

2.1: Infrastructure

SECTOR OVERVIEW

The planned upgrades to Kuwait's aviation infrastructure are expected to support Kuwait's initiatives to position itself as a commercial hub. There exists potential to provide specialized facilities management (FM) services to maintain Kuwait's airport facilities at par with global standards and benchmarks.

POWER GENERATION - FUEL BASED

The Ministry of Electricity and Water (MEW) anticipates an investment of approximately USD 25 Bn to meet the electricity production capacity targets of 25,000 MW set for 2025. The private sector is expected to play a major role, leading to long term opportunities for foreign investors.

Fuel-based power production capacity to increase by over 10,000 MW by 2025

Project value

USD 25 Bn

POWER GENERATION - RENEWABLE

The Kuwait Government is considering alternative sources of energy to meet growing demand. Kuwait aims to generate at least 10% of its electricity (or over 2,000 MW) from renewable sources by 2020.

Kuwait National Rail Road System (tendering in 2016)

Project value

USD 10 Mn

DESALINATION PLANT

Scarcity of natural ground water resources in Kuwait is expected to put increased pressure on desalination facilities and drive demand for expansion and establishment of new desalination capacity.

FUNDING - PROJECT FINANCE

Private sector involvement in infrastructure projects is likely to promote growth of project finance in Kuwait.

MARINE TRANSPORT INFRASTRUCTURE

A number of port expansion and new construction projects are planned, presenting considerable opportunities for specialized global construction contractors, operators and service providers.

RAIL TRANSPORT INFRASTRUCTURE

The development of a national railway and metro network, with project values of USD 10 Bn and USD 7 Bn respectively are integral part of Kuwait's plan to upgrade the public transportation sector.

Power and transport being the main focus areas of the Government's infrastructure plan provide significant opportunities for foreign and local investors

2.1.1: Power Plant - Fuel based

OPPORTUNITY OVERVIEW

Demand for power in Kuwait is expected to grow at a rate of 5.7% per annum (p.a) from the peak load demand of 12,800 MW in 2013 to reach 25,000 MW by 2025. Currently, the Government is the sole producer and distributor of power in Kuwait. However, in order to meet this expected increase in power demand, the Government is inviting private sector participation through the PPP model creating significant opportunities for international investors to participate in Kuwait's power sector.

Conventional fossil fuels are expected to remain the dominant fuel mix for electricity generation in Kuwait. The Ministry of Electricity and Water has announced several large projects to strengthen Kuwait's electricity and water supply situation in order to meet the increasing demand from consumers.

Proposed power plants through the PPP model	Planned capacity
Kuwait KAPP - Al Abdaliya Hybrid Power Plant	280 MW
Kuwait KAPP - Al Khiran IWPP	2,500 MW and 125 million g/d (desalination)
Kuwait KAPP - Al Zour North IWPP - Phase 1	1,500 MW (power) and 102 million g/day (desalination)
Kuwait KAPP - Al Zour North IWPP - Phase 2	1,500 MW (power) and 102 million g/day (desalination)
Kuwait KAPP - Al Zour North IWPP - Phase 3	800 MW (power) and 50 million g/day (desalination)
Kuwait KAPP - Al Zour North IWPP - Phase 4	1,000 MW

- Rapid population growth and subsidized electricity prices has led to high electricity consumption.
- Demand for electricity is expected to grow as a result of Kuwait's growing economy combined with large scale infrastructure projects being undertaken in the country and planned development of the industrial sector.
- Seasonal variations and extreme temperatures are major drivers for power usage, with peak demand usually occurring during the summer months due to heavy use of cooling systems.

Kuwait's power generation capacity stood at 15,990 MW in 2014 and it is estimated that an additional capacity of 12,170 MW of power is planned by 2025 to meet the expected demand. The estimated market size of fuel-based power plants in Kuwait is projected at USD 25 Bn by 2025 with approximately USD 2.5 Bn of investment proposed over the next two to three years to cater to growth in demand for power until 2015.

