30), PIF (32), Khazanah Nasional Berhad (12), Malakoff (12), SEC (8), Tenaga Nasional Berhad (6)

Table 4.3 – Power and desalination PPPs in the GCC, August 2010 – continued

Country	Project	Client	Estimated cost (\$m)	Power capacity (MW)	Desalination capacity (million g/d)	Date of award	Full commissioning	Duration of PWPA/PPA (years)	Type of contract	Shareholders (%)
	King Abdulaziz airport desalination unit	Gaca	40	0	6.6	Q1 2007	Q1 2009	20	BOT	Sete, Aquatech, Haji Abdullah Alireza Company, WTD
	Shuaibah IWPP extension	WEC	240	0	33	Q3 2007	Q1 2009	20	B00	ACWA Power (30), PIF (32), Khazanah Nasional Berhad (12), Malakoff (12), SEC (8), Tenaga Nasional Berhad (6)
	Jubail IWPP	Marafiq	3,400	2,750	176	Q4 2006	Q1 2010	20	BOOT	ACWA Power (20), GIC (20), GDF Suez (20), Marafiq (30), SEC (5), PIF (5)
	Shuqaiq IWPP	WEC	1,900	850	47	Q1 2007	Q4 2010	20	B00	ACWA Power (34), PIF (32), GIC (20), SEC (8), Mitsubishi Corporation (6)
	Rabigh IPP	SEC	2,500	1,204	0	Q3 2009	Q1 2013	20	B00	ACWA Power (40), Kepco (40), SEC (20)
	Riyadh PP11 IPP	SEC	2,100	1,730	0	Q2 2010	Q2 2013	20	B00	GDF Suez (20), Al-Jomaih (15), Sojitz (15), SEC (50)
UAE	Taweelah A2 IWPP	Adwea	750	710	50	Q1 1999	Q3 2001	20	B00	Taqa (54), Marubeni (40), Adwea (6)
	Taweelah A1 IWPP*	Adwea	1,470	1,350	84	Q3 2000	Q2 2003	20***	B00	Taqa (54), GDF Suez (20), Total (20), Adwea (6)
	Shuweihat 1 IWPP	Adwea	1,600	1,500	100	Q3 2001	Q2 2004	20	B00	Taqa (54), Sumitomo (20), International Power (20), Adwea (6)
	Umm al-Nar IWPP*	Adwea	2,100	1,550	94	Q2 2003	Q2 2006	23	B00	Taqa (54), International Power (20), Tepco (14), Mitsui (6)
	Taweelah B IWPP*	Adwea	3,000	2,000	160	Q1 2005	Q2 2008	20	B00	Taqa (54), Marubeni (14), BTU (10), Powertek Berhad (10), JGC (6), Adwea (6)

Table 4.3 – Power and desalination PPPs in the GCC, August 2010 – continued

Country	Project	Client	Estimated cost (\$m)	Power capacity (MW)	Desalination capacity (million g/d)	Date of award	Full commissioning	Duration of PWPA/PPA (years)	Type of contract	Shareholders (%)
	Fujairah 1 IWPP*	Adwea	1,550	893	100	Q3 2006	Q1 2009	22	BOO	Taqa (54), SembCorp (40), Adwea (6)
	Taweelah A1 IWPP extension (A1O)	Adwea	300	230	0	Q1 2007	Q2 2009	20	BOO	Taqa (54), GDF Suez (20), Total (20), Adwea (6)
	Fujairah 2 IWPP	Adwea	2,800	2,000	130	Q3 2007	Q4 2010	20	BOO	Taqa (54), International Power (20), Marubeni (20), Adwea (6)
	Shuweihat 2 IWPP	Adwea	2,600	1,500	100	Q3 2008	Q3 2011	25	BOO	Taqa (54), GDF Suez (20), Marubeni (20), Adwea (6)

* Brownfield

*** The PWPA was originally to run until 2023. However, this was extended to 2029 when the project agreements were subsequently signed for the A1 extension (A1O)

ISPP=independent steam and power project; IPP=independent power plant; IWPP=independent water and power project; BOO=build-own-operate; BOOT=build-own-operate-transfer; OPWP=Oman Power & Water Procurement Company; WEC=Water and Electricity Company; SEC=Saudi Electricity Company

Source: MEED Insight

Wastewater

A far greater variety of models have been employed on the 10 or so wastewater PPPs in the region. Saudi Arabia's National Water Company (NWC) has awarded three management contracts as a first step towards privatisation of wastewater infrastructure. Similarly in Oman, government-owned Haya, the developer of the Muscat wastewater network, and the Public Authority for Electricity & Water (PAEW) have international companies on board to manage their networks. In contrast, in the UAE, the four PPP projects are all based on BOOT structures, while a combined BOO/BOOT is in place for the Muharraq STP and trunkline project in Bahrain. As for the pioneering Sulaibiya scheme in Kuwait, it is structured as a BOT project.

Abu Dhabi has been at the forefront of extending the PPP model into social infrastructure. As part of a major restructuring of the education and healthcare sectors, PPP management contracts have been used extensively. In education, international companies are managing over 125 schools on behalf of Adec. Infrastructure for four universities is also being procured through Mubadala on a PPP basis. The four projects, covering the campuses for the UAE University, Zayed University, Paris-Sorbonne University and New York University, have required investment of over \$2bn.

➔ **“Abu Dhabi has been at the forefront of extending the PPP model into social infrastructure”**

Abu Dhabi's Seha has followed a similar path to Adec. All its major hospitals in the emirate are now managed by operators from Europe, the US and Asia under long-term contracts. In terms of beds, the largest foreign manager is US-based Johns Hopkins Medicine, which has responsibility for three facilities with beds totalling over 830. However, it is set to be overtaken by its US counterpart, Cleveland Clinic, in late 2012 when the 364-bed Cleveland Clinic Abu Dhabi (CCAD) project is commissioned. CCAD, which is being developed by Mubadala Healthcare, will increase the number of beds managed by Cleveland Clinic in the emirate to over 1,000 from the 555 currently located in the Shaikh Khalifa Medical City. Mubadala had also been developing the new Tawam hospital scheme in Al-Ain as a

PPP, although the proposed procurement strategy was subsequently placed under review in early 2010.

Outside wastewater, education and healthcare, transportation has been the other sector to generate significant PPP opportunities. Management contracts have been awarded for numerous ports across the region. Saudi Arabia's eight major ports are now managed by private operators under 27 different contracts ranging in length from 10 to 20 years. In Oman, the Port of Rotterdam runs Sohar port under a long-term concession, with The Hague-based APM Terminals having a similar role at the Salalah container terminal. APM is also involved in Bahrain, operating the recently-commissioned Khalifa Bin Salman port, while in the UAE, the leading players are Dubai government-owned DP World and Sharjah-based GulfTainer. In the airport sector, Saudi Arabia has been the leading proponent of PPPs. In 2008, Germany's Fraport won the contract to manage King Abdulaziz International airport in Jeddah and King Khalid International airport in Riyadh, and was joined by Singapore's Changi, which took over management of King Fahd International airport in Dhahran.

The kingdom also became in 2007 the first GCC state to award a build-operate airport contract, awarding the Saudi Binladin Group the Hajj terminal renovation project in Jeddah.

Table 4.4 – Wastewater, waste and water network PPPs in the GCC

Country	Project	Client	Estimated cost (\$m)	Capacity (cm/d)/scope	Date of award
Bahrain	Muharraq STP and trunkline	Works Ministry	310	100,000	Q3 2010
Kuwait	STP Works Ministry Sulaibiya	Public Works Ministry	430	425,000	Q3 2002
Oman	Muscat wastewater management	Haya	na	Managing the city's wastewater network	Q2 2006
	Management of water production and distribution infrastructure	PAEW	42	Managing wastewater production and distribution infrastructure	Q3 2010
Saudi Arabia	Jeddah water management	NWC	61	Managing the city's water and wastewater networks	Q3 2008
	Riyadh water management	NWC	64	Managing the city's water and wastewater networks	Q2 2008
	Mecca/Taif water management	NWC	46	Managing the city's water and wastewater networks	Q3 2010
UAE	Ajman STP and wastewater network	Ajman government	140	80,000	Q1 2003
	Fujairah STP and wastewater network	Fujairah government	150	16,000	Q2 2005
	Abu Dhabi solid waste management	Abu Dhabi Municipality	300	Handling an estimated 2,300 t/d of waste	Q3 2006
	Al-Wathba and Al-Saad STPs, Abu Dhabi	ADSSC	400	300,000/80,000	Q1 2008
	Al-Wathba and Al-Hamah STPs, Abu Dhabi	ADSSC	500	300,000/120,000	Q3 2008

na=not available; STP=sewage treatment plant; t/d=tonnes a day; cm/d=cubic metres a day; ADSSC=Abu Dhabi Sewerage Services Company; NWC=National Water Company; PAEW=Public Authority for Electricity & Water; Source: MEED Insight

Table 4.5 – Adec's PPP schools

Provider	Number of schools managed	Date of initial agreement
Beaconhouse	4	2009
CfBT	35	2006
Cognition	24	2006
Mosaica Education	6	2006
Nord Anglia	24	2006
Sabis	33	2006

Adec=Abu Dhabi Education Council
Source: MEED Insight

Table 4.6 – Seha's PPP hospital management contracts

Manager	Hospital	Number of beds	Date of initial agreement
Bumrumgrad	Mafraq hospital	457	2006
Johns Hopkins Medicine	Tawam	469	2006
	Al-Rahba	135	2008
	Corniche	235	2008
Vamed	Al-Ain	425	2007
Cleveland Clinic	Shaikh Khalifa Medical City	555	2006

Seha=Abu Dhabi Health Services Company
Source: MEED Insight

Table 4.7 – Selected non-utility PPPs in the GCC

Country	Project	Developer/manager	Estimated cost (\$m)	Type of contract	Concession duration (years)	Date of financial close/award
Bahrain	Medical University, Bahrain	Royal College of Surgeons in Ireland	60	BOO	na	Q2 2008
	Khalifa Bin Salman port	APM Terminals	na	Management	25	Q4 2006
Oman	Salalah port	APM Terminals	na	Management	30	1996
	Sohar port	Port of Rotterdam	na	Management	23	2002
Saudi Arabia	Tusdeer container terminal, Jeddah	Red Sea Gateway Terminal Company	530	BOT	40	Q2 2008
	Hajj terminal renovation, Jeddah	Saudi Binladin Group	315	BTO	20	Q4 2007
	King Abdulaziz International airport, Jeddah	Fraport	52	Management	6	Q4 2008
	King Khalid International airport, Riyadh	Fraport	51	Management	6	Q4 2008
	King Fahd International airport, Dhahran	Changi	51	Management	6	Q4 2008
	Eight local ports (with 27 separate management agreements)	Over 25 private companies	na	Management	10-20	na
UAE	Sharjah ports	Gulftainer	na	Management	na	1976
	Mina Saqr port redevelopment	KGL	na	BOT	21	2004
	Industrial City of Abu Dhabi (ICAD 2)	ZonesCorp	153	BOT	30	Q2 2006
	Al-Ain Industrial City, Abu Dhabi	ZonesCorp	51	BOT	30	Q2 2006
	UAE University new campus, Al-Ain	Al-Hikma Development Company (Mubadala)	477	BOOT	27	Q2 2007
	Industrial City of Abu Dhabi (ICAD 3)	ZonesCorp	224	DBFO	30	Q3 2007
	Paris-Sorbonne University, Abu Dhabi	Mubadala	380	DBFO	25	Q4 2008
Zayed University	Al-Maqsed Development Company (Mubadala)	1,150	DBFO	25	Q4 2009	

na=not available; BOO=build-own-operate; BOT=build-operate-transfer; BTO=build-transfer-operate; DBFO=design-build-finance-operate
Sources: MEED Insight; Infrastructure Journal

Regional ports

In total, the GCC has concluded just over 100 PPP-type agreements, of which half can be classified as management contracts. Often seen as a first step towards privatisation, management contracts have been used extensively in the transportation sector with the overwhelming majority being awarded on regional port projects. In recent years, they have also gained in popularity in the education, healthcare and wastewater sectors. The second most commonly used PPP model has been the BOO contract, which makes up about a quarter of all regional deals. More than 95 per cent of BOO contracts in the GCC have been placed in the power and water sector and reflect the model's widespread application in the region's two biggest markets of Saudi Arabia and the UAE. Sector-wise, power and water has also deliv-

Table 4.8 – Number of PPP deals in the GCC by sector and type

	BOO	BOOT	BOT	BTO	DBFO	Management
Power & Water	26	7	3	0	0	0
Water & Waste	0	5	2	0	0	5
Education	0	1	1	0	2	6
Transportation	0	0	1	1	0	34
Healthcare	1	0	0	0	0	6
Industrial zones	0	0	2	0	1	0
Total	27	13	9	1	3	51

na=not available; BOO=build-own-operate; BOT=build-operate-transfer; BTO=build-transfer-operate; DBFO=design-build-finance-operate
Source: MEED Insight

ered the highest number of BOOT and BOT contracts in the GCC, followed by the wastewater sector, where the models have become the preferred choice for PPP contracts. DBFO contracts have been sparingly used in the GCC, having been applied on a handful of education and industrial projects in Abu Dhabi.

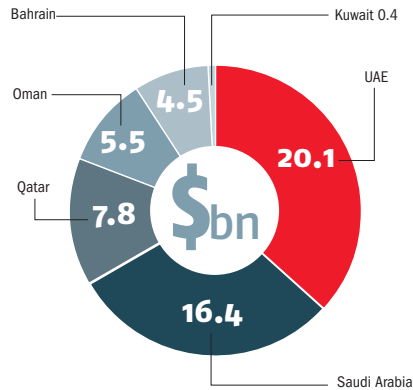
Private investment

The two biggest markets for PPPs have been the UAE and Saudi Arabia on account of the considerable private investment in new private power and desalination capacity. As of September 2010, the UAE had signed off an estimated \$20bn worth of PPPs, with some \$17bn accounted for by Abu Dhabi's utility sector. In Saudi Arabia, power and desalination's share of the PPP market was even higher, making up over 90 per cent of the \$16.4bn total. In contrast, Kuwait had the lowest level of PPP transactions, having concluded just one major scheme, the estimated \$400m Sulaibiya wastewater project. In terms of PPP deals concluded, Saudi Arabia has the highest number at 45.

This reflects its extensive use of management contracts in the transportation and wastewater sectors. In recent years, the BOO model has also risen in popularity as a result of Riyadh's power privatisation programme, while the kingdom has the region's only BTO project in the Hajj terminal renovation scheme. The UAE is in second place in terms of PPP transactions concluded, a position almost entirely due to Abu Dhabi's enthusiasm for the model. The federation has used a broad mix of PPP contracts, having applied all the common structures with the exception of the BTO structure. It has the highest number of concluded BOO and BOOT transactions, as a result of the Abu Dhabi utility privatisation programme, and has been one of the few GCC states to employ the DBFO model. Recent developments in Abu Dhabi's education and healthcare sector have ensured that the UAE has the second highest number of management contracts after Saudi Arabia. Elsewhere, BOO contracts are the most popular PPP models in both Bahrain and Oman, while the BOOT structure has dominated the Qatari market.

Among build-operate contracts however, there remain wide discrepancies in structures even for schemes in the same sector. This is highlighted in the power and water sector. Contract durations vary significantly not only between countries but between clients in the same state. In Saudi Arabia and Bahrain, offtake agreements range between 20-25 years in length, while in Oman, the most recent awards have been for 15 years, compared with

Table 4.9 – Value of PPPs by country, September 2010



Source: MEED Insight

➔ **“There has been even greater variation in the size of stake on offer to private developers”**

20-22 years for older projects. Only in Abu Dhabi and Qatar has there been any consistency with Abu Dhabi offering 20-year power and water purchase agreements and Doha 25-year ones. There has been even greater variation in the size of stake on offer to private developers in the new project companies set up to build and operate the IPPs and IWPPs.

In both Oman and Bahrain, developers have been granted stakes of up to 100 per cent, although there is a stipulation in the sultanate that 35 per cent of the capital has to be sold down to the public within four years of contract signing. In Saudi Arabia, developers have been offered stakes ranging between 50-100 per cent depending on whether the projects are to meet general utility demand or are captive plants for specific industries. For utility-type projects, Saudi Electricity Company (SEC) and the Saline Water Conversion Corporation (SWCC) have generally partnered private developers in project companies. A similar approach has been applied in Doha where Qatar Electricity & Water Company (QEWC) is involved with foreign developers on all the concluded IWPPs and has been joined in most instances by Qatar Petroleum. Again, however, it is in Abu Dhabi where the same template has been applied on all IWPPs. This provides for 40 per cent of the shareholding to be allotted to the foreign developer and the remaining 60 per cent to be split between Abu Dhabi Water & Electricity Authority (Adwea) and Abu Dhabi National Energy Company (Taqa).

