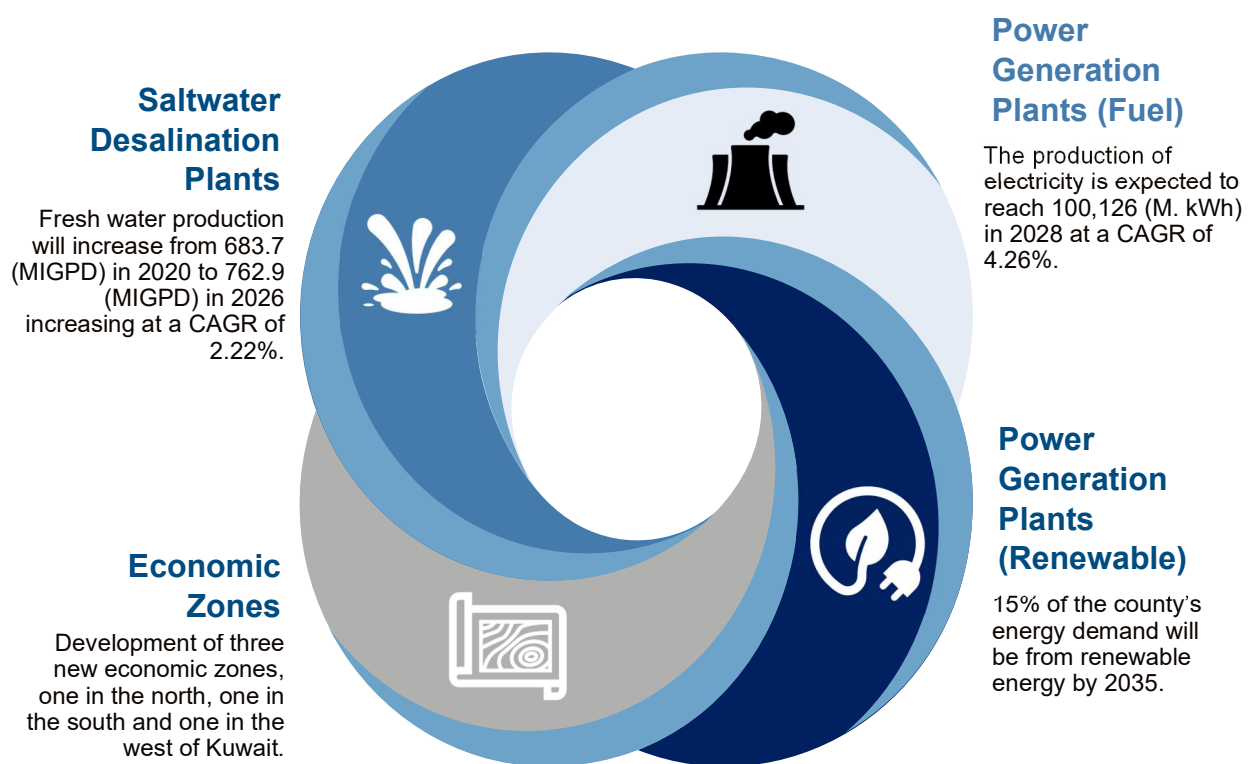


3.1 Infrastructure & Construction Sector

Sector Overview

Kuwait is investing substantially in infrastructural projects related to electricity and water to meet the demand of the rising population. A majority of the projects are being developed by the government through Public Private Participation (PPP) or by inviting foreign companies to provide engineering, design, and construction capabilities. Further, infrastructure is also prioritized by the development of a number of economic zones in the country that are expected to cater to different industries and businesses.

SUBSECTORS



The mega projects undertaken by the government as part of its development plan will create several opportunities for foreign investor participation.

3.1.1 Power Generation Plants (Fuel)

Generation of power by utilizing resources that are mainly based on fuel. In other words, the use of oil and other oil-based byproducts to generate power in the country.

OVERVIEW AND FACTORS INFLUENCING THE MARKET

- Kuwait's electricity is generously subsidized by the government and one of the main factors for the exorbitant consumption of electricity in the country. The rates for electricity stood as below in 2020¹:

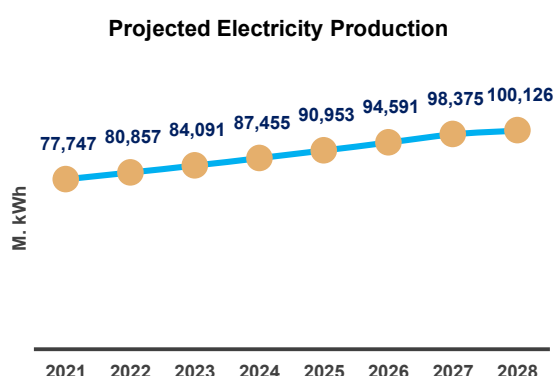
Sector	Tariff/(kWh) USD
Government	0.083
Residential	0.007
Investment and commercial	0.017
Industrial and agricultural	0.017

The rates are one of the lowest tariffs of electricity globally.