The MEW has recently announced several power projects, including through the PPP route, to strengthen the electricity and water capacity in the country. These projects are likely to provide substantial business opportunities for local and international firms.

2.1.2: Power Plant – Renewable

OPPORTUNITY OVERVIEW

Rising population, growing consumerism and limited awareness or incentives for energy conservation have led to high per capita consumption of power in Kuwait. The MEW spends over USD 3.5 Bn per annum to meet the electricity requirements of the country and uses an estimated average of 200,000 to 300,000 barrels of oil and refined products per day to generate power.

The MEW is planning to enhance the efficiency of installed power stations through upgrading the technologies used in power generation. Renewable energy as a substitute to oil would allow Kuwait to conserve its oil for other uses including for export purposes. The PPP model being adopted by the Government for large projects provide significant opportunities for foreign and local private investors to participate in this sector.

Renewable sector projects	
Project Name	Capacity
Al Shaqaya Renewable Energy Project	2,000 MW
ISCC plant at Al-Abdaliya	280 MW

10% of the total electricity generation by 2020, or approximately 2,000 MW, is targeted to be met through renewable energy.

MEW has also received offers from US, European and Japanese firms to build power plants using alternative fuels and renewable energy sources, highlighting the scope for international participation in this sector.

- Shifting from fuel-based power plants to renewable energy can free up oil for other commercial uses. The Kuwait Government has set ambitious renewable energy targets of at least 10% of total power production by 2020.
- As Kuwait has become a net importer of natural gas, there is an urgent need to explore alternative means of power generation.
- Ratification of the Kyoto protocol for control of emission of greenhouse gases can provide an opportunity for energy conserving/environmentally efficient plants to benefit from the sale of greenhouse gases reduction units.
- Increased environmental awareness and Government support can drive renewable energy initiatives in Kuwait, taking advantage of abundant heat, wind and sunlight sources needed to generate renewable energy.



2.1.3: Desalination Plant

OPPORTUNITY OVERVIEW

Continuously increasing demand for water and scarcity of natural water resources is driving Kuwait to expand its desalination facilities. Currently the Government operates all desalination plants in Kuwait. However, the MEW is seeking to establish Integrated Water and Power Plants (IWPP) through the PPP model.

It is estimated that water consumption in Kuwait will rise to 780 Mn imperial g/d by 2020 (from 410 Mn imperial g/d in 2013 approximately 9.6% y-o-y). Kuwait has planned several projects to add new capacity, including the Al-Zour South Plant, Doha West Plant and Subiya Plant, to name a few.

Plant	Planned Capacity Mn Imperial g/d
Al-Zour North IWPP	276
Al Khiran IWPP	125
Doha West Plant	110
Subiya Plant	100
Doha East Plant	42
Shuaiba South Plant	36
Shuwaikh Plant	50

- Population growth and rising urbanization are leading to high levels of water consumption, driving the demand for new desalination facilities.
- Kuwait's per-capita consumption of water is among the highest in the world. Per capita consumption reached nearly 38,000 imperial gallons in 2013 and is estimated to have reached 44,611 imperial gallons by 2015.
- Government-led initiatives for the development of the industrial sector are likely to increase demand for water consumption.
- The scarcity of natural water resources in the country increases dependency on desalinated water as the primary source of water supply in Kuwait.

Estimates for water consumption in Kuwait, 2011-2020

2013

410 mn imperial gallons/day

2014 e

423 mn imperial gallons/day

2015 f

513 mn imperial gallons/day

2020 f

780 mn imperial gallons/day

- The planned and upcoming desalination projects represent potential opportunities for international developers, operators and investors.

2.1.4: Funding – Project Finance

OPPORTUNITY OVERVIEW

Over a period of six years (2009-2014), over USD 148 Bn of infrastructure projects were funded through project finance in the GCC. Over 72% of these project finance transactions were in the utilities sector with KSA and United Arab Emirates attracting 70% of total project finance lending among GCC countries. Historically, the lack of private sector participation in infrastructure has hindered the growth of project finance in Kuwait.