Recovery

Assisted by the recovery in the regional project finance market and growing client understanding of the model's merits, the number of PPPs is expected to soar in the years ahead. As of September 2010, there were over 50 PPPs in the Gulf at various stages of planning and requiring investment estimated in excess of \$60bn. While utility projects will continue to dominate the market, several landmark schemes are proposed in sectors where PPP activity has either been limited or non-existent.

Table 4.10 – Number of PPP deals in the GCC by country and type

	BOO	BOOT	BOT	BTO	DBFO	Management
Bahrain	4	1	0	0	0	1
Kuwait	0	0	1	0	0	0
Oman	8	2	0	0	0	4
Qatar	0	3	1	0	0	0
Saudi Arabia	6	2	3	1	0	33
UAE	9	5	4	0	3	13

na=not available; BOO=build-own-operate; BOT=build-operate-transfer; BTO=build-transfer-operate; DBFO=design-build-finance-operate
Source: MEED Insight

Table 4.11 – The differing PPP structures used in the GCC power and water sectors

Country	Contract duration (years)	Type of PPP employed	Developer shareholding (%)
Bahrain	20-25	BOO	90-100
Oman	15-22	BOO/BOOT	100
Qatar	25	BOOT/BOT	40-55
Saudi Arabia	20-25	BOO/BOOT/BOT	50-100
UAE (Abu Dhabi)	20	BOO	40

na=not available; BOO=build-own-operate; BOT=build-operate-transfer; BTO=build-transfer-operate; Source: MEED Insight

These include the first phase of the low-cost housing programme in Bahrain, a major hazardous waste treatment scheme in Oman, the Medina airport scheme in Saudi Arabia and the flagship Mafraq-Ghuweifat highway and car parks programme in Abu Dhabi.

But perhaps the most striking aspect of the renewed activity has been the sudden enthusiasm of both Kuwait and Dubai for the PPP model. Following its establishment in Kuwait in 2008, government-owned Partnerships Technical Bureau (PTB) rolled out in mid-2010 a PPP programme comprising 32 projects and requiring investment of \$28bn. Transportation, real estate, healthcare and utility projects all feature on the list, with the largest being the estimated \$10bn Kuwait national rail scheme. But perhaps the most important will be PTB's first, the planned Ras al-Zour IWPP. For if the project proceeds on schedule, it will demonstrate that PTB has the ability to deliver PPPs in the state.

With huge government surpluses, securing finance is not the overriding factor behind the PPP push in Kuwait, even though the PTB estimates that about \$4bn a year will have to be spent on infrastructure for the foreseeable future. Rather, it is seen as an attempt by the government to deliver projects much more efficiently, grant the private sector a greater economic role and assist with the diversification of the local economy. In contrast, Dubai's entry into the PPP market has been largely driven by financial necessity following the 2009 real estate collapse. PPPs are now being considered for a waste-to-energy project, a water transport scheme and the Hassyan IWPP, which is viewed as the litmus test of both government and investor commitment.

As elsewhere, the GCC has employed a range of different PPPs on its infrastructure projects. They vary from the relatively straight-

forward project, such as the supply of a specific service, to the extremely complex, taking in the design, build, finance and operation of a multi-billion-dollar power station. The type of structure selected largely depends on the government's priorities, requirements and ambitions.

The most common PPP models used in the GCC are:

Management contracts

A management contract usually runs for about five years and grants the private company management responsibility for public infrastructure. The company will generally not invest in facility improvements, but will be expected to improve services and undertake routine maintenance. Management contracts have tended to be used in the GCC as a first step towards greater privatisation, with the selected company being charged with bringing up infrastructure to a level where it can be outsourced to the private sector on a long-term basis. Such contracts are often used for power and water networks. In the GCC, the biggest advocates have been Saudi Ports Authority, NWC, Seha and Adec.

Build-operate-transfer (BOT)

Under the BOT model, the private company builds, finances, operates and maintains the facility for a specified period of time, before transferring the asset to the client. The project will be supported by a long-term offtake arrangement, often on a take-or-pay basis. This guarantees a steady cashflow to the investor throughout the duration of the contract, which normally extends for at least 15 years. In the GCC, BOT structures have been used intermittently on wastewater, industrial and transportation projects. They were also



➤ Kuwait: Pushing ahead with more than 30 PPPs

employed on the early power and desalination projects, although in recent years, there have been very few. A slight variant to the BOT model is the build-own-operate-transfer (BOOT) contract, which has been used more frequently on utility projects across the region.

Build-own-operate (BOO)

The BOO contract is similar to the BOT and BOOT models with the exception that ownership of the asset does not return to the client at the end of the contract period. The structure has been the most popular PPP structure in the GCC market on account of it being used on three quarters of all private power and desalination projects.

Build-transfer-operate (BTO)

Under the BTO model, a private company takes responsibility for financing and building a facility, whose title on completion is transferred back to the client. However, the private party will operate the facility on behalf of the client under a long-term agreement. BTO contracts have been rarely used in the GCC, with the notable exception of the Hajj terminal refurbishment project at King Abdulaziz International airport in Jeddah. The project is also one of the very few PPPs in the region to have been wholly Islamic-financed.

Design, build, finance, operate (DBFO)

Under the DBFO model, the private party takes responsibility for everything from design through to operations and maintenance. Like build-operate contracts, DBFOs are also long term. They have been used on the Paris-Sorbonne University campus and ICAD 3 projects in Abu Dhabi and are set to be applied on a number of large-scale, upcoming transportation and building projects.

Table 4.22 – Selected planned PPPs in the GCC, September 2010

Country	Project	Sector	Client	Scope	Anticipated date of award	Expected type of contract	Status
Bahrain	Waste to energy plant	Water & Waste	Municipalities Ministry	Plant with capacity to generate 25MW	Q3 2010	BOT	Cnim signed the 25-year contract in June 2010; financial close awaited
	Low-cost housing programme, phase 1	Real estate	Housing Ministry	5,000 units	2010	DBFO	Two developer bids submitted in August 2010
	Tubli STP	Water & Waste	Works Ministry	Acquisition and expansion of existing plant	2011	B00	RFQ due to be issued in Q3 2010
	Addur 2 IPP	Power & Water	Finance Ministry	Up to 1,200MW	2011/12	B00	Planned
Kuwait	Umm al-Hayman PPP	Water & Waste	PTB	Over 600,000 cm/d of new capacity	2012	BOT	Prequalification for advisory contract launched in Q3 2010
	Failaka island development	Real estate	PTB	Development of the island into a tourist resort	2012	BOT	Prequalification for advisory contract launched in Q3 2010
	Rehabilitation hospital	Healthcare	PTB	Development of a rehabilitation centre	2012	BOT	Prequalification for advisory contract launched in Q3 2010
	Al-Zour North IWPP	Power & Water	PTB	Plant of 1,500MW and 100 million g/d	2011	BOT	Advisers on board; prequalification of developers launched in Q3 2010
	Combined solar power project	Power & Water	PTB	Plant of 250MW	2011	BOT	Tender expected to be issued by end of 2010
	Kuwait International airport development	Transportation	PTB	Five separate projects covering maintenance, cargo, catering and a hotel	2011/12	BOT	Advisory tender issued in August 2010
	Kuwait national rail road	Transportation	PTB	An estimated 135 kilometres of track	2012	DBFO	Prequalification for advisory contract launched in Q3 2010
	Labour cities	Real estate	PTB	Six labourer cities	2011	BOT	Roedl & Partners is the consultant; tendering on the first cities expected in late 2010
	Kuwait metro	Transportation	PTB	An estimated 170 kilometres of track	2011	DBFO	Advisory team led by Ernst & Young appointed in August 2010

Table 4.22 – Selected planned PPPs in the GCC, September 2010 – continued

Country	Project	Sector	Client	Scope	Anticipated date of award	Expected type of contract	Status
	Municipal solid waste treatment plant	Water & Waste	PTB	na	2011	BOT	Baker Tilly is carrying out a feasibility study
Oman	Sur IPP	Power & Water	OPWP	Plant of 1,500MW	2011	BOO	Developer bidding launched in Q3 2010
	Ghubrah desalination plant	Power & Water	OPWP	RO plant of 42 million g/d	2012	BOO	Selection of engineering consultant under way
	Hazardous waste treatment plant	Water & Waste	OESHCo	A central complex to cater for all the sultanate's hazardous waste	2011	BOOT	Developer bids due to be submitted in Q4 2010
Qatar	Desalination plant	Power & Water	Kahramaa	Plant of about 40 million g/d	2010	BOOT	Selection of a developer awaited
	Management of wastewater networks	Water & Waste	Ashghal	Management of the 5,000-kilometre network	2011	Management	Feasibility study contract tendered in early 2010
	Solar-powered desalination plants	Power & Water	Kahramaa	Establishing desalination plants to support agriculture	tbd	tbd	Feasibility study being undertaken by Sogreah
Saudi Arabia	Qurrayah IPP	Power & Water	SEC	Plant with capacity of about 1,800MW	2011	BOO	Due to be tendered among developers in Q4 2010
	Medina airport, phase 1	Transportation	Gaca	New capacity for 8 million passengers a year	2011	BOT	Developer bids due to be submitted in late 2010
	Riyadh metro/light rail	Transportation	Arriyadh Development Authority	Construction of 39 kilometres of line with stations	tbd	tbd	Planned
	Jeddah monorail	Transportation	Transport Ministry	City-wide network	tbd	tbd	Planned
	Medina water management PPP	Water & Waste	NWC	Managing the wastewater and water networks	2011	Management	Planned. Contract expected to be for five years
	Dammam/Al-Khobar water management PPP	Water & Waste	NWC	Managing the wastewater and water networks	2011/12	Management	Planned. Contract expected to be for five years
UAE	Shams 1 solar complex, Abu Dhabi	Renewables	Masdar	Concentrated solar plant of 100MW	2010	BOO	Consortium of Abengoa and Total selected in mid-2010 as the foreign partner; financial close awaited

Table 4.22 – Selected planned PPPs in the GCC, September 2010 – continued

Country	Project	Sector	Client	Scope	Anticipated date of award	Expected type of contract	Status
	Shuweihat 3 IPP, Abu Dhabi	Power & Water	Adwea	Plant of 1,600MW	2011	BOO	Five developer groups submitted proposals in July 2010
	New York University campus, Abu Dhabi	Education	Mubadala	Campus for up to 3,000 students	2010	DBFO	Contractor selected in April 2010; financial close expected in 2011
	Mafraq-Ghuweifat highway, Abu Dhabi	Transportation	Department of Transport	Construction of 327 kilometres of highway	2010	DBFO	Preferred bidder due to be selected in Q4 2010
	Car parking programme	Transportation	Department of Transport	Construction of six car parks	2011	DBFO	Prequalification for developers closed in September 2010
	Waste to energy plant	Water & Waste	Dubai Municipality	Plant with capacity for 6,500 t/d of waste	2011	BOT	Developer bids due in late 2010
	Dubai water transport scheme	Transportation	RTA	Operating ferries and building docking stations	2011	tbd	Adviser selection launched in Q3 2010
	Hassyan IWPP, Dubai	Power & Water	Dewa	Plant of 1,500MW and 120 million g/d	2011	BOO	Advisory team led by HSBC selected in mid-2010

BOT=build-operate-transfer; DBFO=design-build-finance-operate; BOO=build-own-operate; BOOT=build-own-operate-transfer; RFQ=request for qualifications; tbd=to be determined; STP=sewage treatment plant; RO=reverse osmosis; IPP=independent power plant; PPP=public-private partnership; IWPP=independent water and power project; g/d=gallons a day; t/d=tonnes a day; PTB=Partnerships Technical Bureau; OPWP=Oman Power & Water Procurement Company; OESHCo=Oman Environmental Services Holding Company; SEC=Saudi Electricity Company; Gaca=General Authority for Civil Aviation; NWC=National Water Company; RTA=Roads & Transport Authority
 Source: MEED Insight

GCC project finance market overview

During 2005 to the end of August 2010 projects worth a total of \$70bn have secured funding from the private sector, with the total amount of debt raised being \$55bn. This is based on project finance being defined as the long-term funding of infrastructure projects through a structure where projects investors are repaid from the project company, and have no recourse to the project sponsors.

The leading markets for project finance have clearly been the UAE and Saudi Arabia, where \$32bn and \$14bn of funding respectively has been arranged for projects between 2005 and 2010. Together, the two nations accounted for 66 per cent of all project finance deals in the region.

Qatar has been the third largest market with \$13.4bn of project finance over the same period, while in Kuwait there have been no project finance transactions during the last five years.

Oman raised a total of \$6.6bn in project finance, and the country has a fairly well developed reputation with project developers and lenders despite its more constrained fiscal position compared with other states in the GCC.

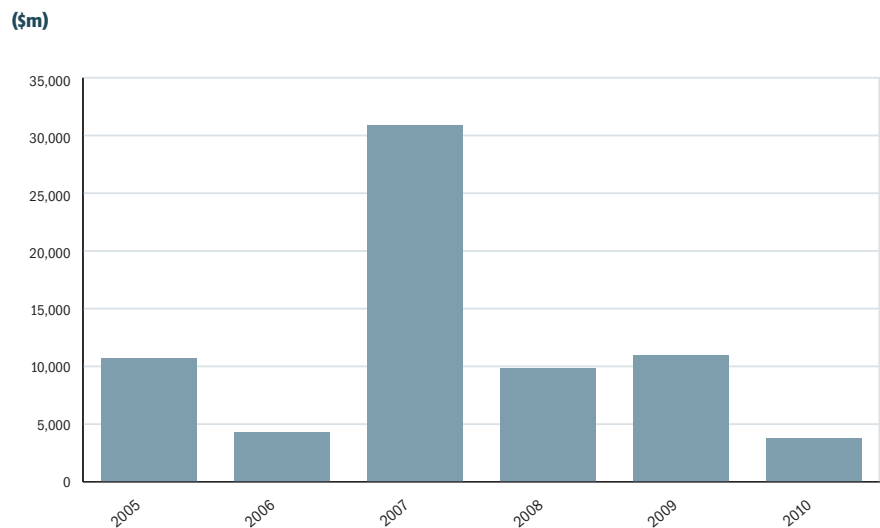
The huge role that the UAE has played in developing project finance in the region is concentrated almost entirely in Abu Dhabi alone. Dubai largely financed its infrastructure developments through direct government spending, short-term bank borrowing, or the capital markets.

Attractive environment

In contrast, Abu Dhabi developed one of the region's most attractive environments for project finance, led by Abu Dhabi Water & Electricity Authority (Adwea) and its highly successful independent water and power project (IWPP).

Saudi Arabia's project finance market is much larger than suggested by the figures, as it has embarked on a large number of privately financed deals in the oil and gas and petrochemicals sectors. Excluding oil and gas

Table 5.1 – Value of GCC project financings by year, 2005-10



Source: MEED Insight

its project finance market is concentrated on power and water projects.

Kuwait has not witnessed a single infrastructure project finance deal during the period. The state has been a lone bastion in resisting project finance even though it was one of the first to push ahead with the BOT model with its 2002 Sulaibiya wastewater treatment plant. However, it recently announced plans to develop its first IWPP, suggesting it is now starting to embrace private sector financing.

A number of project finance deals have gone ahead in Bahrain, with the larger projects occurring in the power and water sector, although private finance has also been used in metals and social infrastructure projects. Oman has also raised \$6.6bn, largely for the development of utilities projects.

Middle East project finance deals have not gone unaffected by the global financial crisis, as evidenced by the sharp fall-off in deal volume since 2007. The Middle East was one of the most active regions for project finance deals in the world.

In 2007 over \$30bn worth of projects secured private sector finance. The following year this dropped to \$9.9bn as banks around the world became increasingly risk averse and focused on short-term investments.

The associated collapse in oil prices in 2008 led many regional governments to carefully consider future investment plans. It also hit the viability of many planned projects leading to several schemes being put on hold or delayed. As the financial markets have stabilised in late 2009 and 2010, activity in the project finance sector has once again resumed, although at lower levels than prior to the global financial crisis.

The result of the credit crunch has been a significant shift in the attitudes of lenders towards project assets. Many banks lost interest in low yielding assets like project finance, which typically has tenors of 15 years or even longer. From the beginning of 2010 to the end of August 2010 just \$3.8bn of project finance were arranged. Although several more deals could reach financial close before the end of

the year the market is unlikely to become as active as it was during 2007.