- Kuwait is one of the largest consumers of electricity in the world. Per capita energy consumption was 38.8 kWh per day in 2020 and 14,207 kWh per year in 2020¹. This is higher than the average consumption of Middle Eastern and OECD countries during the same year.
- Electricity demand for air-conditioning services in Kuwait accounts for some 70% of residential electricity demand.
- Kuwait's power is almost exclusively generated from oil and natural gas. The following are fuel-based power plants in Kuwait¹:

Stations	Total Available Capacity (MW)
Shuwaikh Station	252
Shuaiba South Station	720
Shuaiba North Station	875.5
Doha East Station	1,122
Doha west Station	2,541
Az-Zour South Station	6,055.8
Subiya Station	7,046.7
Az-Zour North Station	1,540
Total Capacity	20,153

- Oil holds a major share in terms of fuel utilized for generating power, with natural gas occupying a smaller proportion. However, the country is rapidly moving away from oil to natural gas as a means of power generation. Until recently, Kuwait held approximately 1% of the world's reserves in natural gas, but the recent discovery of oil and natural gas in the Neutral Zone area and offshore with KSA should increase the country's reserves and meet its requirements for power generation.
- The total production of electricity in the year 2020 was 74,757 (M. kWh), which has increased at a CAGR of 1.63% from 2016 at 70,085 (M. kWh). The total production is expected to reach 100,126 (M. kWh) in 2028 at a CAGR of 4.26%¹.
- Kuwait peak load demand was 14,960 MW in 2020. The peak load was expected to increase to 20,474 MW by the year 2028¹.



- The Kuwaiti government was the only producer and distributor of power in the country. However, it has now adopted the PPP model for developing new power plants and has thus involved the participation of the private sector in power generation.

The following projects are being developed under the PPP model²:

Stations	Capacity
Az-Zour North IWPP (Phase 1)	1,500 MW
Al Khairan IWPP (Phase I)	5,400 MW
Az-Zour North IWPP (Phase 2 & 3)	2,700 MW

- Further, Shuaiba North Station with an estimated value of USD 1.2 billion³ is expected to be privatized and will be the first existing utilities asset to be sold off to the private sector in Kuwait on completion.

OPPORTUNITIES AND INVESTMENT CONSIDERATIONS

- Kuwait's demands for power have been increasing historically and are expected to progressively increase at a growing rate as a result of the population growth.
- Global warming and its impact on the country, which has seen soaring temperatures in summer and will thus cause an added demand for power.
- The country's plan to diversify from an oil-based economy to a more diversified economy in the near future will further add demands on electric power to sustain the growing economic environment.
- Considering the above, electricity expectations by 2028 will soar to levels which cannot be sustained by the current power generating infrastructure alone. Hence, the government has been launching new power plants through the PPP models seeking private sector participation. This provides lucrative opportunities for foreign investors to participate in power projects.

Source: ¹MEW, ²KAPP, ³Energy and Utilities



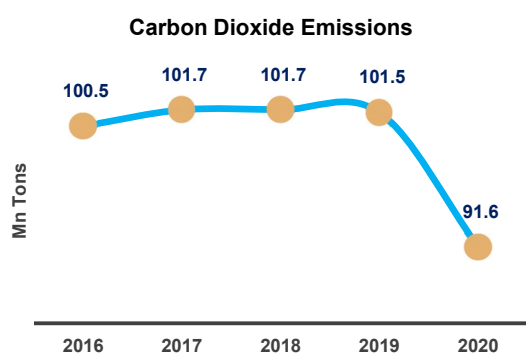
3.1.2 Power Generation Plants (Renewable)

Generation of power by utilizing resources that are mainly based on renewable energy. In other words, the use of solar, wind, water, and green hydrogen energy to generate power in the country.

