

# Developing renewable energy projects

A guide to achieving success in the Middle East

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EVERSHEDS



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# Forewords

## 2015 was a significant year for the renewable energy market and for the MENA region.

Three key developments in the global renewable energy market generally stand out to us as a team. First, the maturity of the core technologies has made these projects significantly more bankable and marketable to the extent that capital is chasing projects and institutional capital is able to participate much earlier than before making it easier for development and construction capital to be recycled into new opportunities. The cost of capital in certain markets has correspondingly reduced.

The maturing of the technologies and the corresponding impact this has had on the approach of funders has allowed key market participants to also mature and refine their approach so that they are far better equipped now to assess country risk. This is opening up a growing number of new markets which may have been challenged even three years ago to attract the level of international engagement they are now enjoying.

The second development has been an acceptance that storage has the potential to, and very likely will, completely turn traditional power market models on their head. In this respect three key things are happening. First, the electric car/transport market is emerging with strong confidence that it will be the dominant transport technology. Second, storage cost curves are reducing rapidly with many accepting a cost curve similar to silicon.

Finally, software technology is allowing aggregation of storage and renewable energy generating solutions to operate on rapid demand response times so as to create virtual power plants.

It is this potential to be less reliant on national grid infrastructure and base load generation which has the potential to be transformational. The third change we have seen is the potential and appetite for market disruption. It seems that the power sector is asking not if, but when. This means that our sector, as ever, will continue to be nimble, prepared and successful.

What does all this mean for the MENA region? MENA has some of the best renewable energy resource globally. It is also blessed with a growing availability of regionally sourced capital both from banks and funds and from an expert community of developers, technical and other advisors. It has Governments which understand the opportunity and are prepared to engage with the market to ensure that their programmes work for all.

MENA is in a prime position to benefit from the global momentum which has only been spurred on by the recent Paris COP outcome.

We are honoured and proud to be working in the renewable energy sector in MENA with some of the leading participants and leaders in this market. We are also delighted to have such expert partners including IFC, Shahid Law, PWC, MESIA and WFES, all of whom have worked hard to ensure that the market maintains its momentum and delivers success for its participants.

Best wishes for a successful and enjoyable 2016.

*Michelle*

**Michelle T Davies**

Global Head of Clean Energy, Eversheds LLP



*Middle East Law Firm of the Year 2014  
and Woman of the year 2013 & 2014*

**Oil & gas prices remain volatile while the cost of renewables continues to fall. This is a major driver behind the developments we have seen last year and are expecting for 2016 and beyond.**

In 2015, the MENA region has seen wind and solar developments breaking new low-cost records – this attracted strong international interest and resulted in new project development and investment.

Solar PV, is now cheaper than gas for new power projects in a number of markets in the region, as is wind where resources are strong. But instead of renewables “competing” with conventional power, their ability to complement and neatly fit into an energy system is now more widely understood. The strong and continuing decline in oil prices also impacts renewables in a number of ways: Longer term, it acts as a catalyst further strengthening country’s resolve to diversify the energy mix and the economy, decoupling both from price volatility and single-fuel dependency.

Of course, lower oil prices also put pressure on government revenues in exporting countries – which could result in reduced government investment for public utilities, including renewables. To date, this effect has however not been observed: Energy (and water) security remains an utmost priority for decision-makers across the region and increasing private sector investment also plays a role. We are hence seeing a continued thrust for new renewable energy projects – despite low oil prices – and we’re observing increasing targets for renewable energy shares in 2020 and 2030.

Besides costs, we are observing a growing appreciation of the business case for renewables, including the wider socio-economic benefits that can come alongside the generated electricity – This is where

energy policy meets economic policy – for job creation, trade, investment and private sector growth. The International Renewable Energy Agency (IRENA), headquartered here in the region in Masdar City, provides us with ample evidence of this trend. Renewable energy now also features heavily in many of the region’s nationally determined contributions to a global climate change solution which underpins the unprecedented Paris Agreement reached at COP21.