The long lead time on project finance transactions before they hit the financing markets means that many launched in 2008 were based on the banking environment of 2007 when liquidity was abundant.

Sponsors and financial advisers are now much more aware of the banking environment, and projects launched in 2009 and 2010 have been much more cognisant of the more constrained financing environment.

Sectors

Of the 60 project finance transactions concluded, 35 were in the power and water sectors. Utilities have been the major focus of the project finance market for two reasons.

The first is the regional shortage of power that has led governments to focus their non-oil investment strategies on the provision of energy. Secondly, power projects are structured in such a way as to make them attractive for the private sector. Typically, a government agency, usually a power authority, signs a contract to buy the power from the plant for a specific number of years. This agreement often carries a guarantee from the Finance Ministry. The nature of these contracts gives the lenders comfort that the project company will receive a steady income stream from the sale of the power produced, while also giving the assurances that the government stands firmly behind the project.

Metals projects have also been active as the region has tried to diversify its industrial base away from hydrocarbons. Several aluminium and steel projects have been financed around the region during the past few years, raising a total of \$19bn.

Metals projects typically require the lenders to take on more of the market risk of the price of the commodities produced. However, the access to cheap feedstock often makes GCC metals producers much more profitable than international competition, giving a degree of assurances to the lenders.

Pricing

The most dramatic shift in project finance deals over the past five years has undoubtedly been in pricing of debt. In the build up to 2007, when the market peaked, pricing was slowly decreasing with each successive deal.

The major debt tranche on the Qatar Aluminium (Qatalum) project was \$2.3bn in size, and pricing started at just 40 basis points above the London interbank offered rate (Libor).

Since 2008 the downtrend on pricing has

→ “The most dramatic shift in project finance deals over the past five years has been in pricing of debt”



→ Riyadh station: the sole railway on the peninsula

reversed sharply. Recent transactions have witnessed pricing levels far in excess of that. The Riyadh power project PP11, which closed in June 2010, featured a debt tranche of \$630m, with pricing starting at 250 basis points above Libor, rising to 340 basis points during the life of the loan.

Although pricing of debt shows signs of stabilising, it is unlikely to approach the levels reached in 2007 for some time.

However, the overall impact of rising spreads above Libor on debt servicing costs can be mitigated. In 2007 the interest rate set by the US Federal Reserve was around 5 per cent. This brings the total interest level to around 6 per cent.

By 2010 government-set interest rates were at or near zero, bringing the total financing cost of a project funded at Libor plus 300 basis points to just over 3 per cent. Sponsors have the option to use interest rate swaps on the financial markets to lock in their debt servicing costs at around the same price they were paying in 2007. In this way the overall financing costs for projects financed in 2009 and 2010 can work out at roughly the same level as financing costs for deals arranged in 2005 to 2007.

The exception to the upward trend in pricing has been Saudi Arabia. After some initial upward movement in the wake of the global financial crisis, the Saudi market has since

improved considerably. The very liquid banking sector has begun to show signs of pushing down lending margins through their hunger to book new assets, although this is a phenomenon currently limited to the local banks lending in Saudi riyals.

Participants

During the height of the oil boom, GCC project finance deals were attracting the interest of lenders from around the world.

Since the onset of the financial crisis this number has been dramatically reduced. Some 45 banks were actively pursuing project finance deals in the region in 2007, and by early 2009 this was thought to be down to about 12.

The Marafiq IWPP at the peak of the market boom in 2007 featured 17 banks in a single tranche of the deal. The most recent power deal in Saudi Arabia attracted only eight banks in its largest tranche.

The key international banks that remain active in the GCC project finance market are HSBC, BNP Paribas, Credit Agricole, Societe Generale, Royal Bank of Scotland, Citigroup and ING, and a few other smaller players.

As sponsors have tried to diversify their funding sources because of the problems in Western banks, several Chinese lenders have begun to lend into the region. So far though, their presence has been limited and very selective, based on supporting Chinese businesses that have won contracts in the GCC.

HSBC, BNP Paribas, Credit Agricole and Citigroup have emerged from the financial crisis as the forerunners in terms of project finance advisory roles. The majority of the region's largest projects tend to involve at least one of those four as a financial adviser.

Regional banks tend not to operate outside their domestic markets, and that leaves UAE projects financed by local banks, for example.

Use of multi-currency tranches

The majority of the \$55bn debt raised has been in the form of syndicated lending from a group of international and local banks, typically lending in dollars.

As a result of the global financial crisis many international banks retreated from project lending and regional banks found their access to dollar funding increasingly limited. This led to local banks primarily funding projects in their local currency, leading to projects with dual tranches split between US dollars and local currencies.

The PP11 power project which raised \$1.7bn in debt in mid-2010 was one of the



⚡ **Dubai: the credit crunch has forced it to adopt private power**

most recent examples of this. A group of four Saudi-based banks provided \$656m worth of commitments in Saudi riyals. A further \$630m was provided largely by international banks.

Nearly every deal financed in 2009 and 2010 involved fund raising in more than one currency. This trend looks set to continue throughout 2011 as regional banks continue to suffer from poor access to dollar deposits, and more extensive reserves of local currency liquidity enabling them to lend much more cheaply in their local currency.

This has left many project sponsors having to hold the burden of foreign exchange risk, something that in the past they had been reluctant to do. However, the difference in interest costs that local currency can enjoy has created a situation where it is often better for them to take on that risk.

Bank lending

Banks have been the largest source of project finance in the GCC, largely through syndicated loans. This changed in 2008 as banks became reluctant to take on the risk of underwriting several hundred million dollars in the hope they could sell down their exposures later.

As a result, most project finance deals in 2008 to 2010 were arranged on a club basis, rather than through a typical syndication. This involved banks agreeing to fund projects on a take and hold basis.

➔ “Islamic finance holds great potential for the GCC projects market”

While this has enabled deals to continue to be done, it has added to the complexity of managing project finance transactions. Rather than each bidder for a project submitting fully underwritten proposals, with the banks agreeing a set of terms that they must convince other banks to agree to, a more time-consuming approach has to be taken.

Once a preferred bidder is selected, a financial adviser contacts a group of banks to solicit their interest in funding the project. They then submit proposals outlining how much funding they could provide, and what the interest rates on the loans would be. The financial adviser then has the job of finding a commonly agreed set of terms from the different offers that

attracts enough interest from the banks, while also being a good deal for the project sponsor.

Islamic finance

Islamic finance holds great potential for the GCC projects market. The large economies of the region coupled with a large portion of the population that is eager to invest along sharia principles has the potential to create Islamic banks of substantial size.

So far the development of banks that are large enough to be interested in making long-term low yielding investments has been limited. Even those Islamic banks in the region which are active in project finance very seldom lend outside of their home country.

There are also concerns in the market about how much additional liquidity is really raised through Islamic tranches, since most banks have the capability to lend in both conventional and Islamic tranches, and often prefer conventional deals as they are less complex.

An example of this is the Dolphin Energy refinancing in mid-2009. Attempts to include a \$500m Islamic loan in the \$3.5bn refinancing were dropped after the conventional loan was massively oversubscribed, while the Islamic tranche only managed to secure commitments totalling \$200m.

There is unlikely to be enough purely Islamic liquidity to fund a large project, meaning that most projects wishing to use Islamic

Table 5.2 – Value of GCC project financings by year and sector, 2005-10 (\$m)

Sectors	2005	2006	2007	2008	2009	2010
Power & Water	6,609	3,753	14,190	5,235	8,263	2,253
Industrial & Metals	2,400	150	13,284	1,135	700	1,500
Civil infrastructure	0	204	224	165	0	0
Telecoms	0	0	0	1,445	0	0
Ports	1,650	0	1,191	450	248	0
Water & Waste	0	140	1,166	984	599	0
Airports	0	0	315	0	0	0
Education	0	0	477	443	1,159	0

Source: MEED Insight

finance will need to access both conventional and sharia-compliant banks to raise funds.

That means the real deciding factor over the use of Islamic tranches is largely sponsor preference and the desire to foster the development of Islamic banking.

Project bonds

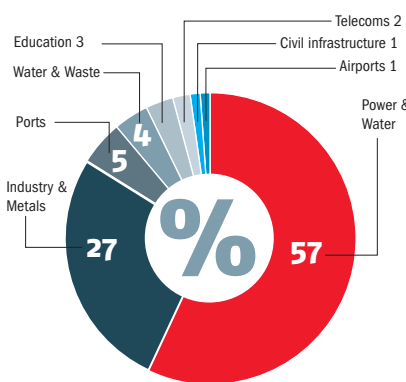
Excluding project sponsors in the oil and gas sector, there have been no project bonds so far in the 2005 to 2010 period. Several are under consideration. The Emirates Aluminium (Emal) project had been close to issuing a bond in 2008 but the plan was put on hold in the wake of the global financial crisis. The company now hopes to issue one of about \$1bn by early 2011.

The Mafraq-Ghweifat road project in the UAE is also expected to feature a bond as part of its financing, though this is unlikely to be issued until late 2011.

The development of a project bond market has been hindered by the turbulence in global capital markets, and also the difficulties in structuring a deal to be attractive to capital markets investors. Financial investors are often put off the idea of project bonds because of the construction risk that they entail.

However, project bonds may prove to be a more utilised form of refinancing existing project debt once a development is operational and generating cash flow. This is because bond

Table 5.3 – Breakdown of GCC project financings by sector



Source: MEED Insight

investors are often unwilling to take on the construction risk associated with investing in a new project development. An operational asset may be attractive to the bond markets because of proven, stable cash flows, and strategic importance to the government-related sponsor. It may also be attractive to banks that hold long-term project debt on their books, as it offers them an early exit from a project.

Export credit agencies

Export credit agencies (ECAs) play an important role in financing projects in the GCC. Over the past five years ECAs have been involved in direct lending to projects of around \$10bn. In addition to this is the use of ECAs to provide guarantees to loans that are funded by banks.

Since the onset of the financial crisis their role has increased as bank liquidity has dried up. Financial advisers now say that the ability to access ECA support is a key factor to a successful project deal.

The ability to access ECA financing is also starting to impact contracting strategies, with sponsors increasingly looking at what sort of financial support bidders are able to offer.

Japan Bank for International Co-operation (JBIC) is one of the key ECAs in the GCC. It has the ability to make large direct loans to projects, making it a favourable lending source. Several times in the past five years it has contributed over \$1bn to a single project. In the



Abu Dhabi: the oil-rich emirate has led the way in PPP deals

financing for the Shuweihat 2 IWPP JBIC provided around the same amount as the commercial banks, \$1.1bn, and was an integral part in getting the deal done.

Infrastructure funds

Infrastructure funds have so far played a limited role in the GCC project finance market. Although a number of funds have been created they have struggled to find projects to invest in. This is because it is difficult for the funds to get high yielding assets in the infrastructure area, particularly as project development costs in the region have been rising so far.

The difficulties these funds have had in finding investments is illustrated by the closure in March 2010 of the \$250m infrastructure fund launched by UBS and Invest AD. The fund was closed due to weak appetite from investors.

Instrata Capital invested in the Al-Dur IWPP in Bahrain in 2009, one of the few deals done by infrastructure funds in project finance in the past few years. Instead, infrastructure funds have largely been investors in operational assets, taking part in secondary market transactions. For example, the sale of three operational power plants by the US developer AES Corporation and an infrastructure fund launched by the Islamic Development Bank (IDB) attracted a lot of interest from financial

investors, in addition to power plant operators. The IDB fund was keen to capitalise on its investment, and many other funds were eager to step into its place.

Prospects

Despite the slowdown in activity in 2008-10, the prospects for project finance in the region are strong. In addition to a continuing pipeline of new projects in established sectors like power and water and industry, governments are beginning to seek private finance in several new sectors of the economy.

Abu Dhabi has announced plans to invest \$68bn through the Department of Transport in order to meet the emirate's development goals for its 2030 masterplan. This includes the region's first privately financed road, the \$2.7bn Mafrag-Ghweifat road. Subsequent projects will include a metro, light rail, and other road and public transport improvements.

In Bahrain, the government is developing the region's first housing project using project finance. A pilot scheme involving the construction of 5,000 units is currently being tendered, and the scheme will be expanded to cover the construction of 20,000 homes.

If successful, the Bahrain housing project is expected to act as a template for other parts of the GCC, most notably Oman and Saudi Ara-

bia, that require the supply of large volumes of low-income housing.

The Jabal Sayid copper and gold mining project in Saudi Arabia is the country's first private mining project and is expected to be followed by further projects in the sector. Saudi Arabia is also currently tendering a public-private partnership (PPP) contract for the development of Medina airport. The financing for that deal is expected to be launched into the bank market in 2011.

In addition to new sectors opening up to the potential of private finance, new markets are also showing signs of embracing the project finance model. Kuwait is beginning to develop the regulations and government oversight needed to embark on plans for 32 projects with the involvement of the private sector.

The first of these new projects to seek financing will be the Al-Zour North IWPP which should be tendered in early 2011 after the passage of the PPP law.

Dubai is also embracing private finance as a way of funding infrastructure developments in the wake of the government's debt crisis. Dubai Electricity & Water Authority (Dewa) is developing its first IWPP at Hassyan, and the Roads & Transport Authority is also looking at the PPP model for developing transport infrastructure in the emirate.

Table 5.4 – Selected planned project financings in the GCC

Project	Client	Country	Sector	Anticipated construction award date	Likely contract model	Scope	Status
Energy from waste plant	Municipalities Ministry	Bahrain	Power & Water	Q3 2010	BOT	Plant with capacity to generate 25MW	Cnim signed the 25-year contract in June 2010; financial close awaited
Low-cost housing programme, phase 1	Housing Ministry	Bahrain	Real estate	2010	DBFO	5,000 units	Two developer bids submitted in August 2010
Tubli STP	Works Ministry	Bahrain	Power & Water	2011	BOO	Acquisition and expansion of existing plant	RFQ due to be issued in Q3 2010
Addur 2 IPP	Finance Ministry	Bahrain	Power & Water	2011/12	BOO	Up to 1,200MW	Planned
Umm al-Hayman STP	PTB	Kuwait	Power & Water	2012	BOT	Over 600,000 cm/d of new capacity	Prequalification for advisory contract launched in Q3 2010
Failaka island development	PTB	Kuwait	Real estate	2012	BOT	Development of the island into a tourist resort	Prequalification for advisory contract launched in Q3 2010
Rehabilitation hospital	PTB	Kuwait	Healthcare	2012	BOT	Development of a rehabilitation centre	Prequalification for advisory contract launched in Q3 2010
Al-Zour North IWPP	PTB	Kuwait	Power & Water	2011	BOT	Plant of 1,500MW and 100 million g/d	Advisers on board; prequalification of developers launched in Q3 2010
Combined solar power project	PTB	Kuwait	Power & Water	2011	BOT	Plant of 250MW	Tender expected to be issued by end of 2010
Kuwait International Airport development	PTB	Kuwait	Airports	2011/12	BOT	Five separate projects covering maintenance, cargo, catering and a hotel	Advisory tender issued in August 2010
Kuwait national rail road	PTB	Kuwait	Rail	2012	DBFO	An estimated 135 kilometres of track	Prequalification for advisory contract launched in Q3 2010
Labour cities	PTB	Kuwait	Real estate	2011	BOT	Six labourer cities	Roedl & Partners is the consultant; tendering on the first cities expected in late 2010
Kuwait metro	PTB	Kuwait	Rail	2011	DBFO	An estimated 170 kilometres of track	Advisory team led by Ernst & Young appointed in August 2010
Municipal solid waste treatment plant	PTB	Kuwait	Power & Water	2011	BOT	na	Baker Tilly is carrying out a feasibility study
Mutlaa township development	PAHW	Kuwait	Real estate	2011	BOT	Development of more than 25,000 housing units	Expressions of interest recently requested
Sur IPP	OPWP	Oman	Power & Water	2011	BOO	Plant of 1,500MW	Developer bidding launched in Q3 2010
Ghubrah desalination plant	OPWP	Oman	Power & Water	2012	BOO	RO plant of 40 million g/d	Planned