However, this scenario is set to change with the Kuwait Government adopting PPP models especially in core sectors such as power and water. Projects worth over USD 358 Bn are expected to be implemented over the next 15 to 20 years, presenting an attractive, high-growth market for project finance.

- The Kuwait Development Plan includes a number of large infrastructure projects, which are expected to drive significant construction activity.
- The Kuwait Government is pursuing projects under the PPP law to create wider private sector ownership in large projects.
- Private sector led development of these projects under the PPP model is expected to give rise to a need for project finance, presenting a sizeable opportunity for international banks and other long term infrastructure investors.



GCC- Project Finance Market

2009

24,928 USD Mn

2010

20,396 USD Mn

2011

29,601 USD Mn

2012

22,164 USD Mn

2013

28,788 USD

2014

21,745 USD Mn

2.1.5: Marine Transport Infrastructure – Construction & Engineering

OPPORTUNITY OVERVIEW

The prioritization of marine infrastructure development across GCC countries has led to several global companies establishing direct regional presence. The planned development of new ports and expansion work on the existing ports present considerable long-term potential for international engineering and construction enterprises in Kuwait.

Kuwait ports	Expansion and development plans
Mubarak Al Kabir Port – Bubiyan Island	The development of the new port is expected to be executed in 3 phases, once completed it will have a capacity of 2 Mn TEUs.
Shuwaikh Port	New gantry cranes and yard equipment, redevelopment of stacking areas, and installation of enhanced computer systems are in the pipeline, in addition to the deepening and widening of the approach channel to allow larger ships to use the terminals.
Shuaiba Port	Shuaiba Port could see further investment in its infrastructure. Kuwait had invited international consultants in 2009 to draw up a master plan to redevelop and expand Shuaiba port.
Doha Port	Plans to develop Doha port to handle more commercial cargo as the port is endowed with ample space for the expansion of warehousing and cargo handling facilities.

- Kuwait's economic growth and favorable socio-demographic balance positively impacts international trade and supports the development of Kuwait's local port infrastructure.
- The Kuwait Government has undertaken major initiatives for development of new ports, as well as the maintenance and expansion of existing ports.
- The limited local production capacities across sectors translates to a dependency on imports for items ranging from vehicles, electronics, building materials to food stuff and other consumables.

Kuwait's port volume for the two primary ports of Shuaiba and Shuwaikh had reached 840,149 TEUs (Twenty-foot equivalent units) in 2013. The government is currently developing plans for six additional ports in Kuwait besides the redevelopment of the existing three ports - Shuwaikh, Shuaiba and Doha. The construction of Mubarak Al Kabir Port alone constitutes a USD 4 Bn opportunity for marine construction and engineering companies in addition to the need for new marine facilities for the Al Zour refinery project.

2.1.6: Rail Transport Infrastructure – Construction, Engineering and Maintenance

OPPORTUNITY OVERVIEW

Transportation infrastructure constitutes a major area of focus under the Kuwait Development Plan. There is a need to significantly develop Kuwait's transport infrastructure in order to support Kuwait's increasing population as well as to service additional movement of people and goods arising from higher domestic economic activity.

To address these challenges, the Government is planning the development of rail and metro networks in Kuwait. These two are expected to require specialized multi-disciplinary and integrated service providers.

- The value of the Metro project is estimated at USD 7 Bn. The project is targeted to be operational by 2020.
- The USD 10 Bn railway project comprises of a new integrated rail network connecting Kuwait's key port and industrial installations as well as linking the country with the GCC rail network. This project is targeted to become operational by 2018.
- Both these projects are expected to provide opportunities for a host of industry players including integrated engineering services providers, construction contractors, rolling stock manufacturers, signaling and communication equipment firms, among others.

The planned rail and metro projects, with a combined value of around USD 17 Bn are expected to generate an annual market of USD 100-150 Mn for operations and maintenance on an annual basis. Kuwait's increased focus and awareness on environmental sustainability indicates the requirement for "green architecture" for these projects and presents opportunities for specialized, experienced firms.



Source: KAPP and Zawya