MENA markets also continue to develop their ability to integrate more and more renewables at an operational level – building the institutional capacity through new authorities, policies, regulation and tariffs. This now includes de-centralised renewable energy generation as seen in Dubai’s solar rooftop scheme as well as more integrated resource planning.

What should also continue, is the enhancement of utilities’ capabilities, tendering processes and perhaps business models – to match the needed pace of technology deployment in the coming years. We are seeing transformational change of entities and entire sectors in the MENA power & water industry, which will also facilitate increased renewables integration.

Looking ahead into 2016 the prospects of renewable energy in the MENA region are vast, exciting and yet not without their challenges. We hope this publication provides an overview of the region’s renewable energy landscape and will help both business and Government fully exploit the opportunities that renewables can offer the MENA region.



**Jonty Palmer**

Power and Utilities Leader, PwC Middle East

# Chapter 1: Egypt



## Egypt Overview

Area	1,001,450 km <sup>2</sup> (2015)
Population	88.5 m (2015)
GDP (PPP)	Total: \$946.6 b (2014) Per capita: \$10,900 (2014)
CO <sub>2</sub> Emissions	Total: 227.08 m tons (2012) Per capita: 2.65 tons (2011)

Source: CIA Factbook, EIA

## Egyptian Power Sector (2014)

Installed capacity	32 GW
Peak demand	26 GW
Peak demand growth	5%
Installed capacity requirement by 2020	45 GW

Source: RES4MED, EIU

## Retail Price Levels

		US cents	Local Currency (Piastre)
Power	Min (2015)	1/kWh	5/kWh
	Max (2015)	8/kWh	60/kWh
Fuel	Petrol (2015)	34/litre	264/litre
Water	Min (2014)	3/m <sup>3</sup>	23/m <sup>3</sup>
	Max (2014)	31/m <sup>3</sup>	240/m <sup>3</sup>

Source: Egyptera, Egyptindependent, Numbeo

### Key Bodies referred to:

CRCICA	Cairo Regional Centre for International Commercial Arbitration
EEHC	Egyptian Electricity Holding Company
EETC	Egyptian Electricity Transmission Company
EgyptERA	Egyptian Electric Utility and Consumer Protection Regulatory Agency
GAFI	General Authority for Investment and Free Zones
HCWW	Holding Company for Water and Wastewater
MOEE	Egyptian Ministry of Electricity and Renewable Energy
NREA	New and Renewable Energy Authority
OPEC	Organization of the Petroleum Exporting Countries
UNCITRAL	United Nations Commission on International Trade Law

### Key Terms used:

BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BIT	Bilateral Investment Treaty
FIT	Feed-in-Tariff
GDP	Gross Domestic Product
GW	Gigawatt
IPP	Independent Power Producers
JSC	Joint Stock Company
kWh	Kilowatt Hour
LLC	Limited Liability Company
MW	Megawatt
PPA	Power Purchase Agreement
PV	Photovoltaic
RE	Renewable Energy
TSO	Transmission System Operator

## 1.1. Context and Key Drivers

Egypt is the largest non-OPEC oil producer in Africa and second largest natural gas producer. However, it is also the largest oil and natural gas consumer in Africa. Natural gas and oil are the primary fuels used to meet energy demand, and accounted for 85% of total energy consumption in 2014.

A shortage of natural gas is a contributing factor in Egypt's frequent electricity blackouts since 2011. Egypt Government is actively closing the gap by importing liquefied natural gas (LNG) and building new power plants. The new West Nile Delta offshore natural gas project will increase the gas supply by 25% from late 2017. Increasing Egypt's domestic renewable energy capacity will help diversify its energy mix and improve energy security.