Table 5.4 – Selected planned project financings in the GCC – continued

Project	Client	Country	Sector	Anticipated construction award date	Likely contract model	Scope	Status
Hazardous waste treatment plant	OESHCo	Oman	Power & Water	2011	BOOT	A central complex to cater for all the sultanate's hazardous waste	Developer bids due to be submitted in Q4 2010
Desalination plant	Kahramaa	Qatar	Power & Water	2010	BOOT	Plant of about 40 million g/d	Selection of a developer awaited
Management of wastewater networks	Ashghal	Qatar	Power & Water	2011	Management	Management of the 5,000-kilometre network	Feasibility study contract tendered in early 2010
Mesaieed aluminium smelter complex, phase 2	Qatalum	Qatar	Industrial & Metals	2012	EPCM	na	Under study dependent on global demand and performance of first phase
Solar-powered desalination plants	Kahramaa	Qatar	Power & Water	tbd	tbd	Establishing desalination plants to support agriculture	Feasibility study being undertaken by Sogreah
Qurrayah IPP	SEC	Saudi Arabia	Power & Water	2011	BOO	Plant with capacity of about 1,800MW	Due to be tendered among developers in Q4 2010
Medina airport, phase 1	Gaca	Saudi Arabia	Airports	2011	BOT	New capacity for 8 million passengers a year	Developer bids due to be submitted in late 2010
Jizan aluminium smelter	Sino-Saudi Jizan Aluminium	Saudi Arabia	Industrial & Metals	2012	BOO	335,000 t/y of primary aluminium	Financial feasibility study ongoing
Riyadh metro/light rail	Arriyadh Development Authority	Saudi Arabia	Rail	tbd	tbd	Construction of 39 kilometres of line with stations	Planned
Jeddah monorail	Transport Ministry	Saudi Arabia	Rail	tbd	tbd	City-wide network	Planned
Medina water management PPP	NWC	Saudi Arabia	Power & Water	2011	Management	Managing the wastewater and water networks	Planned. Contract expected to be for five years
Dammam/Al-Khobar water management PPP	NWC	Saudi Arabia	Power & Water	2011/12	Management	Managing the wastewater and water networks	Planned. Contract expected to be for five years
Shams 1 solar complex, Abu Dhabi	Masdar	UAE	Power & Water	2010	BOO	Concentrated solar plant of 100MW	Consortium of Abengoa and Total selected in mid-2010 as the foreign partner; financial close awaited
Shuweihat 3 IPP, Abu Dhabi	Adwea	UAE	Power & Water	2011	BOO	Plant of 1,600MW	Five developer groups submitted proposals in July 2010
New York University campus, Abu Dhabi	Mubadala	UAE	Education	2010	DBFO	Campus for up to 3,000 students	Contractor selected in April 2010; financial close expected in 2011
Mafraq-Ghuweifat highway, Abu Dhabi	Department of Transport	UAE	Roads, bridges and tunnels	2010	DBFO	Construction of 327 kilometres of highway	Preferred bidder due to be selected in September 2010

Table 5.4 – Selected planned project financings in the GCC – continued

Project	Client	Country	Sector	Anticipated construction award date	Likely contract model	Scope	Status
Dubai water transport scheme	RTA	UAE	Ports	2011	tbd	Operating ferries and building docking stations	Adviser selection launched in Q3 2010
Hassyan IWPP, Dubai	Dewa	UAE	Power & Water	2011	BOO	Plant of 1,500MW and 120 million g/d	Advisory team led by HSBC selected in mid-2010
Taweelah aluminium smelter, phase II	Emal	UAE	Industrial & Metals	2012	EPCM	Second phase with 2,000MW of new capacity	Planned
Taweelah C IWPP	Adwea	UAE	Power & Water	2011	BOO	Around 2,500MW and 55 million g/d	Under study
Jubail polysilicon plant	PMD/FEB	Saudi Arabia	Industrial & Metals	2011	EPC	Capacity of 7,500 t/y	Under study, GIB has been appointed financial adviser
Yanbu integrated smelter complex (copper, lead and zinc)	Tasnee	Saudi Arabia	Industrial & Metals	2011	EPC/EPCM	Capacity of 100,000 t/y each of copper, lead and zinc ingots	Planned
Deba IPP, phase 1	SEC	Saudi Arabia	Power & Water	2011	BOO	500MW	Planned
Deba IPP, phase 2	SEC	Saudi Arabia	Power & Water	2013	BOO	500MW	Planned
Ras al-Zour IPP, phase 1	SEC	Saudi Arabia	Power & Water	2012	BOO	630MW	Planned
Ras al-Zour IPP, phase 2	SEC	Saudi Arabia	Power & Water	2012	BOO	1,260MW	Planned
Ras al-Zour IPP, phase 3	SEC	Saudi Arabia	Power & Water	2013	BOO	630MW	Planned
Ras al-Zour IPP, phase 4	SEC	Saudi Arabia	Power & Water	2016	BOO	1,890MW	Planned
Shuqaiq IPP, phase 1	SEC	Saudi Arabia	Power & Water	2011	BOO	1,200MW	Planned
Shuqaiq IPP, phase 2	SEC	Saudi Arabia	Power & Water	2012	BOO	400MW	Planned
Shuqaiq IPP, phase 3	SEC	Saudi Arabia	Power & Water	2013	BOO	400MW	Planned
Shuqaiq IPP, phase 4	SEC	Saudi Arabia	Power & Water	2015	BOO	400MW	Planned
Shuqaiq IPP, phase 5	SEC	Saudi Arabia	Power & Water	2016	BOO	400MW	Planned
Shuqaiq IPP, phase 6	SEC	Saudi Arabia	Power & Water	2018	BOO	800MW	Planned
Muharraaq STP	Works & Housing Ministry	Bahrain	Power & Water	2010	BOO	100,000 cm ³ /d	Concession award due imminently
Solar power plant	PAEW	Oman	Power & Water	2011	BOO	Up to 200MW	Feasibility study ongoing, Macquarie is financial adviser

BOOT=build-own-operate-transfer; DBFO=design-build-finance-operate; BOO=build-own-operate; RFQ=request for qualification; cm³/d=cubic metres a day; g/d=gallons a day; na=not available; BOOT=build-own-operate-transfer; EPCM=engineering, procurement and construction management; t/y=tonnes a year; STP=sewage treatment plant; IPP=independent power project; IWPP=independent water & power project; PTB=Partnerships Technical Bureau; PAHW=Public Authority for Housing Welfare; OPWP=Oman Power and Water Procurement Company; OESHCo=Oman Environmental Services Holding Company; SEC=Saudi Electricity Company; Gaca=General Authority for Civil Aviation; NWC=National Water Company; Adwea=Abu Dhabi Water & Electricity Authority; PAEW=Public Authority for Electricity & Water
 Sources: MEED Insight; Infrastructure Journal

Table 5.5 – GCC infrastructure project financings, 2005-10

Name	Country	Sector	Financial close	Total value (\$m)	Debt (\$m)	Financial adviser	Tranche 1
CSX World Terminals acquisition	UAE	Ports	15-Feb-05	1,650	1,650	Citigroup	\$1,650m provided by Deutsche Bank, ABN Amro Bank, Abu Dhabi Investment Company, Agricultural Bank of China, Ahli United Bank, Allied Irish Bank, Banca di Roma, Bank of China, Bank of East Asia, Bank of Ireland, Scotia Capital, Bank of Tokyo-Mitsubishi UFJ, Barclays, BayernLB, BNP Paribas, Crédit Agricole Group, China Construction Bank, Chinatrust Commercial Bank, Citigroup, Commerzbank, DnB NOR Bank, DBS Bank, DZ Bank, Emirates Bank, First Gulf Bank, Fortis Bank, Gulf International Bank, HSBC, HSH Nordbank, UniCredit Group, IKB, Industrial & Commercial Bank of China, International Commercial Bank of China, KfW, Korea Exchange Bank, Lloyds TSB, Mashreq Bank, Mizuho Financial Group, Natexis Banques Populaires, National Bank of Dubai, SachsenLB, SanPaolo IMI, Societe Generale, CIB Bank, SMBC, Standard Chartered Bank, State Bank of India, United Overseas Bank, WestLB
Taweelah B IWPP expansion and acquisition	UAE	Power & Water	25-Apr-05	3,025	2,441	HSBC	\$590m from BNP Paribas and KfW
Ras Laffan B IWPP	Qatar	Power & Water	28-Apr-05	1,014	719	na	\$719m from BTMU, Credit Agricole, GIB, HSBC, GNB, RBS
Al-Kamil refinancing	Oman	Power & Water	31-Oct-05	130	82	na	na
Sohar aluminium smelter plant	Oman	Industrial & Metals	09-Dec-05	2,400	1,578	na	\$1,088m from ABN, Citigroup, ADCB, BNP Paribas, SMBC, Standard Chartered, GIB, Credit Agricole, WestLB, Bank Muscat, Mizuho, Arab Banking Corporation, Oman Arab Bank, RBS, ING Bank, Societe Generale
Shuaibah III IWPP	Saudi Arabia	Power & Water	21-Dec-05	2,440	1,585	Standard Chartered, HSBC	\$875m from ABN Amro, Saudi Hollandi Bank, Arab Banking Corporation, Riyadh Bank
Ajman wastewater PPP refinancing	UAE	Power & Water	06-Mar-06	140	100	ING Bank	\$100m from ING Bank
Bahrain Al-Hidd IWPP	Bahrain	Power & Water	04-Apr-06	1,269	1,169	BNP Paribas	\$390m from RBS, Mizuho, SMBC, GIB, KfW, Standard Chartered Bank
Industrial City of Abu Dhabi extension, phase 1 (ICAD II)	UAE	Civil infrastructure	09-May-06	153	130	na	na
Ras Abu Fontas B2 IWPP	Qatar	Power & Water	16-Jun-06	665	504	HSBC	\$485m at 65-150bps from BTMU, Credit Agricole, Commercial Bank of Qatar, GIB, HSBC, GNB
Al-Ain industrial city	UAE	Civil infrastructure	06-Sep-06	51	44	na	na
Barka I IWPP refinancing	Oman	Power & Water	30-Oct-06	319	319	na	\$319 from Credit Agricole with tenor of 12 years at 65-95bps

Tranche 2	Tranche 3	Tranche 4	Equity (\$m)	Multilateral & government support (\$m)
na	na	na	0	0
\$295m from Standard Chartered	\$316m NBAD, ADCB	\$1,240m from JBIC	584	0
na	na	na	295	0
na	na	na	48	0
ECA \$150m from Export Development Canada	\$150m from Societe Generale	\$260m from ABN Amro, Citigroup, ADCB, BNP Paribas, Standard Chartered Bank, GIB, Credit Agricole, RBS, Societe Generale, ING Bank, Arab Banking Corporation, \$80m letter of credit from same group of banks	822	0
\$500m ABN Amro, Saudi Hollandi, Riyad Bank, Arab Banking Corporation	\$210m Islamic finance from Al-Rajhi Bank	ECA \$455m from Kexim, ECA \$400m from Hermes	0	855
na	na	na	40	0
\$179m from same group as tranche 1	\$600m from JBIC		100	0
na	na	na	23	0
\$18m standby facility same as tranche 1	na	na	162	0
na	na	na	8	0
na	na	na	0	0

Table 5.5 – GCC infrastructure project financings, 2005-10 – continued

Name	Country	Sector	Financial close	Total value (\$m)	Debt (\$m)	Financial adviser	Tranche 1
Ras Al-Khaimah Star Cement clinker project	UAE	Industry & Metals	15-Nov-06	150	104	na	\$104m from GIB, ADCB
Fujairah IWPP	UAE	Power & Water	22-Nov-06	1,500	1,500	HSBC, Barclays, Societe Generale	\$1,275m for 22 years at 70bps from Societe Generale, Standard Chartered Bank, Barclays
Taweelah A1/A10 IWPP refinancing	UAE	Power & Water	14-Feb-07	1,100	1,100	HSBC	\$1,100m for 22 years at 50-95bps from BNP Paribas, Credit Agricole
Shuqaiq IWPP	Saudi Arabia	Power & Water	28-Feb-07	1,820	1,390	HSBC	\$1,160m for 22 years at 120-165bps from BayernLB, GIB, Samba, Riyad Bank, Woori
Rusail open cycle power plant	Oman	Power & Water	01-Mar-07	113	113	na	\$113m SMBC, HSBC
Barka II IWPP	Oman	Power & Water	07-Mar-07	787	787	HSBC	\$716m for 15 years at 70-90bps from HSBC, SMBC, Credit Agricole, Bank Muscat, BNP Paribas, BayernLB, GIB, KBC, KfW, Mashreq, Mizuho, NBAD, Natixis, Standard Chartered Bank, WestLB, ABC
Mussafah Emirates Steel project	UAE	Industry & Metals	28-Mar-07	1,100	600	HSBC	\$600m for 1 year at 30-35bps from ABC, HSBC, First Gulf, Natixis, NBAD, Mizuho, QNB, UniCredit, Union National Bank
UAE University New Campus, al Ain, PPP project	UAE	Education	01-Apr-07	477	410	E&Y, HSBC	\$410m for 15 years at 27.5 to 75bps, Barclays, NBAD, RBS, Societe Generale
Jumeirah Golf Estates sewage plant	UAE	Power & Water	29-Apr-07	652	525	na	\$525m for 22 years at 70-110bps from Credit Agricole, ADCB
GIIC pelletizing plant expansion	Bahrain	Industry & Metals	30-Apr-07	460	460	na	\$460m for 12 years at 80-90bps from ABC
Taweelah B IWPP refinancing	UAE	Power & Water	03-May-07	900	900	na	\$900m for 20 years from RBS, NBAD
Sur IWP	Oman	Power & Water	17-Jun-07	182	144	Bank Muscat, Societe Generale	\$144m for 22 year from RBS, Societe Generale, Natixis
Tihama Power 1075MW gas-fired power plant refinancing	Saudi Arabia	Power & Water	29-Jun-07	550	550	Credit Agricole	\$550m from Credit Agricole
Marafiq IWPP	Saudi Arabia	Power & Water	13-Aug-07	3,433	3,312	Citigroup	\$1,571m for 22 years at 110-160bps from BNP Paribas, Gulf International Bank, Samba Financial, Banque Saudi Fransi, Arab National Bank, SABB, Saudi Hollandi Bank, APICORP, BayernLB, Bank of Tokyo-Mitsubishi UFJ, Crédit Agricole, Dexia Group, DZ Bank, Fortis Bank, HSBC, ING Bank, KBC Bank, KfW, Mizuho Financial Group, Natixis, Royal Bank of Scotland, SMBC, Societe Generale, Standard Chartered Bank, WestLB, Arab Banking Corporation, Mashreq Bank, Woori Bank

Tranche 2	Tranche 3	Tranche 4	Equity (\$m)	Multilateral & government support (\$m)
na	na	na	46	0
\$225m bridge loan at 70bps for 2 years	na	na	0	0
na	na	na	0	0
\$230m for 10 years at 90bps, same as tranche 1	\$60m for 14 years at cost over loan, same as tranche 1	na	430	0
na	na	na	0	0
\$71m for 3.5 years at 20bps, same as tranche 1	na	na	0	0
na	na	na	500	0
na	na	na	67	0
na	na	na	127	0
na	na	na	0	0
na	na	na	0	0
na	na	na	38	0
na	na	na	0	0
\$496m for 7 years from BNP Paribas, BayernLB, BTMU, Credit Agricole, Dexia, DZ Bank, Fortis, HSBC, ING, KBC, KfW, Mizuho, Natixis, RBS, SMBC, Societe Generale, Standard Chartered Bank, WestLB	\$645m for 17 years at 40bps, same as tranche 2	\$600m Islamic tranche from Riyad Bank, Al-Rajhi, NCB	121	0