OVERVIEW AND FACTORS INFLUENCING THE MARKET

- Kuwait's growing population means a need for increased electric power generation. Kuwait Vision 2035 Development Plan is an ambitious plan for diversifying the Kuwaiti economy and will place additional burden on the existing infrastructure of the country to meet the power requirements.
- Kuwait's power generation is based on power plants that are predominantly fuel based and are thus not eco-friendly. Greenhouse-gas emissions of 91.6 Mt of CO₂-eq in 2020¹ are expected to increase to 103.4 Mt of CO₂-eq in 2035². This increase is expected at an approximate annual rate of 1.1%, which is twice the average of global emissions.² Greenhouse gas emissions in Kuwait increased rapidly in recent times as a result of the construction activities associated with infrastructural development, high oil prices and a major reliance on fuel for power generation.
- Further, Kuwait is rapidly moving away from oil to natural gas as a means of power generation. The share of natural gas is increasing at a rapid pace for this requirement. Until recently Kuwait held approximately 1% of the world's reserves in natural gas and the production capacity was expected to reach 27.3 bcm by 2035.²

This capacity though was thought to be insufficient to meet the growing needs for natural gas in power generation and Kuwait was expected to be a net importer of natural gas. However, the recent discovery of major oil and gas reserves in the Neutral Zone area and offshore with KSA is expected to sustain the country's requirements for natural gas as a fuel for generating power. Nevertheless, while natural gas is less polluting than oil, it will still cause sustained carbon emissions.



- Today less than 1% of total energy capacity of Kuwait comes from renewable energy.³ However, the Kuwaiti government has set up an ambitious plan to generate at least 16% of the country's energy demand from renewable energy by 2035.²

In this regard and as part of Kuwait vision to move to a more sustainable form of energy generation, the below plants are being developed by the government on a PPP basis⁴:

Renewable Energy based Power Plants	Capacity
Al Shaqaya Renewable Energy Project	2,000 MW
ISCC Plant at Al-Abdaly	280 MW

OPPORTUNITIES AND INVESTMENT CONSIDERATIONS

- Global warming is a major concern worldwide and nations are coming together to place strict control on carbon emissions. Kuwait needs to play its part in reducing emissions and being at the forefront of climate initiatives.
- Kuwaitis' energy demands are expected to keep increasing and barely any requirements are met through renewable energy. Foreign investors, who specialize in providing renewable energy solutions have an excellent opportunity to enter the sector with their advanced expertise.
- Further, the Kuwaiti government seeks the initiative of the private sector in the participation of mega projects related to renewable energy through a number of PPP arrangements. Such arrangements can be utilized by international investors within the country.
- Moreover, Kuwait's government shall participate in Saudi and Middle East Green Initiatives Forum, which has been launched in October 2021.
- Green Hydrogen plants can be established to fulfill the renewable energy gap in the market.

Source: ¹British Petroleum, ²Kuwait Institute of Scientific Research, ³MEW, ⁴Kuwait Vision 2035 Development Plan



3.1.3 Saltwater Desalination Plants

Saltwater desalination plants convert sea water into fresh water. They are particularly used in arid regions where fresh water is in shortage but where there is ample access to seawater.

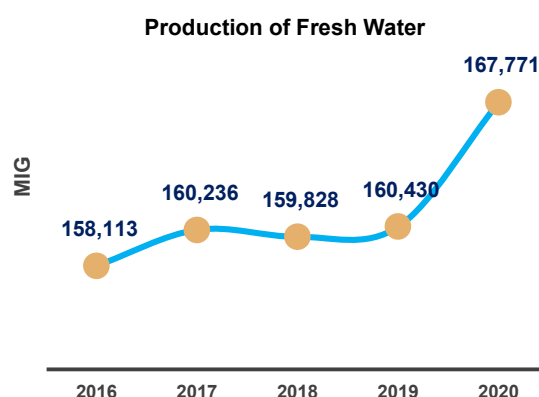
OVERVIEW AND FACTORS INFLUENCING THE MARKET

- Despite its relatively small population, Kuwait is one of the largest consumers of water in the world. Per capita water consumption was 98 IG per day in 2020 and 35,857 IG per year in 2020, thus making it one of the highest water consumers in the world.¹ In fact, the demand for fresh water in the GCC is expected to increase by 62% by the year 2025.²
- Kuwait stands as the 3rd largest producer of desalinated water in the GCC only behind Saudi Arabia and the UAE.
- Kuwait's water is extremely subsidized by the government and one of the main factors for the exorbitant consumption of water in the country.
- The rates for water stood as below in 2020¹:
- Kuwait's desalination facilities supply almost 90% off its freshwater requirements in the residential sector and 60% of the demand in the industrial sector. The following are the desalination plants in Kuwait¹:

Stations	Total Available Capacity (MIGPD)
Shuwaikh Station	48.5
Shuaiba South Station	30
Shuaiba North Station	45
Doha East Station	42
Doha west Station	170.4
Az-Zour South Station	140.4
Subiya Station	100
Az-Zour North Station	107
Total Capacity	683.7

Sector	Tariff/ (1000 IG) USD
Government	13.3
Residential	2.7
Investment and commercial	6.6
Industrial and agricultural	4.2

- The gross production of fresh water in the year 2020 was 167,771 MIG which has increased at a CAGR of 1.49% from 158,113 MIG in 2016¹.