Furthermore, the large scale deployment of renewable energy would:

- **Free up gas for more profitable uses:** Potential natural gas exports in Egypt have previously been diverted to the domestic market to meet growing energy demand. Consequently, Egypt's gas exports declined by an annual average of 3% from 2009 to 2014. Developing domestic renewable energy would ensure that more natural gas is available for export.
- **Meet growing demand:** Egypt's peak demand is expected to grow at a rate of 5% annually. This increase in demand and declining oil and gas production mean that Egypt needs to diversify energy production to fill these gaps or face further electricity blackouts.



Egypt's gas exports declined by an annual average of **3%** from 2009 to 2014.



- **Leverage the advantageous geography and climate:** Egypt has very rich renewable energy resources. The global horizontal irradiance is 2,450 kWh/m<sup>2</sup>/year, and direct normal radiation is 2,800 kWh/m<sup>2</sup>/year. Wind full load hours at 3,015 hours/year is the highest among Arab countries, especially in the Gulf of Suez.



Egypt has very rich renewable energy resources.



*Zafarana Wind Farm<sup>1</sup>*

## 1.2. Market Readiness

Recent political upheavals, while increasing overall market risk, have not affected Egypt's long term commitment to renewable energy. Although private sector investment in renewable energy is a relatively new market in Egypt, the country's high potential and the government's commitment to increasing its renewable energy output make it an attractive investment opportunity.

Key initiatives which demonstrate Egypt's commitment to renewable energy include:

- **Energy subsidy reform:** Electricity subsidies cost the government almost \$2 billion in 2013-14 in addition to fuel products subsidies of about \$14 billion, which contributed to a high budget deficit. However, the Egyptian government has recognised the regressive nature of these subsidies and committed to subsidy reform. In early 2013, the government increased slab tariffs for electricity for heavy industries, reduced subsidies on inputs for electricity producers, and increased tariffs for households that consumed more per capita. In July 2014, the government raised prices for subsidized petroleum products which saved subsidies in the government budgets by 2% of

GDP. The subsidies have fallen due to the lower oil prices in 2015 as well. The Government has published details of further tariff increase to be implemented in coming years with the aim of achieving a break even point and fully remove subsidies by 2018. Egypt is also in the process of implementing a smart card system to re-target subsidies towards those most in need.

- **Feed-in-tariff:** In September 2014, the Egyptian Ministry of Electricity and Energy announced specific feed-in-tariffs for electricity generated by distributed solar and wind sources as part of the government's efforts to increase the country's energy capacity in the face of the serious power shortage in the medium term.



Electricity subsidies cost the government almost \$2 billion in 2013-14 in addition to fuel products subsidies of about \$14 billion, which contributed to a high budget deficit.

- **Dedicated funds:** In January 2012, the Cabinet approved a renewable energy fund dedicated to financing renewable energy projects. Clear determination of sources of financing and procedures for disbursement of funds to renewable energy projects are still under discussion.
- **Renewable energy-focused research centers:** The New and Renewable Energy Authority (NREA) is the Government entity responsible for promoting and supporting renewable energy. The Energy Research Center and Cairo University are the main technical research centers in Egypt.
- **Land access:** The government has allocated more than 7,600 km<sup>2</sup> of desert land for deployment of future public and private wind farms. All permits for distributing this land have been handed over to NREA.



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### 1.3. Current Project Status

Given the need to reduce national dependence on residual domestic and imported gas, Egypt has announced that it will place greater emphasis on its considerable solar and wind potential.

The Egyptian government expects the renewable energy sector to produce 20% of total power generation by 2022, 12% of which will be generated by wind energy alone.

Both wind farms and the secondary priority area of biodiesel production are supported by the country's abundance of land, stable climate conditions and competitive labour force.

In January 2015, the Egyptian president Abdel Fattah El Sisi said that the country would maintain its aggressive energy strategy, which includes 4.3GW of renewable energy projects through the FIT scheme. Solar accounts for 1,300MW and wind accounts for 2,000MW. In June 2015, Siemens signed a contract to provide 16.4 GW of electricity capacity which includes 2,000MW of wind projects. In the same month, NREA awarded Desert Technologies and Enerray SpA two 50 MW PV projects through the Feed-in-Tariff Program in Benban.