Table 5.5 – GCC infrastructure project financings, 2005-10 – continued

Name	Country	Sector	Financial close	Total value (\$m)	Debt (\$m)	Financial adviser	Tranche 1
Mesaieed A IPP	Qatar	Power & Water	23-Aug-07	2,397	2,092	RBS, Credit Agricole	\$836m from JBIC
Gatalum Aluminium new smelter complex	Qatar	Industrial & Metals	23-Aug-07	4,850	2,400	BNP Paribas	\$2,250m for 16.5 years at 40-85bps from BNP, Commerzbank, BTMU, Barclays, ABC, Apicorp, Societe Generale, Intesa Sanpaolo, KfW, Mashreq, RBS, Credit Agricole, China Construction, Standard Chartered Bank, Natixis, Goldman Sachs, GIB, Fortis, Woori, WestLB, National Australia, SMBC, Mizuho, Unicredit, Europe Arab, Doha, DnB Nor, BBVA, ING, Nordea
Salalah refinancing	Oman	Power & Water	31-Aug-07	340	340	na	\$176m matures in 2018 at 25bps, Credit Agricole
Oman Duqm port complex	Oman	Ports	22-Sep-07	660	660	na	\$660m from JBIC, 14 years
ICAD industrial effluent treatment plant - Abu Dhabi	UAE	Power & Water	27-Sep-07	97	79	Macquarie	\$56m for 25 years Eibor at 110bps from ADCB
Industrial City of Abu Dhabi extension, phase 2 (ICAD III)	UAE	Civil infrastructure	27-Sep-07	224	188	Macquarie, ADCB	\$133m for 25 years from ADCB
Shuaibah III IWPP expansion	Saudi Arabia	Power & Water	22-Oct-07	235	185	HSBC	\$100m for 20 years at 150-160bps from BayernLB
Tusdeer container terminal Jeddah	Saudi Arabia	Ports	03-Dec-07	531	451		\$37m from Al-Rajhi
Hajj terminal redevelopment PPP	Saudi Arabia	Airports	11-Dec-07	315	204	IFC, Gulf One Investment Bank	\$204m from Al-Jazira, Credit Suisse, Islamic Development Bank for 12 years and 9 months
Emal Taweelah aluminium smelter	UAE	Industrial & Metals	12-Dec-07	6,874	6,874	Citigroup	\$1,804m for 16 years at 70-130bps, from SMBC, ADCB, BNP Paribas, RBS, Mashreq, Goldman Sachs, NBAD, Standard Chartered Bank, Credit Agricole, Export Development Canada, Export Finance & Insurance Corporation Australia
Fujairah F2 IWPP	UAE	Power & Water	20-Dec-07	2,750	2,257	HSBC	\$900m for 22 years at 60-110bps, Credit Agricole, Citi, SMBC
Ras Abu Fontas A1 desalination plant	Qatar	Power & Water	13-Mar-08	576	432	BTMU	\$288m at 55bps, from BTMU, RBS, GIB, Standard Chartered Bank, Doha Bank
Sohar power company IWPP refinancing	Oman	Power & Water	28-Mar-08	446	446	HSBC	\$446m for 17.5 years at 85bps, HSBC, Standard Chartered Bank, Credit Agricole, SMBC, BayernLB, KBC, Bank Muscat

Tranche 2	Tranche 3	Tranche 4	Equity (\$m)	Multilateral & government support (\$m)
\$1,256m for 25 years at 90bps from Credit Agricole, ADCB, Allied Irish, ABC, Bank of Ireland, BTMU, BayernLB, BBVA, Commercial Bank of Qatar, CM CIC, DekaBank, Dexia, DZ Bank, Fortis, GIB, HSBC, Depfa, ING, KBC, KfW, Mashreq, Mizuho, National Australia Bank, Natixis, NordLB, QNB, RBS, SMBC, Woori Bank, Standard Chartered Bank	na	na	305	0
\$150m for 16.5 years at 60-85bps from Europe Arab, Barclays, BBVA, BNP, Credit Agricole, Commerzbank, DnB Nor, Doha Bank, Fortis, GIB, Unicredit, ING, Intesa Sanpaolo, Mashreq, Mizuho, National Australia Bank, Nordea, RBS, Standard Chartered Bank, SMBC, WestLB	\$350m ECA tranche GIEK	\$300m EDC ECA tranche	2,100	350
\$164m matures in 2021, same as tranche 1	na	na	0	0
na	na	na	0	0
\$23m from ADCB	na	na	na	0
\$55m for 25 years from ADCB	\$11m from ADCB optional facility	na	na	0
\$85m at 150-160bps from GIB, Al-Rajhi	na	na	50	0
\$37m from Al-Rajhi working capital	Islamic loan worth \$341m from Al-Rajhi, Banque Saudi Fransi	\$37m from Al-Rajhi as letter of credit	80	0
na	na	na	111	0
\$2,800m for 6 years at 70-90bps from BNP Paribas, Credit Agricole, Standard Chartered Bank, ADCB, NBAD, Goldman Sachs, SMBC, RBS, Mashreq, Citigroup	\$270m letter of credit from Emirates NBD	\$700m ECA tranche raised in mid-2010; \$1bn bond tranche expected late 2010	0	0
\$57m from Credit Agricole	\$1,300m from JBIC	na	493	0
\$144m at 55bps from QIB	na	na	144	0
na	na	na	0	0

Table 5.5 – GCC infrastructure project financings, 2005-10 – continued

Name	Country	Sector	Financial close	Total value (\$m)	Debt (\$m)	Financial adviser	Tranche 1
Emirates Steel Industries bridge facility	UAE	Industrial & Metals	28-May-08	700	700	HSBC	\$700m for 1.5 years from Natixis, Union National Bank, Mizuho, HSBC, UniCredit, ABC, NBAD
Medical University Bahrain development PPP	Bahrain	Education	04-Jun-08	60	39	KPMG	\$39m for 6 years from Ahli United, Bank of Bahrain & Kuwait
Al Wathba and Al Saad sewage treatment plants	UAE	Power & Water	17-Jun-08	408	408	Macquarie, BNP Paribas,	\$408m for 25 years from ADCB
Industrial City of Abu Dhabi extension, phase 2 (ICAD III) - additional tranche	UAE	Civil infrastructure	18-Jun-08	165	165	Macquarie	\$165m from ADCB
Ras Laffan C IWPP	Qatar	Power & Water	04-Aug-08	3,889	1,664	RBS	\$1,079m for 25 years at 105-160bps from Arab Bank, Apicorp, Santander, BTMU, BBVA, BNP Paribas, CIC, Depfa, Dexia, Fortis, HSBC, KBC, KfW, GNB, RBS, Societe Generale, Standard Chartered Bank, SMBC, Export Development Canada
Yahsat advanced satellite communications	UAE	Telecoms	09-Sep-08	1,445	1,200	BNP Paribas	\$1,020m for 14 years from BNP Paribas, ADCB, BTMU, BayernLB, Credit Agricole, First Gulf Bank, HSBC, ING, Mizuho, NBAD, Natixis, Societe Generale, Standard Chartered Bank, Export Development Canada
Emirates cement project	UAE	Industrial & Metals	18-Sep-08	435	290	na	\$290m for 12 years from Ahli United, Arab Bank, BayernLB, British Arab Commercial Bank, Citigroup, Commercial Bank of Dubai, Emirates Bank, First Gulf Bank, NBAD, Samba, Standard Chartered Bank, Union National Bank
Khalifa Port and Industrial zone, phase I	UAE	Ports	12-Dec-08	450	450	HSBC	\$150m (in AED) for 2 years from HSBC
Paris-Sorbonne University - Abu Dhabi	UAE	Education	18-Dec-08	384	326	Credit Agricole	\$326m for 20 years at 200-275bps from BTMU, BNP Paribas, Credit Agricole, First Gulf Bank, RBS, SMBC
Shuweihat 2 IWPP interim bridge loan	UAE	Power & Water	22-Dec-08	900	900	HSBC	\$900m for 9 months from BayernLB, Credit Agricole, Natixis, Standard Chartered Bank, KfW, NBAD
Al Wathba waste water treatment plants - ISTP 2 Bridge Loan	UAE	Power & Water	02-Feb-09	86	86	Credit Agricole, BNP Paribas	\$86m bridge loan for 5 months at 190bps, NBAD, Natixis, Credit Agricole
Al Dur IWPP	Bahrain	Power & Water	29-Jun-09	2,130	1,338	BNP Paribas	\$751m for 8 years at 290-365bps from Credit Agricole, Mashreq, Standard Chartered Bank, KBC, National Australia Bank, WestLB, KfW, Societe Generale, Arab Bank, BTMU, ANB, BayernLB, CIC, Dexia, HSBC, Fortis, Export Development Canada

Tranche 2	Tranche 3	Tranche 4	Equity (\$m)	Multilateral & government support (\$m)
na	na	na	0	0
na	na	na	21	0
na	na	na	0	0
na	na	na	0	0
\$233m for 4.5 years at 90bps from same banks as tranche 1	\$79m standby loan from same banks as tranche 1	\$250m Islamic loan from QIB, Islamic Development Bank; \$1,375m from JBIC for 25 years, \$300m from Sace	550	1,675
\$80m for 14 years reserve tranche, NBAD	\$100m standby tranche for 14 years from same banks as tranche 1	na	245	0
na	na	na	145	0
\$300m (in AED) for 1 year from NBAD		na	0	0
na	na	na	57	0
na	na	na	0	0
na	na	na	0	0
\$272m for 9.5 years, from Credit Agricole, Mashreq, Standard Chartered Bank, KBC, National Australia Bank, WestLB, Fortis, KfW, Societe Generale, BTMU, HSBC, CIC, Dexia	\$27m for 8 years as a BD tranche from Arab Bank	\$288m for 8 years at 290-365bps from Al-Rajhi, Banque Saudi Fransi, Islamic Bank of Asia, Credit Agricole; \$229m for 12 years direct ECA loan, from US Exim Bank	563	229

Table 5.5 – GCC infrastructure project financings, 2005-10 – continued

Name	Country	Sector	Financial close	Total value (\$m)	Debt (\$m)	Financial adviser	Tranche 1
Rabigh IPP	Saudi Arabia	Power & Water	22-Jul-09	2,503	1,903	Citigroup	\$1,500m for 20 years with an SR tranche from Al-Rajhi, Alinma, Samba, Banque Saudi Fransi, NCB, SABB
Al Wathba waste water treatment plants - ISTP 2	UAE	Power & Water	15-Sep-09	513	5,123	BNP Paribas	\$385m matures in 2029 from BTMU, BNP Paribas, Credit Agricole, ING Bank, Mizuho, NBAD, Natixis, SMBC,
Mussafah Emirates Steel refinancing	UAE	Industrial & Metals	01-Oct-09	700	700	Natixis	\$700m for 10 months from Al-Khaliji, Al-Khaliji (France), First Gulf Bank, NBAD, UniCredit, Bank of Baroda, DnB Nor, HSBC, Natixis, Union National Bank
Shuweihat 2 IWPP long-term debt	UAE	Power & Water	15-Oct-09	2,634	1,124	HSBC	\$950m for 22 years at 260-350bps from BTMU, BayernLB, BNP Paribas, HSBC, KfW, Mizuho, NBAD, Samba, Standard Chartered Bank, Societe Generale, SMBC, Sumitomo Trust & Banking, Credit Agricole, Natixis
Salalah IWPP	Oman	Power & Water	23-Nov-09	995	759	Standard Chartered, BNP Paribas	\$350m for 17 years at 300bps from Bank of China, China Development Bank
Zayed University PPP	UAE	Education	24-Nov-09	1,159	1,044	Credit Agricole	\$796m for 10 years at 290-390bps from ADCB, BTMU, Credit Agricole, NBAB, Natixis, Societe Generale, Banca Infrastruttura Innovazione e Sviluppo, Union National Bank, RBS, First Gulf Bank
Development of marine infrastructure	Oman	Ports	24-Nov-09	248	199	Bank Muscat	\$198m for 14 years from National Bank of Oman, Bank Dhofar, Ahli United, Ahli Bank Oman, Bank Sohar, Oman Arab Bank, State Bank of India, Bank Muscat
Riyadh PP11 IPP	Saudi Arabia	Power & Water	25-Jun-10	2,253	1,699	Citigroup	\$630m for 20 years at 250-340bps from Standard Chartered Bank, Credit Agricole, Societe Generale, CIC, Intesa San Paolo, KfW, Samba, Export Development Canada
Emirates Steel Taweelah industry & metals plant, phase II	UAE	Industrial & Metals	29-Jul-10	1,500	1,500	Natixis	\$733m from Union National Bank, NBAD, First Gulf Bank, Bank of Baroda, ABC, Al-Khaliji, Al-Khaliji (France)

Source: MEED Insight

Tranche 2	Tranche 3	Tranche 4	Equity (\$m)	Multilateral & government support (\$m)
\$400m for 20yrs at 275-300bps to bps from Credit Agricole, HSBC, Standard Chartered Bank, Bank of China	na	na	600	0
\$108m from ADCB for 2 years with an AED tranche	\$20m standby loan, same banks as tranche 1	na	0	0
na	na	na	0	0
\$118m from BTMU and SMBC	\$31m standby facility, same as tranche 1	\$1,100m from JBIC	400	1,111
\$280m for 17 years at 285-395bps from Standard Chartered Bank, KfW, SMBC	\$129m for 17 years at 7-10 per cent from OMR, Bank Muscat, National Bank of Oman, Bank Sohar	na	236	0
\$29m for 10 years at 75bps from Union National Bank	\$77m for 10 years	\$142m for 10 years, Islamic loan from Al-Hilal	115	0
na	na	na	50	0
\$386m equity bridge loan from NCB	\$264m for 20 years from SR Islamic tranche, Alinma, NCB	\$393m SR Islamic tranche from Banque Saudi Fransi, Samba; \$378m from US Exim Bank	176	378
\$367m Islamic loan from Abu Dhabi Islamic Bank, Al-Hilal Bank	na	na	0	0

Sources: MEED Insight; Infrastructure Journal

na=not available; bps=basis points; IWPP=independent water and power project; IWP=independent water project; ECA=export credit agency; GIB=Gulf Investment Bank; QNB=Qatar National Bank; NBAD=National Bank of Abu Dhabi; ADCB=Abu Dhabi Commercial Bank; SMBC=Sumitomo Mitsui Banking Corporation; BTM=Bank of Tokyo Mitsubishi; UNB=Union National Bank; NCB=National Commercial Bank; ABC=Arab Banking Corporation; IFC=International Finance Corporation; QIB=Qatar Islamic Bank

Qatar's infrastructure projects market

Over the last five years, Qatar's infrastructure projects market has consistently been the largest in the region after the UAE and Saudi Arabia. Thanks to its growing liquefied natural gas (LNG) export revenues, it has had no shortage of cash with which to finance its ambitious capital investment programme.

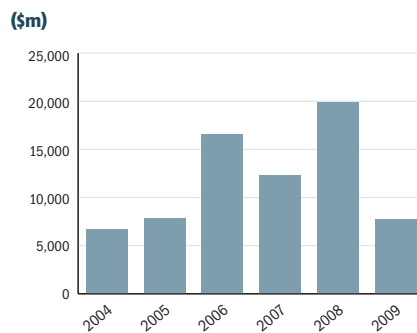
A total of more than \$75bn has been awarded on Qatari infrastructure projects since 2004. Expenditure increased gradually from 2004 onward, hitting a peak of \$20bn in 2008. Spending dropped last year in the wake of the global financial crisis and a re-evaluation of the short-term demand for the state's real estate sector. But the indications are that investment levels are increasing again as Doha commits to its long-term vision. Project spending may not return to 2008's record levels but there will still be considerable activity in the years to come.

Like other Gulf states over this period, the largest infrastructure project sector in Qatar was real estate. However, unlike Dubai, the most active real estate market, Qatar's real estate sector was much more restrained, comprising just over a quarter of all contracts awarded. This meant that when the regional real estate crisis hit in 2008, Qatar was less exposed.

Indeed, there are three other project sectors that stand out over the past six years. Thanks to the giant New Doha International airport, the airports sector has been the recipient of close to \$10bn worth of contracts, primarily for what will be one of the world's biggest and modern aviation facilities. The airport is not the only transport project of note. Close to \$5bn has also been spent on expanding Qatar's port facilities as Doha has sought to expand and modernise its freight handling capacity.

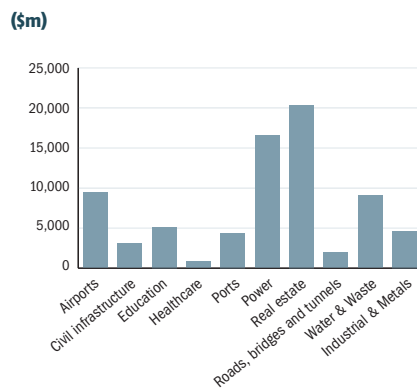
The power and water sectors are the two other areas where project spending has been at its highest. With Qatar's economy growing by as much as 15 per cent a year and its population doubling, there has been a steep rise in demand for utilities. Four major power facilities have been built in the state since 2004,

Table 6.1 – Qatari infrastructure contracts awarded, 2004-09



Source: MEED Projects

Table 6.2 – Qatari infrastructure contracts awarded by sector, 2004-09



Source: MEED Projects

while the nation's transmission and distribution networks have had more than \$3bn pumped into them over the same period.

Likewise the water sector has been equally active, as the government has invested in desalination and wastewater production plants as well as the extension of potable water and effluent networks across the state.

Education comprises another considerable chunk of investment spending. Eager to enhance its higher education sector, the government is building the massive Education City project where several internationally-re-

nown universities have been invited to establish campuses.

Like its neighbours, Qatar has not been totally immune to the global slowdown. Just under \$40bn worth of projects have been put on hold or cancelled over the last two years, about 8 per cent of all active awarded and unawarded projects in the state.