- The installed capacity of desalination plants is expected to increase from 683.7 MIGPD in 2020 to 762.9 MIGPD in 2026 increasing at a CAGR of 2.22%¹.

- The Government has already increased the capacity of the Doha West Plant and is in the process of increasing the capacity of the Al-Zour South Plant and Subiya Plant.
- Until recently the Kuwaiti government was the only producer and distributor of water in the country. However, it has now adopted the PPP model for developing new IWPP plants and has thus involved the participation of the private sector in water production.

Some of the projects currently developed under the PPP model include³:

Stations	Capacity
Az-Zour North IWPP (Phase 1)	102 MIGPD
Al Khairan IWPP (Phase I)	125 MIGPD
Az-Zour North IWPP (Phase 2 & 3)	165 MIGPD

- As part of Kuwait Vision 2035 Development Plan, the Shuaiba North Station is to be privatized, which will help it in increasing its efficiency and thus the production capacity of fresh water.

OPPORTUNITIES AND INVESTMENT CONSIDERATIONS

- The increasing population of Kuwait is expected to add additional strain on the water desalination infrastructure of the country. Water desalination capabilities must be increased either through expanding capacity or through developing new plants.
- The economic diversification of the country and its growing demand for water in different sectors will further add a lot of pressure on the existing infrastructure that will certainly not be able to sustain such levels of demand.
- Multi-effect desalination technology is the most preferred technology for water desalination, away from the presently used multi-stage flash desalination technology. While this technology accounts for just 6% of water production today, it is expected to be utilized in almost 50% of water production by 2035.⁴
- Considering the above, the government is encouraging the participation of private players in the sector who can bring in the most cost-effective technology with the least environmental consequences. Thus, foreign investors with expertise in this domain can become major players within this sector of Kuwait market.

Source: ¹MEW, ²MEED, ³KAPP, ⁴Kuwait Institute of Scientific Research



3.1.4 Economic Zones

Special Economic Zones are Free Trade Zones that cater to logistics, manufacturing, trading and other activities. Taxes and custom duties are usually not levied in these zones. On the other hand, Economic Zones are a more inclusive concept and have additional benefits than Free Trade Zones. They are available to local and foreign investors. Incentives that may be provided in the economic zones are according to each country's laws, regulations and incentives. The Economic Zones in Kuwait are subject to the laws and regulations of KDIPA and incentives granted by KDIPA.

OVERVIEW AND FACTORS INFLUENCING THE MARKET

- Kuwait's only free trade zone was established in Shuwaikh in the 1990's. The objective of the zone was to increase the inflow of foreign funds into the country for investment purposes while at the same time making it a commercial exchange point between the countries in the region. However, the zone was not able to achieve its true purpose and was closed down in 2019 based on Kuwait's Council of Ministers decision to cancel Decision No. 512/2018.
- In 2016, a detailed feasibility study was undertaken by Kuwait Direct Investment Promotion Authority for creating three economic zones in Kuwait. The areas allocated to the economic zones and the specific designated uses of the areas are provided below¹:
- The study was formally adopted by the Kuwait Municipality on 30 May 2016. The projects are currently being considered towards development.
- KDIPA may consider offering a number of benefits/incentives to foreign investors for establishing their presence in the zones including:
 - a) Competitive Infrastructure
 - b) Duty Free Exports
 - c) Tax Incentives/Tax Holidays/Tax Concessions
 - d) Import of capital goods at concessional rates

Area	Designated Activities
Al Abdali area near the northern part of the Arabian Gulf	Coke and petroleum products, logistics and storage, waste management and other activities
Al Naim area located in the western region	Basic industries, environmental concentrated industries.
Al Wafra area located in the southern region	Cross-border economic activity

OPPORTUNITIES AND INVESTMENT CONSIDERATIONS

- Kuwait has launched a number of mega projects in line with Kuwait Vision 2035 Development Plan initiative that intends to diversify Kuwait's economy away from oil into other diversified economic sectors. These projects provide foreign investors with opportunities to participate in the local market. Foreign investors can cater to the local markets by setting up their business in the economic zones and at the same time take advantage of the various concessions and benefits provided in these zones.
- Further, the zones are in close proximity to similar zones in other GCC countries thereby providing foreign investors an option of conducting cross border trade and tapping into other markets.

Source: ¹KDIPA