NREA stated in early 2015 that 67 solar applicants and 27 wind applicants have been selected to take part in developing over 4.3 GW of renewable energy projects in the country. As this Guide goes to print, most of the PV developers have been allocated land by NREA in Benban (Aswan), the Zafarana (Gulf of Suez) or West of Nile, and a number of wind developers have been allocated land in the Gulf of Suez. The allocation is temporary and is done on the basis of a memorandum of understanding to undertake the necessary site measurements for the projects by the developers.

In addition to the FIT scheme, EETC is tendering for a 250 MW wind project in the Gulf of Suez and a 200MW solar PV project, both under build, own and operate contracts. Four out of six eligible consortia submitted their bids for the wind projects. Furthermore, EETC tendered for a 250MW wind project, a 200MW solar PV project and a 50MW CSP project in the West Nile area. The process of evaluation of the tenders was initiated in late 2015. As this Guide goes to print, the winners of the tenders have not been announced.

Key Renewable Energy Facts	
Installed Capacity	4.8 GW
Pipeline Capacity	880 MW
Targets	20% by 2022
Implied Capacity	10 GW

Source: EIU, REN21

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
Kom Ombo PV	PV	Main Contract Bid	200 MW	Aswan
Gabal El Zeit	Wind	Execution	220MW	Suez
Gulf of Suez	Wind	Main Contract Bid	250 MW	Suez
Gulf of Zayt	Wind	Execution	120MW	Red Sea
Assiut Barrage & Hydropower Plant	Hydro	Execution	40 MW	Asyut
Egypt Ministry of Electricity & Energy - Gabal El Zeit Wind Farm	Wind	Complete	200 MW	Gabal El Zeit

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
Kureimat Hybrid Power Plant: Solar Island Package	PV	Complete	20 MW out of 140 MW	Cairo
Zafarana	Wind	Complete	545MW	Suez
Naga Hammadi Barrage	Hydro	Complete	64 MW	Naga Hammadi
Power Plant in Benban	PV	Execution	100 MW	Benban

Source: MEED

## 1.4 Regulatory Policies

Committed to the development of the renewables sector, Egypt passed the Renewable Energy Law in December 2014. The new law sets out the regulatory framework for renewables in Egypt. The executive regulations of the law have not yet been issued. A new Electricity Law was also passed in July 2015, which completely reforms the electric utility.

In addition to the Renewable Energy Law and the new Electricity Law, a number of existing policies and regulations remain applicable to the sector.

### Current Policies and regulations

- **Companies Law No. 159 of the year 1981 and its Executive Regulations (as amended)** - Establishes the requirements for the incorporation of the SPV and sets

out the general rules for its capital, management, profits distribution and auditing, etc.

- **Investment Law No. 8 of the year 1997 (as amended by Law No. 17 of the year 2015) and its Executive Regulations issued by Prime Ministerial Decree No. 1820 of the year 2015** - Mainly sets out investment incentives, customs exemptions, the allocation of land to investors and the means of settlement of any disputes arising between the investors and the relevant Egyptian authorities.



A new Electricity Law was also passed in July 2015, which completely reforms the electric utility.