The majority of the delayed or cancelled schemes are in the real estate sector as developers rethink their investments in light of falling demand and a decrease in property prices. For example, Barwa Real Estate, Qatar's largest real estate developer, recently announced a postponement of nearly \$10bn worth of projects citing a surplus in residential and commercial properties in the state.

However, given the rapid rate of economic and population growth in Qatar, most real estate projects are likely to have to be re-activated at some point over the next five years as demand catches up with supply. Unlike Dubai, the most heavily-hit of regional real estate markets, the slower rate of new projects and construction in Qatar meant that the real estate sector was less exposed to the crash as there were fewer projects to be suspended.

Indeed, the two largest projects on hold or cancelled in Qatar are outside real estate, and neither are in that position due to financial or supply/demand issues. The Qatar-Bahrain causeway was put on hold earlier this year, primarily due to political reasons. The two countries remain committed to a physical link between the two, and there is a good probability that the estimated \$4bn scheme will be re-activated in future.

Similarly, the second project, the West Coast independent water and power project (IWPP), may well become live again once demand for power and water is great enough to justify the construction of more generating facilities.

Examination of other projects on hold or cancelled reveals that only five have a value of more than \$1bn, highlighting the relatively little impact made by the global economic slowdown on the local projects market.

Table 6.3 – Selected Qatari airport contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
NDIA - Doha International Airport: Infrastructure Packages	3,550	Execution	2007
NDIA - Doha International Airport: Passenger Terminal Complex	1,000	Execution	2007
NDIA - Doha International Airport: Airfield Paving, Tunnel & Detention Ponds Works	932	Execution	2005
NDIA - Doha International Airport: Concourse C	778	Execution	2009
NDIA - Doha International Airport: Phase 3	745	Execution	2010
NDIA - Doha International Airport: Aircraft Maintenance Hangar	670	Execution	2006
NDIA - Doha International Airport: Reclamation & Dredging	425	Execution	2005

Source: MEED Projects

Table 6.4 – Selected Qatari civil infrastructure contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Qatari Diar Real Estate Investment Company (QDREIC) - Lusail Mixed-use Development - Civil infrastructure: Design Package I & II	800	Execution	2008
Qatari Diar Real Estate Investment Company (QDREIC) - Lusail Mixed-use Development - Marine, Earthworks and Site Preparation	440	Complete	2006
UDC - The Pearl - Civil infrastructure Works	420	Complete	2006
UDC - Pearl Island - Dredging & Reclamation	400	Complete	2004
Nakilat / Keppel O&M Ltd - Dry Docks Facility: Civil Works, Minor Buildings & Ship Construction Facility: Phase I, II & IV	175	Execution	2007
Dohaland - Musheireb Development: Civil infrastructure works	142	Execution	2010
QP - Ras Laffan Industrial and Metal City: Civil infrastructure	82	Execution	2009

Source: MEED Projects

Table 6.5 – Selected Qatari education contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Qatar Foundation for Education, Science & Community Development (QF) - Education City: Convention Centre	1,100	Execution	2006
Qatar Foundation for Education, Science & Community Development (QF) - Education City: Al Shaqab Equestrian Academy	407	Execution	2006
Qatar Foundation for Education, Science & Community Development (QF) - Education City: Science and Technology Park (QSTP)	355	Complete	2005
QP / QF / Texas A&M University - Ras Laffan Emergency and Safety College (RLESC)	302	Execution	2008
Qatar Foundation for Education, Science & Community Development (QF) - Education City: Carnegie Mellon University College of Busin	200	Complete	2006
Qatar Foundation for Education, Science & Community Development (QF) - Education City: Utility Tunnel	184	Execution	2009

Source: MEED Projects

Table 6.6 – Selected Qatari healthcare contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Qatar Foundation for Education, Science & Community Development(QF) - Education City: Sidra Digital Medical Care & Research Centre	2,300	Execution	2008
ASHGHAL - Hamad Medical City ENT Hospital	1,100	Execution	2010
ASHGHAL - Al Wakrah Hospital	515	Complete	2007
ASHGHAL - Hamad Medical Complex: Finishings	170	Complete	2004
ASHGHAL - Hamad Medical Complex: Hospital Structure & Car Parking	110	Complete	2004
QP - Dukhan Western District Hospital	89	Complete	2006
ASHGHAL - Hamad Medical Complex: Energy Centre	60	Complete	2004

Source: MEED Projects

Table 6.7 – Selected Qatari industrial and metal contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Qatalum - Aluminium Smelter Reduction Cells and Potroom Equipment	750	Execution	2007
Qatalum - Aluminium Smelter Service Area and Pot Room Building	700	Execution	2006
QASCO - EAF Expansion	400	Complete	2008
Gulf Cement Company - Umm Bab Cement Plant	375	Complete	2007
Qatalum - Aluminium Smelter Anode Baking Plant	300	Execution	2007
Qatalum - Aluminium Smelter Anode Service Area	300	Execution	2007
Qatalum - Aluminium Casthouse	300	Complete	2007

Source: MEED Projects

Table 6.8 – Selected Qatari port contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
QP - Ras Laffan Port Expansion - Dredging and Reclamation	2,000	Complete	2005
QP - Ras Laffan Port Expansion - Berths & Port Infrastructure	1,863	Execution	2008
NAKILAT/Keppel O&M - Dry Docks Facility: Phases I & II	746	Execution	2007
QP - Qatar Gabbro Port Expansion (Package I)	519	Execution	2008
ASHGHAL - Ruwais Port Upgrade	215	Execution	2010

Source: MEED Projects

Table 6.9 – Selected Qatari power contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Ras Girtas Power Company - Ras Girtas Power & Water Project	3,850	Execution	2008
MPCL - Mesaieed Facility A IPP	2,300	Complete	2006
KAHRAMAA - Qatar Transmission Phase VII	1,700	Complete	2006
Qatalum - Aluminium Smelter Power Plant	1,000	Execution	2007
Q-Power - Ras Laffan (B) Power and Desalination Plant	900	Complete	2004
KAHRAMAA - Qatar Transmission Phase IX: Substation Package	750	Execution	2009
KAHRAMAA - Qatar Transmission Phase VIII: Substations (6 Nos.)	700	Execution	2008

Source: MEED Projects

Table 6.10 – Selected Qatari real estate contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Barwa Al Khor - Al Khor Barwa City: Phase I	1,400	Execution	2008
Al Waab Development Company - Al Waab City	1,374	Execution	2006
Barwa Real Estate Company - Barwa Financial District	1,301	Execution	2009
Qatari Diar Real Estate Investment Company (QDREIC) - Lusail Development Phase II - Fox Hills	1,200	Execution	2008
Barwa Real Estate Company - Commercial Avenue Development	1,100	Execution	2007
Qatari Diar Real Estate Investment Company (QDREIC) - Doha Convention Centre	800	Execution	2009
Gulf Ware Housing Company - Logistics Village Qatar: Phase I & II	549	Execution	2006
Barwa Real Estate Company - Al-Dhahiya Housing Complex - Phase I	500	Execution	2007
Rikaz Development & Planning - Doha Gardens	500	Execution	2009
Al Rayyan Tourism Investment Company - Doha City Centre Expansion	433	Execution	2004

Source: MEED Projects

Table 6.11 – Selected Qatari roads, bridges and tunnels contracts awarded, 2004-10

Project Name	Value (\$m)	Project status	Award date
ASHGHAL - Primary Routes Project: North Road: Phases II & III	597	Execution	2007
ASHGHAL - Primary Routes Project: Doha Expressway: Salwa Road Phase II: Package VII	437	Execution	2010
ASHGHAL - Primary Routes Project: Doha Expressway D Ring Roads: 22 February Interchange	274	Execution	2005
QP - Ras Laffan Industrial and Metal City: Khalifa Road Extension	225	Execution	2009
ASHGHAL - Primary Routes Project: Doha Dukhan Highway: Western Section	209	Execution	2005
NDIA - North and South Extension of the Ras Abu Aboud Road	203	Complete	2007
QP - Mesaieed Community: Gabbro Support Area: Earthworks, Roads & Infrastructure Works	203	Execution	2010

Source: MEED Projects

Table 6.12 – Selected Qatari roads, bridges and tunnels contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
ASHGHAL - Primary Routes Project: North Road: Phases II & III	597	Execution	2007
ASHGHAL - Primary Routes Project: Doha Expressway: Salwa Road Phase II: Package VII	437	Execution	2010
ASHGHAL - Primary Routes Project: Doha Expressway D Ring Roads: 22 February Interchange	274	Execution	2005
QP - Ras Laffan Industrial and Metal City: Khalifa Road Extension	225	Execution	2009
ASHGHAL - Primary Routes Project: Doha Dukhan Highway: Western Section	209	Execution	2005
NDIA - North and South Extension of the Ras Abu Aboud Road	203	Complete	2007
QP - Mesaieed Community: Gabbro Support Area: Earthworks, Roads & Infrastructure Works	203	Execution	2010

Source: MEED Insight

Table 6.13 – Selected Qatari water and waste contracts awarded, 2004-10

Project name	Value (\$m)	Project status	Award date
Ministry of Municipal Affairs & Agriculture - Integrated Solid Waste Management Facility	1,700	Complete	2006
ASHGHAL - Doha North Wastewater Treatment Plant	1,500	Execution	2007
QP - Ras Laffan Common Cooling Water System - Part I (Phase II)	1,000	Complete	2006
QP - Ras Laffan Common Cooling Water System - Part II (Phase II)	600	Complete	2008
QEWC - Ras Abu Fontas A1 (RAF A1) Desalination Plant	577	Execution	2007
ASHGHAL - Doha North Sewerage Treatment & Associated Works PS 70 & Pumping Main CP 682/2	490	Execution	2009
ASHGHAL - Upgrade & Expansion of Doha Residential Wastewater Services	365	Execution	2008

Source: MEED Projects

Planned projects

Thanks to its position as the world's number one LNG producer, Qatar is well-placed financially to implement its ambitious infrastructure project plans. The state is growing rapidly, and the government is committed to building and delivering a world-class infrastructure that will be able to meet the needs of its rising population. From housing to parks, roads to power plants, billions of dollars worth of projects will be tendered and awarded over the next decade.

The value of major infrastructure projects currently under construction in Qatar is just over \$55bn, just under half the value of the \$100bn, active un-awarded projects in the state, and indicating that the local infrastructure projects market can only get bigger over the coming years.

➔ **“Real estate is not the largest infrastructure sector in Qatar when it comes to future projects”**

Unlike most other GCC states, real estate is not the largest infrastructure sector in Qatar when it comes to future projects. Rather it is the state's ambitious rail plans which take first place. Doha is planning to spend more than \$35bn on building an extensive metro and overland rail network over the next 10 years.

While it is not the largest future infrastructure project sector, real estate is still a major component of future activity with more than \$30bn worth of schemes and proposals in the pipeline.

Port, civil infrastructure and water projects also comprise a significant portion of planned work, thanks to an ongoing need for increased wastewater treatment capacity, general infrastructure work, and future plans for a new port near Mesaieed.

Equally significant is the huge amount of road deals coming up. The Public Works Authority (Ashghal) is planning billions of dollars worth of investment on the state's roads as the population and traffic increases.

Airports

Qatar has spent close to \$10bn over the past seven years building the New Doha International airport (NDIA) to replace the existing airport. When it opens in 2012 the NDIA will have a capacity of 24 million passengers a year, or 30 times the current population of Qatar. The new airport has been built on reclaimed land and covers an area of 22 square kilometres, including a 590,000-square-metre passenger terminal. The project is undoubtedly one of the greatest engineering achievements in the region over the past 10 years and the jewel in the crown for Qatar Airways.

Given the amount of investment in NDIA and Qatar's small size, it is unsurprising that there are few other airport investments planned over the coming years. NDIA's capacity will be more than sufficient to meet aviation traffic needs for some time to come.

Education

The development of Qatar Foundation's Education City has been one of the key projects in Qatar over the last decade. The government is keen to diversify the economy but needs to ensure its citizens are properly equipped for working life, especially in the private sector.

This is being achieved by bringing in notable international education establishments such as Weill Cornell, Texas A&M and Northwestern to launch campuses at Education City. These have resulted in several iconic campus projects being awarded. At the same time, as Education City expands, more international institutions may be attracted to Qatar, bringing in additional work.

In parallel, the government is investing billions of dollars in upgrading its primary and secondary schools system. The focus is on modernising existing facilities and building new schools to cope with the rise in population. Thanks to this commitment to education, Qatar will soon be able to lay claim to having one of the world's best and most modern educational systems.

Industrial & Metals

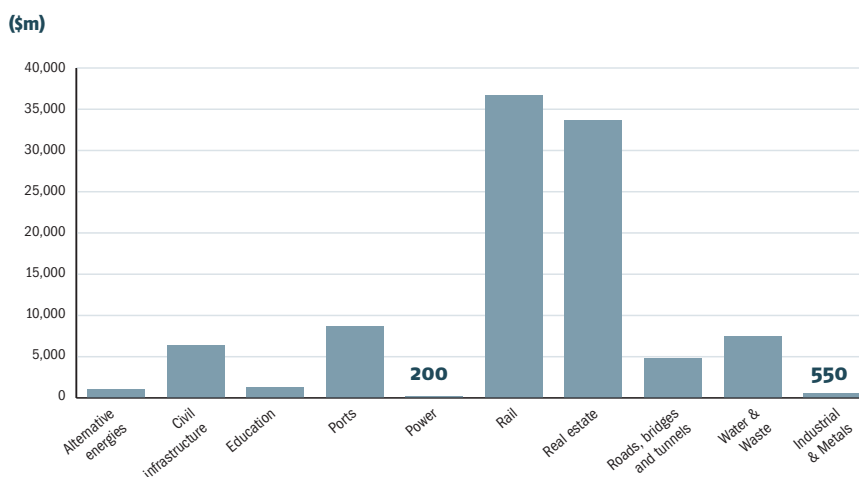
Qatar has done much over the past decade to develop a diversified industrial sector. Backed by its plentiful gas reserves, it is one of the few states in the GCC to be able to continue with these plans. Potential future industrial

Table 6.14 – Selected delayed or cancelled projects in Qatar

Project name	Sector	Budget value (\$m)
Qatar and Bahrain Causeway Foundation (QBCF) - Al Marhaba Causeway	Roads, bridges and tunnels	4,000
GEWC - West Coast IWPP	Power	3,000
Masraf Al Rayan - Smart Industrial City	Real estate	2,000
GREIC - Mesaieed Industrial City Housing Project - Phase II	Real estate	2,000
ADIH - Porta Moda	Real estate	1,200
Barwa Al Doha - Barwa Al Doha Development	Real estate	824
Al Jaber Group - Abu Dhabi Mixed-use Tower	Real estate	700
QNHC - Lusail Twin Towers	Real estate	500
The Land Investment & Real Estate Company - Energy City: The Atrium	Real estate	439
QIMC - Ras Laffan Polysilicon Production Facility	Industrial	400
QP - Qatar National Library	Real estate	274
Salam Bounian - Lusail Development - Salam 4 Towers	Real estate	274
Real Estate Services Group - Mash'oor Tower	Real estate	150
Tanmiyat Investment Company - West Bay Bin Samakh Mixed-Use Tower	Real estate	140
Government of Qatar - Luxury Villas	Real estate	130
International Bank of Qatar (IBQ) - International Bank of Qatar Tower	Real estate	125
Barwa Al Baraha - Barwa Al Baraha Medical Center	Healthcare	100
Salam Bounian - Lusail Development: Blues Tower	Real estate	100

Source: MEED Projects

Table 6.15 – Breakdown of active, un-awarded projects in Qatar by sector



Source: MEED Projects

Table 6.16 – Selected un-awarded Qatari education projects

Project name	Value (\$m)	Project status
Public Works Authority (ASHGHAL) - School Modifications: Package 3	549	EPC bid
Qatar Foundation for Education, Science & Community Development (QF) - Northwestern University	350	EPC bid
Qatar Foundation for Education, Science & Community Development (QF) - Qatar Foundation Headquarters / Strategic Studies Center	275	EPC bid
Qatar Foundation for Education, Science & Community Development (QF) - Central Library	70	EPC bid
Qatar Foundation for Education, Science & Community Development (QF) - North East Underground Car Park	70	EPC bid

Source: MEED Projects

Table 6.17 – Selected un-awarded Qatari real estate projects

Project name	Value (\$m)	Project status
Barwa Al Khor - Al Khor City: Urjuan Mixed-use Development	10,000	Planned
Dohaland - Musheireb: Stage II	4,072	Design
Arcapita Bank/ Al-Imtiaz Investment Company - Lusail Development: Al-Sidra Golf Residential Development	3,500	Design
Urban Planning and Development Authority (UPDA) - Al Wakrah & Al Khor Cities	2,000	Study
Majid Al Futtaim/ ADIH - Lusail Entertainment City: Downtown Precinct	1,500	Design
Barwa Real Estate Company - Al Khor Development	1,400	Design
Barwa Al Baraha - Barwa Al Baraha Project (Labourers City)	1,100	EPC bid
First Qatar Real Estate - Pearl Qatar: Abraj Quartier	1,000	Design
Diyar Al Kuwait - Lusail Mixed use Development	800	Design
Qatar National Bank - Head Office Building	700	EPC bid

Source: MEED Projects

→ “Qatar has built up a substantial amount of new electricity generating capacity over the last decade”

schemes include a second phase expansion of the Qatar Aluminium (Qatalum) smelter, expansions of the Qatar Fertiliser Company and Qatar Steel complexes, and a new polysilicon plant.

Ports

Like nearly all Middle East states over the last five years, Qatar is planning a radical overhaul of its ports network. As the economy and population have grown so too has the strain on existing port capacity. Because ports in the region, such as Mina Zayed in Abu Dhabi, and Sheikh Rashid Port in Dubai, have historically been built close to or inside the main cities, it is difficult for them to grow. Traffic congestion has also become a major problem.

Qatar’s solution is to build a new world-class port facility called New Doha Port. Located about 20 kilometres north of Mesaieed, the estimated \$7bn project will cover over 20 square kilometres. It will be built in three phases. The first phase will have a capacity of 2 million 20-foot-equivalent units (TEUs) of volume a year in addition to 2 million tonnes of general cargo by 2025.

New Doha will come on top of upgraded port facilities at Ras Laffan, Ruwais and Mesaieed. Doha has already invested more than \$4bn over the last five years in its ports and at least the same again will be spent over the next half-decade.

Power

In line with its record-breaking growth story, Qatar has built up a substantial amount of new electricity generating capacity over the last decade. In 2000, installed generating capacity stood at just 1,800MW, a figure that will reach an estimated 9,000MW in 2011. By then, there will be 270 high-voltage substations, a significant jump from the 80 that were in operation 10 years ago.

Doha has successfully avoided the pitfalls of high power demand growth experienced by



Deutsche Bahn: the firm is building Qatar's metro

other Gulf states, and kept the supply curve above that of demand. Indeed such is the wide margin today between supply and demand that Qatar can export power to its neighbours. But with population and demand continuing to grow, it cannot rest on its laurels for long. As such the state is planning to invest close to \$10bn over the next nine years to bring on stream an additional 8,200MW of generating capacity.

In common with its GCC counterparts, the state is also looking at renewable and alternative energies to diversify its sources of energy and reduce its carbon footprint. Solar energy is an obvious candidate. In 2007, a planning document published by Qatar General Electricity & Water Corporation (Kahramaa) outlined plans for 3,000MW of solar energy projects, but the scheme has since been put on the backburner. Instead, it may well be that Qatar follows the UAE in adopting atomic power, although thanks to its healthy feedstock situation, it does not have the same kind of pressing need.

Rail

Qatar is set to be connected to the GCC rail network linking the six GCC states. Two options are available. The first sees Qatar being connected to the network via a line through the foot of the peninsula. The other involves the construction of a rail line on the Qatar-Bahrain causeway. Work on the latter had already started but has recently stalled, with the expectation that it will recommence soon.

The rail sector also comprises what is probably the largest single investment in the state over the coming five years – the estimated \$36bn Qatar national railway system. The network will comprise overland and below ground conventional and metro lines, connecting all parts of the peninsula. It will consist of an East coast rail link, a passenger and freight railway linking Ras Laffan industrial complex with the new port in Mesaieed via Doha, a

Table 6.18 – Selected un-awarded Qatari road, bridges and tunnel projects

Project name	Value (\$m)	Project status
ASHGHAL - Doha, Lusail & Dukhan Highway Projects	1,000	Planned
Urban Planning and Development Authority (UPDA) - Doha Bay Crossing	1,000	Study
ASHGHAL - Primary Routes Project: North Road: Phase IV	604	Design
ASHGHAL - Primary Routes Project: Doha Dukhan Highway: Central Section	300	EPC Bid
QP - Qatar Industrial & Metal Highway	300	Planned
ASHGHAL - Development of Roads in Zone 46	190	EPC bid
ASHGHAL - Peripheral Roads to Barwa City	164	EPC bid
ASHGHAL - Primary Routes Project: Doha Dukhan Highway: Eastern Section	150	Design
ASHGHAL - Primary Routes Project: Doha Expressway: G Ring Road	130	Design
ASHGHAL - Lusail Road: Phase I	100	Design

Source: MEED Projects

Table 6.19 – Selected un-awarded Qatari water and waste projects

Project name	Value (\$m)	Project status
Government of Qatar/Darco Water Technologies Ltd - Water Recycling Plant	5,000	Planned
QEWG - Ras Abu Fontas A2 (RAF A2) Desalination Plant	350	Study
Marafiq Qatar: Doha Waste Collection Plant	350	Planned
KAHRAMAAA - Water Security Mega Reservoirs	200	Study
ASHGHAL - Waste Water Treatment Plant	100	Study
ASHGHAL - Al Khor Sewerage Network For Northern Region : Phase II	82	EPC bid
QP - Dukhan Township Potable Water & Sewage Treatment Plant Upgrade	50	Study
ASHGHAL - Peripheral Roads to Barwa City	164	EPC bid
ASHGHAL - Lusail Road: Phase 1	100	Design

Source: MEED Projects

high-speed link between the new international airport and Doha city centre, and a four-line metro network. In total, more than 700 kilometres of track will be built, transforming Qatar into one of the most well-served rail networks in the world.

Real estate

Real estate continues to be the largest sector in terms of current and future project spending. A growing population, the ability for foreigners to own property, and fast economic growth are all driving demand for new real estate projects. The government is focusing on grand master-planned developments such as the Pearl Qatar, built on land reclaimed from the sea, and Lusail, a 21 sq km development located north of Doha.

The plans for the sector are in line with the Qatar National Masterplan that projects the country's population will grow to about 2.5 million in the coming years, from the current level of more than 1.6 million. To cope with this near doubling on population, there is a clear need to build new housing stock. However, the fall in regional real estate prices, both freehold and rental, has dented the demand outlook, and many developers are adjusting their project plans accordingly. As with Dubai, there are fears that many of the smaller, private sector developers may have to cancel their schemes completely.



➡ Dukhan: Qatari departure point for the causeway

➡ “Billions of dollars in road investment seeks to reduce congestion and provide adequate road capacity”

However, the government-backed developers such as Barwa Real Estate Development, Dohaland and Qatari Diar are expected to proceed with their projects, albeit at a somewhat slower pace.

Roads, bridges and tunnels

Probably the biggest landmark project is the Qatar-Bahrain causeway to create a physical link between the two countries for the first time. The “Friendship Causeway” will run for 40 kilometres making it one of the longest causeways in the world. It will use a series of bridges and viaducts, including two 400-metre cable-stayed bridges over the main shipping channel. The ambitious bridge will also comprise a railway link between the states as an essential component of the GCC railway. Although the main contract to build the project was awarded in 2009, the multi-billion-dollar scheme was put on hold earlier this year while further discussions were held on what is obviously a deeply political project. But given its importance to both Bahrain and Qatar, the hope is that it will soon be reactivated.

Ashghal is planning billions of dollars in road investment over the coming decade as it seeks to reduce congestion and provide adequate road capacity for the growing car population. In the next five years alone, it has earmarked more than \$20bn on new roads and

Table 6.20 – Largest infrastructure project market clients in Qatar by value of work under execution

Client	Value (\$m)
New Doha International Airport (NDIA) Steering Committee	9,147
Public Works Authority (Ashghal)	7,052
Qatar General Electricity & Water Corporation (Kahramaa)	5,608
Qatar Foundation for Education, Science & Community Development (QF)	4,395
Ras Girtas Power Company	3,850
Qatar Petroleum (QP)	3,529
Barwa	3,508
Qatalum	3,300
Qatari Diar Real Estate Investment Company (QDREIC)	3,245
Al-Waab Development Company	1,374

Source: MEED Projects

Table 6.21 – Largest infrastructure project market clients in Qatar by value of work planned *

Client	Value (\$m)
Qatar Railway Development Company (QDRC)	36,675
Barwa	10,000
Government of Qatar	8,648
Qatari Diar Real Estate Investment Company (QDREIC)	6,600
Government of Qatar with Darco Water Technologies Limited	5,000
Dohaland	4,652
Public Works Authority (Ashghal)	4,239
Arcapita (Formerly First Islamic Investment Bank) with Barwa	3,500
Urban Planning & Development Authority (UPDA)	3,000
Qatar General Electricity & Water Corporation (Kahramaa)	2,450

* based on announced or known projects only
Source: MEED Projects

Table 6.22 – Largest infrastructure project market contractors in Qatar by value of work under construction *

Client	Value (\$m)
Hyundai Engineering & Construction	3,441
Al-Jaber Engineering	3,058
Midmac Contracting Company	2,413
Sidem	1,925
Bilfinger Berger	1,840
Six Construct	1,658
Keppel Seghers	1,500
CCC	1,281
Contract	1,150
Obrascon Huarte Lain (OHL)	1,150

*Where contracts have been awarded in joint venture, the value has been obtained by dividing the total contract amount by the number of contractors Source: MEED Insight

related drainage and infrastructure, including the Dukhan, Doha and Lusail highway projects, the Doha Bay Crossing, and the fourth phase of the North Road.

Water and waste

As with the power sector, Doha has successfully built up enough desalination capacity to ensure that no major plants are required for the time being. Instead the future short-term focus will be on wastewater treatment plants and the state's distribution networks. The largest of these is the planned water recycling plant to be developed by the government and Singapore's Darco Water Technologies under a memorandum of understanding signed in 2007.

Progress on the project has been slow since then, but there are hopes that it will push ahead over the next two years. Other waste projects include a new Doha waste collection plant, new strategic water reservoirs, and the extension of sewerage systems across the state.

Client analysis

It is perhaps no surprise that the largest clients in the Qatari infrastructure projects market over the past five years have been state dominated. Indeed of the top 10 clients by the value of work currently under execution, only one – Al-Waab Development Company – has no state shareholding. The state with its vast hydrocarbons wealth and ambitious infrastructure plans has naturally led the way in terms of project development. And with the exception of the Qatalum aluminium complex and Ras Girtas IWPP, the largest schemes have been funded directly out of the state's budget.

Leading the way is the NDIA Steering Committee thanks to its \$10bn-plus airport project. The scheme was one of the first infrastructure projects launched in Qatar since the turn of the century and is now nearing completion. Once finished, it will be among the most modern and best-equipped airport facilities in the world.

With responsibility for roads, wastewater and sewerage, Ashghal is the second largest client on the list. It has a key role in the development of Qatar's infrastructure and has plans to invest more than \$20bn over the next half decade to expand the road and sewage networks, ensuring it will remain one of the main clients in Qatar.

Kahramaa rounds off the top three due to its role as the main client for Qatar's power and water projects. As the economy and population have grown so it has had to award dozens of projects to ensure that power and desalination capacity has kept up with demand. Real



Qatar 2022: Doha's bid includes cooled stadium

→ “The largest clients in the Qatari infrastructure projects market over the past five years have been state dominated”

estate, industry and education comprise the rest of the top 10 providing a balanced sectoral mix of capital investment in infrastructure.

Looking forward, the list of the top future clients changes as the emphasis is placed on different sectors. With its work on the airport nearing an end, the NDIA Steering Committee falls off the list, as does the Qatar Foundation which has completed the bulk of its projects.

Instead it is the Qatar Railway Development Company (QDRC), a joint venture of Qatari Diar and Deutsche Bahn, which tops the list. It has by far and away the largest workload of projects as it proceeds with Qatar's railway plans. Over the next 10-20 years, it will be responsible for building an entire overland and metro network from scratch.

Real estate developer Barwa, thanks to its massive Barwa City, Barwa al-Khor and Barwa al-Baraha masterplan projects, among others, will be another major client. While plans for real estate development have been slowed by the lower demand outlook, the governments continue to remain committed to building new housing developments to cope with future population growth.

It is the same story for Qatari Diar, through its giant Lusail development, and Dohaland

which are both proceeding with the long-term plans to develop new residential areas in the state.

Utility-wise, Kahramaa will remain a key client, although as Qatar has succeeded in building up power and desalination capacity, the focus will turn to transmission and distribution networks. Similarly, Doha is keen to improve the wastewater treatment and distribution networks. The estimated \$5bn water recycling plant between the state and Darco Water Technologies is another example of this.

One key aspect about the major future clients is that all of them have a majority government interest. The state remains the key player in infrastructure project spending, and with its access to huge gas export revenues, this is a fact that is unlikely to change for the foreseeable future.

Contractor analysis

The contracting community in Qatar is dominated by international contractors, with only Midmac Contracting and Al-Jaber Engineering making headway in terms of the value of contracts won. The main reason for this is that many projects are so large in size that only the biggest international contractors can carry them out.

No one dominant contractor, such as Saudi Binladin in Saudi Arabia, stands out as being pre-eminent in Qatar's infrastructure sector. Rather the number of contractors is quite widespread and diverse, with firms from Europe, Korea, the US and elsewhere in the Middle East all represented.

South Korea's Hyundai Engineering & Construction is market leader thanks to its ability to carry out work in a number of different sectors. In addition to its contracts to expand the transmission and distribution system for Kahramaa and build the Ras Girtas power plant, it is also a contractor on the ENT hospital at Hamad Medical City and the infrastructure works on the Musheireb development.

Local contractors Al-Jaber Engineering and Midmac carry the flag for Qatar. As the two largest local contractors, they are currently working on more than a dozen major projects ranging from packages on the New Doha International airport and the Doha Expressway to transmission work for Kahramaa and the infrastructure packages on Barwa al-Khor financial district.

Interestingly, no single international contractor has more than four major contracts in the state, indicating the diverse range of contracting firms working there and clients' eagerness to attract international firms into Qatar.

PPPs in Qatar

With the notable exception of the power generation sector, PPPs have not been extensively used in the Qatari infrastructure market. Even so, a number of government agencies are now looking at the model as awareness of its merits increase and the UN is even considering Doha as a possible location for an international PPP centre.

Private sector

Qatar has been at the forefront of promoting the role of the private sector in regional power generation. In 1990, Qatar Electricity & Water Company (QEWC) was set up with some 57 per cent of its capital held by companies and private individuals. QEWC was originally formed to undertake one of the region's first IWPPs at Al-Wusail, although in the end, the project never materialised. However, in the late 1990s, it began taking over existing generating assets held by the Ministry of Electricity & Water (MEW) and today is the largest generator in the state wholly owning eight stations with combined capacity of over 2,500MW of power and 119 million gallons a day (g/d) of desalination.

The drive to increase private sector involvement stepped up a gear in 2000 with the forma-

tion of Qatar General Electricity & Water Corporation (Kahramaa) to replace the MEW. Set up as part of a major restructuring of the sector, the body wasted little time in launching its first independent water and power project (IWPP). In 2001, foreign developers were invited to bid for a 55 per cent stake in the Ras Laffan A IWPP, with the eventual winner being the US' AES Corporation. Since then, three more PPP projects have been awarded. In 2005, the UK's International Power (IP) and Japan's Chubu Electric were selected as foreign partners on Ras Laffan B, while in 2007, another Japanese firm, Marubeni Corporation, signed up for the Mesaieed independent power project (IPP). For the fourth and most recent project, France's GDF Suez and a consortium of Japanese developers were brought on board.

The launch of the PPP programme has allowed international developers to build up sizable capacity in the state. In terms of power, the largest foreign investor is Marubeni with 800MW of equity capacity followed by GDF Suez with 546MW.

In total, Kahramaa has contracted 6,500MW of power and 163 million g/d of desalination capacity from the developer market in a programme that has required investment of

\$7.8bn. For each scheme, a new project company has been set up with the foreign partners owning a 40-55 per cent stake and the remainder normally split between QEWC and Qatar Petroleum (QP). The projects have tended to be structured as build-own-operate-transfer (BOOT) schemes, with the developer company signing a 25-year take-or-pay agreement with Kahramaa for the power and desalinated water.