- **Renewable Energy Law No 203 of year 2014** - Governs the establishment of power generation projects from renewable sources, and generally sets out the rules applicable to the allocation of land for such projects, the connection to the national grid and the sale of the power generated from such projects in accordance with the feed-in tariff.
- **Prime-Ministerial Decree No. 1947 of the year 2014** - Establishes feed-in tariffs for electricity generated from renewable sources. The purpose of the feed-in tariff is to guarantee a fixed price for energy producers (for 25 years for solar energy projects and for 20 years for wind projects) to encourage investment into the renewable energy sector.
- **EgyptERA SPV Incorporation Guidelines issued on 17 March 2015** - Sets out the rules applicable to the incorporation of FIT project companies as well as those applicable to such companies following commercial operation.
- **Electricity Law No. 87 of the year 2015** - This new Electricity Law introduces fundamental changes to the structure and behaviour of the electricity market to ensure a liberalised market. Generally, it establishes a competitive electricity market that encourages private sector involvement (through project companies set up in Egypt in the form of joint stock companies) in the generation and distribution of electricity, by creating an atmosphere which attracts investments to the energy sector. Under the new Law, the role of EEHC is shifting towards a supervisory role and more free competition is introduced in the production, transfer, distribution and sale of electricity for the non-regulated market. EETC becomes an independent company under the new Law and has the exclusive responsibility of electricity transmission and network operation. EETC also has the obligation to allow third parties to use its networks with equal opportunities. EETC must make available information about



The new Electricity Law is expected to be the main legislation governing the power sector in Egypt.

its activities for the commercial benefit of the agencies working in the electricity sector. The Law also reorganises EgyptERA by giving it a more extensive role in the electricity market and separating it from the MOEE. Further, both EETC and EgyptERA now have an obligation to ensure the efficiency of the electricity sector; EETC must operate the electricity transmission system in a manner that achieves efficiency and stability and EgyptERA must develop rules and procedures to raise the efficiency of electricity usage and prevent any monopolistic practices in the sector. The Law ensures availability of supply to users at equitable prices while taking into consideration environmental aspects and mandates that the tariff of electricity must be approved by EgyptERA before being officially issued. The Law also complements the Renewable Energy Law by encouraging renewable energies and power generation from secondary resources.

## Upcoming policies and regulations

- **The Executive Regulations of the Renewable Energy Law** - Expected to regulate in detail the subject of power generation from renewable sources.
- **The Executive Regulations of the New Electricity Law** - Expected to be issued soon to regulate in detail the new market structure and the revised roles of the electric utility entities, such as EEHC, EETC, EgyptERA and NREA. Notably, EETC ceases to be affiliated to EEHC under the new Electricity Law and is expected to be transformed into a Transmission System Operator (TSO).

## 1.5. Governing Laws

### Counterparties and governing laws

A developer will need to enter into a number of contracts to develop a renewable energy project in Egypt. We set out below the relevant counterparty and law applicable to each of the key contracts:

Contract	Counterparties	Governing law
Real Estate Contract (freehold/leasehold) for the SPV premises	Owner/Landlord	Egypt
Usufruct Agreement for the project's plot of land	New and Renewable Energy Authority	Egypt
Usufruct Agreement and Cost Sharing Agreement Direct Agreement	New and Renewable Energy Authority and Lenders	
SPV Bylaws	Shareholders	Egypt
Network Connection Contract	Egyptian Electricity Transmission Company	Egypt
Cost Sharing Agreement	Egyptian Electricity Transmission Company and New and Renewable Energy Authority	Egypt
Network Connection Contract and Cost Sharing Agreement Direct Agreement	Egyptian Electricity Transmission Company, Ministry of Finance and Lenders	
Renewable Energy Power Purchase Agreement	Egyptian Electricity Transmission Company	Egypt
Renewable Energy Power Purchase Agreement Direct Agreement	Egyptian Electricity Transmission Company, Ministry of Finance and Lenders	Egypt



Contract	Counterparties	Governing law
Guarantee	Ministry of Finance	Egypt
EPC Contract	Third party contract	Negotiable
Operation and Management Contract	Third party contractor	Negotiable

The choice of the governing law of the finance documents is usually subject to the agreement of the parties. If finance is not obtained from Egypt, it is common for finance documents to be governed by English Law. Egypt allows both Islamic and Non – Islamic finance.