Lull

The PPP is the established model for procuring new power and desalination capacity in the state. However, such has been the volume of new capacity procured in recent years, there will be a lull in new projects until demand catches up. Kahramaa estimates that it will only require 40 million g/d of additional desalination capacity and about 200MW of power by 2015.

The generation sector was always considered as a first step for greater private involvement with the transmission and distribution sector earmarked as the next. In 2003, Kahramaa commissioned a detailed study looking into the possible privatisation of both the electricity and water networks. However, the government decided not to go ahead with the initi-

Table 7.1 – QEWC wholly owned plants

Plant	Power capacity (MW)	Water capacity (million g/d)
Ras Abu Fontas A	477	55
Ras Abu Fontas B	609	33
Ras Abu Fontas B1	387	0
Ras Abu Fontas B2	567	29
Doha satellite stations	473	0
Dukhan desalination plant	0	2

g/d=gallons a day

Source: QEWC, January 2010

ative, although it said it did not rule out doing so in future.

Embracing PPP

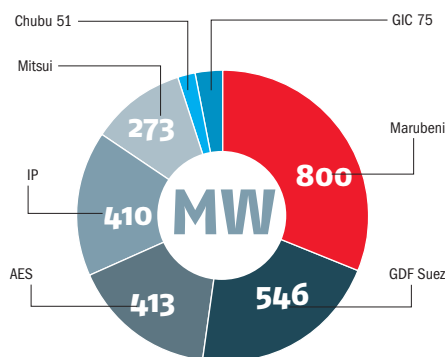
In hindsight, postponing plans to privatise the networks was probably sensible, given the subsequent need to massively upgrade and expand the networks to meet soaring demand.

Elsewhere in the Gulf, the wastewater sector has often followed the power and desalination industry in embracing the PPP model. And although so far the government has not attempted to undertake a build-operate wastewater plant, steps have been taken to increase the role of the private sector. In recent years, the Public Works Authority (Ashghal) has included a long-term operations and maintenance (O&M) component on all its major sewage treatment plant construction awards. For example on the biggest, Doha North, Singapore-based main contractor Keppel Seghers will operate and maintain the plant for a period of 10 years. As for existing facilities, Ashghal has started to take on O&M contractors: in 2009, France’s Veolia won a long-term contract for the Doha South plant.

In early 2010, Ashghal signalled that it was looking to extend private sector participation much further. It issued for tender a feasibility study contract to look at outsourcing the O&M of its wastewater networks. Once the study is complete and if the findings are approved, contractors will be invited to bid for several O&M contracts under a PPP model, covering 5,000 kilometres of wastewater, treated sewage effluent and rainwater networks.

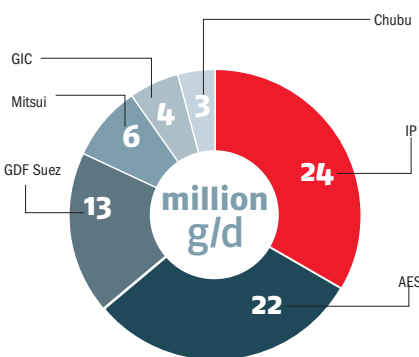
Several local real estate developers have also turned to the private sector to provide wastewater services. In 2006, Qatari Diar awarded a contract to France’s Degremont to design, build

Table 7.2 – Equity capacity held by foreign developers



Source: MEED Insight

Table 7.3 – Equity capacity held by foreign developers



Source: MEED Insight
g/d=gallons a day

and operate a sewage transfer and treatment system to serve both the Pearl Qatar and Lusail residential projects. In 2008, it established Marafeq Qatar, a new multi-utility company, with its sister company Barwa Real Estate, France’s GdF Suez and Suez Environment. In 2009, the new entity signed an outline agreement with Lusail Real Estate Development Company for the design, construction, financing, O&M of utilities of the Lusail project.

Outside the utility sector, the biggest outsourcing project took place in late 2006, when the then Municipal Affairs & Agriculture Ministry awarded Keppel a \$1.2bn contract to design, build and operate for 20 years the new Doha solid waste management facility. However, elsewhere activity has been limited. While there are private institutions in both the education and healthcare sectors, Doha has not followed in Abu Dhabi’s footsteps by awarding long-term management contracts to international companies to run schools and hospitals.

Commitment

The government is committed to increasing the role of the private sector in infrastructure delivery, a point reflected in the fact that the Business & Trade Ministry has a PPP directorate. The ministry plays a key role in Enterprise Qatar, which has been established to champion small and medium-sized enterprises (SMEs). The Qatar Chamber of Commerce & Industry has also been a strong advocate for greater PPP opportunities and has called for a comprehensive framework and legislation to be put in place. Assistance could be provided by the planned international PPP centre, for which Doha is one of the sites being looked at. One of the key roles of the centre will be to help governments develop PPP models and projects.

Table 7.4 – PPPs in Qatar’s generation sector

Project	Estimated cost (\$m)	Power capacity (MW)	Desalination capacity (million g/d)	Date of award	Date of operation	Duration of PWPA/PPA (years)	Type of contract	Shareholders (%)
Ras Laffan A IWPP	700	750	40	Q4 2001	Q2 2004	25	BOT	AES (55), GEWC (25), GP (10), GIC (10)
Ras Laffan B IWPP	900	1,025	60	Q1 2005	Q1 2008	25	BOOT	International Power (40), GEWC (55), Chubu (5)
Mesaieed IPP	2,300	2,000	0	Q2 2007	Q2 2010	25	BOOT	Marubeni (40), GEWC (40), GP (20)
Ras Laffan C IWPP	3,900	2,730	63	Q1 2008	Q1 2011	25	BOOT	GEWC (45), GDF Suez (20), GP (15), Mitsui (10), Chubu (5), Shikoku Electric (5)

g/d=gallons a day; PWPA=power and water purchase agreement; PPA=power purchase agreement; BOT=build-operate-transfer; BOOT=build-own-operate-transfer
Source: MEED Insight

Qatar project finance

Qatar's strong government finances and plans to diversify its economy have made it an attractive project sponsor. Its success at raising project finance for its oil and gas sector has given the state a strong track record in this area.

Qatar Petroleum, the main project sponsor in Qatar, has a good reputation with banks and is often able to extract low pricing and good terms from banks because of its control over the oil and gas resources.

Power and water

Outside oil and gas, the use of project finance has been more limited and concentrated on the power sector. Of the six project finance deals completed in Qatar between 2005 to August 2010, five of them were in the power and water sector. During the period, Qatar raised \$13.4bn in project finance, of which \$7.8bn was for the power and water sector.

The peak year for project finance activity was 2007 when \$7.2bn was raised for Qatar projects. This came from just two large schemes, the Mesaieed power and water project, and the Qatar Aluminium project. In other years activity has been more subdued. In 2009 and 2010 no project finance deals were completed in Qatar.

The use of project finance for a small number of typically large schemes means that deal flow can appear to dry up quickly.

Ras Laffan A in 2001 was the country's first IWPP. It has since been followed by Ras Laffan B and C in 2005 and 2007 respectively, and Mesaieed A in 2007.

The financing model used by these projects has developed over the past few years to allow Qatar to access a greater number of funding sources and also lower its financing costs.

Ras Laffan A and B were funded along a traditional IWPP route, with a competitive tender process followed by a winning developer providing funding for the development of the plant. Ras Laffan B managed to secure a total of \$1bn, with the majority of the financing coming from a \$719m debt tranche put in place by

Table 8.1 – Qatari infrastructure market project financings, 2005-10

Name	Sector	Financial close	Total value (\$m)	Debt (\$m)
Ras Laffan B IWPP	Power & Water	28-Apr-05	1,014	719
Ras Abu Fontas B2 IWPP	Power & Water	16-Jun-06	665	504
Mesaieed A IPP	Power & Water	23-Aug-07	2,397	2,092
Qatar Aluminium	Mining & Metals	23-Aug-07	4,850	2,400
Ras Abu Fontas A1 desalination plant	Power & Water	13-Mar-08	576	432
Ras Laffan C IWPP	Power & Water	04-Aug-08	3,889	1,664

Source: MEED Insight



❖ Desalination plants: often financed through debt

the US' AES Corporation, the developer of the plant. The debt was provided by a group of six banks, including Qatari, regional and international lenders.

Ras Abu Fontas B2, a smaller IWPP, raised \$503m from banks the following year. Both used syndicated bank loans to finance the projects.

This began to change with the development of the Mesaieed A IPP. Because of the considerable size of the project, over \$2bn in value compared to only \$1bn for Ras Laffan B, the government determined that its equity stake would be held by several government-affiliated shareholders.

The government's 45 per cent stake in Ras Laffan B was held directly by Qatar Electricity & Water Corporation (QEW). For the larger Mesaieed project, it was decided that the government stake would be split between QEW holding 40 per cent and Qatar Petroleum (QP) which holds 20 per cent.

The \$2bn debt tranche for Mesaieed A was raised through syndicated bank loans, with an additional \$836m coming from Japan Bank for International Co-operation (JBIC).

After its involvement with this project QP, with extensive experience of raising finance for Qatari projects in the oil and gas sector, decided the financing model could be adapted to allow Qatar to raise cheaper funding.

The model it adopted for the financing of the Ras Laffan C IWPP managed to be both innovative and successful.

QP again acquired a 20 per cent stake in the project, along with QEWC, which held 40 per cent. During the tendering process, rather than ask each bidder to provide underwritten bids, they were requested to provide bids based on a pre-determined set of financing costs. This left the developers bidding solely on the technical and operational aspects of the Ras Laffan C plant.

At the same time that developers were bidding on the project, QP was approaching banks about putting together a financing package for the scheme. Its aim was to narrow the difference in financing costs between oil and gas projects in Qatar and financing costs for power projects, seeing the two as both ultimately being sovereign risk.

Financial advisers Royal Bank of Scotland also structured the deal as a club loan, asking banks to take and hold tickets of \$75m each, rather than underwrite much larger portions of the debt as with a syndicated loan.

That helped the project to secure commitments from a group of 20 banks and complete the financing by August 2008, without being impacted by the worsening global economic conditions at the time.

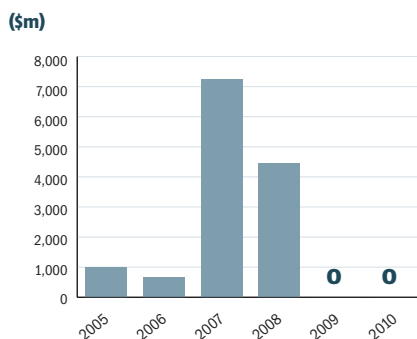
Because the funding was raised at the QP level and not by the developer of the project, it allowed the company to secure money from export credit agencies with no direct links to the project. This enabled Italian export credit agency Sace to lend \$300m to the project despite it being developed by a consortium of French and Japanese companies.

Ras Laffan C was the first project in the Middle East region to raise finance in this way, although future large power schemes in Qatar are expected to repeat this model.

Outside of the power sector, the other main Qatar project finance deal completed between 2005 and 2010 was the \$4.85bn raised for the Qatar Aluminium (Qatalum) project in 2007. Developed at the Mesaieed Industrial City, Qatalum included an aluminium smelter, a 1,350MW power plant, casthouse and at one stage also included the development of a dedicated port, although this was later scrapped.

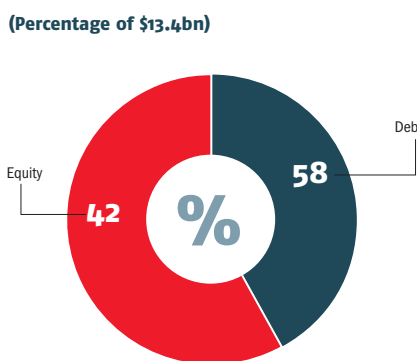
Of the total debt on the project, \$2.25bn came from commercial banks, and \$350m from export credit agencies. The export credit

Table 8.2 – Qatari infrastructure market project financings, 2005-10



Source: MEED Insight

Table 8.3 – Qatari infrastructure market project financing



Source: MEED Insight

➔ **“Of the total \$13.4bn raised in project finance in Qatar between 2005 to 2010, \$7.8bn came from debt”**

tranche was smaller than originally expected as a result of the procurement strategy.

Engineering, procurement and construction contracts were still being awarded fairly close to financial close, which meant that the final amount able to be raised from export credit agencies could not be finalised until towards the end of the financing process.

The relatively high level of equity on the project, the debt equity ratio was 55:45, was a result of the rapidly rising cost of the project due to the construction boom in the GCC at the time. The sponsors had to increase the equity in the project to keep pace with the project's rising costs. When the project was originally announced in 2004 the cost was expected to be \$3bn, which increased to \$4.5bn by the end of 2006, before being further revised to \$4.85bn by mid-2007.

Funding sources

Of the total \$13.4bn raised in project finance in Qatar between 2005 to 2010, \$7.8bn came from debt, with the rest from equity sponsors.

The majority of debt project finance commitments in Qatar have come in the form of syndicated bank loans, although the Ras Laffan C project saw this shift towards banks being asked to lend on a take and hold basis, rather than underwriting.

The \$7.8bn of project finance debt is overwhelmingly bank sourced. Nearly \$7bn came from bank loans, with the remainder secured from export credit agencies. Japan Bank for International Co-operation (JBIC) provided the largest single export credit agency loan in the form of a \$1.3bn direct loan to the Ras Laffan C power project.

The main local banks active in project finance are Qatar National Bank, Commercial Bank of Qatar, and Qatar Islamic Bank, for sharia-compliant deals. The ability of Qatari banks to become involved in project finance lending is limited by the lack of dollar funding sources for the local banks. Qatari banks now concentrate on supporting key local clients, rather than lending to other project finance transactions in the region. Royal Bank of Scotland also has a close association with Qatari project sponsors, particularly QP.

Infrastructure funds have had little involvement in financing Qatari projects, and bond financing has not been used for a standard infrastructure project financing. Loosely related to the project finance sector has been the funding raised by Qatar Gas Transportation Company (Nakilat).

Although not considered a project finance transaction by some in the industry, the cash



❖❖❖ **Doha: the government's ambitious infrastructure plans have resulted in a changing skyline**

raised by Nakilat over the past five years could be described as quasi-project finance because the lenders are repaid from secured cash flows from the operation of the liquefied natural gas (LNG) tankers after the construction period is completed. Because of this structure, it has a lot in common with project finance transactions, although the assets developed are in the shipping sector rather than infrastructure.

Nakilat has raised a total of \$6.8bn since 2005, \$4.3bn in December 2006, \$1.5bn in August 2008 and \$1bn in 2009. The debt will finance the development of 25 wholly owned LNG tankers. Financing was sourced from a mixture of syndicated loans, bond deals, and export credit agencies.

Outlook

The pipeline of new project finance deals from Qatar-based sponsors is currently focused more towards non-infrastructure projects, particularly oil and gas. Excluding the hydrocarbons sector, the country is unlikely to launch many privately financed projects in the next two to three years.

Kahramaa is not expected to launch another power scheme until around 2014 as the projects developed in 2005-10 met the country's current energy needs. The government is beginning to turn its attention towards renewable energy projects, although no specific plans have been announced.

➔ “Qatar has a large investment in infrastructure in the country, including health, education and transport”

Qatar has a large investment programme planned to develop infrastructure in the country, including health, education and transport. The majority of this is being financed directly by the government, or through the capital markets. The government has already raised money in the capital markets which it said would partly be used to finance local infrastructure spending.

Several smaller projects in the power and water sector are planned, including two desalination plants, one of which is intended to be solar powered. An expansion to the Qatalum plant in Mesaieed is also under consideration.

Qatar Steel (formerly Qasco) also delayed a planned \$1.3bn project financing deal in 2008 after being unable to agree terms with lenders,

which was intended to finance its expansion plans. It is unclear when, or if, the scheme will be restarted.

Future benefit

Several large oil and gas schemes are expected to be project financed in the next five years. The most advanced of these is the Barzan gas scheme, which will deliver offshore gas for domestic purposes. Royal Bank of Scotland has been appointed by QP to act as financial adviser on the scheme and is set to start approaching export credit agencies for financing before the end of 2010, although financial close is not expected until late 2011 or early 2012. Phase one of Barzan is expected to cost around \$1.7bn although it is still unclear if the finance raised will be for the entire development or staggered as contracts for each phase are awarded.

QP is also working on a \$6bn petrochemicals project at Ras Laffan Industrial City. The sponsor is expected to start seeking a financial adviser in early 2011, with financial close likely by 2014.

These future schemes should benefit from the stabilising global banking market in 2010 and beyond, and the government's strong credit quality as a result of high GDP growth. Doha raised \$10bn through bond sales in 2009, helping to boost its reputation amongst international investors.