## Dispute resolutions/ considerations

Egypt has a well-developed court system of three tiers: the courts of first instance, the Court of Appeal and the Court of Cassation. Further, the Cairo Regional Centre for International Commercial Arbitration (CRCICA) is a well-established venue for the settlement of disputes either through mediation or arbitration. CRCICA has been active for thirty-five years administering both domestic and international cases, and has handled over 1,000 cases covering a wide range of sectors. Additionally CRCICA has a very diverse list of arbitrators from different countries in the world, and also from different fields in order to best accommodate the diverse cases it handles.

The Egyptian Arbitration Law No. 27 of year 1994 follows the principles of the International Chamber of Commerce and the United Nations Commission on International Trade Law (UNCITRAL) arbitration rules.



Egypt has a well-developed court system of three tiers: the court of first instance, the Court of Appeal and the Court of Cassation.

Save where the Egyptian courts or local arbitration through CRCICA have mandatory jurisdiction, international arbitration is often favoured as a dispute resolution mechanism in key contracts.

Egypt is a signatory of both the ICSID and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. Egyptian courts have a good record of enforcing foreign arbitral awards.

Egypt is also a signatory of a number of bilateral and multilateral treaties for reciprocal enforcement of judicial awards such as the Riyadh Convention on Judicial Cooperation between States of the Arab League.

### Bilateral investment treaties

A member of the World Trade Organisation since 1995, Egypt is party to numerous regional and international trade initiatives and market access agreements.

Among others, Egypt is party to the Agadir Free Trade Declaration, Greater Arab Free Trade Agreement, Common Market for Eastern and Southern Africa Trade Agreement and Egypt-EFTA Free Trade Agreements.

Egypt also has a wide network of Bilateral Investment Treaties (BITs). There are currently 112 BITs signed and in force. These include BITs with Australia, China, Denmark, France, Spain, India, Kuwait, Malaysia, Russia, Switzerland, United Arab Emirates, Indonesia, United Kingdom, Japan, South Africa and the United States. Other BITs are being negotiated.

Egypt's BITs secure the common protection of expropriation without compensation, free transfer of investments and returns, most favourable nation treatment, fair and equitable treatment and provision of full protection and security of foreign assets and rights.

Egypt is not a party to the Energy Charter Treaty. Although it has Observer Status in the organisation, this does not allow investors to invoke the investor – State arbitration provisions in the Treaty.

Accordingly, if an investor wishes to access investment protections for a clean energy investment in Egypt, it should consider not only whether a treaty is in place between Egypt and the investor's home State, but also the terms of the potentially applicable treaty or treaties to evaluate whether its investment will be covered by one or more treaties. Careful structuring of an investment can allow an investor to maximise its protection under international investment protection instruments.



Egypt has been a member of the World Trade Organisation since 1995.

## Employment considerations

Employment relationships are governed by the Labour Law No. 12 of year 2003 (Labour Law).

The Labour Law applies to private sectors employees regardless of their activities. Save for limited exceptions, the Labour Law does not differentiate between Egyptian and foreign employees. Investors should be aware of the following employment-related considerations:

- **Annual Pay Rise** - The Labour Law sets out a mandatory pay rise of wages at a rate not less than 7% of the employee's basic salary on which social contributions are calculated.
- **Guarantee of Benefits** - The Labour Law generally does not allow the decrease of the employees' benefits. Also special disciplinary rules set out in the Labour Law apply, and dismissal of employees must be pronounced by the Labour Tribunal.
- **9:1 Ratio** - A ratio of at least nine Egyptian employees to every foreigner is applicable to employers wishing to hire foreign employees, unless specially exempted.

- **Termination of Employment Contracts** -

Developers should be aware of the rather restrictive Labour Law provisions in relation to the classification of definite and indefinite employment contracts and the applicable termination processes.

- **Distribution of Dividends** -

At least 10% of the net profits of a joint stock company determined for distribution should be distributed to the employees provided that such distribution does not exceed the total annual salaries of the company's employees.



A ratio of at least nine Egyptian employees to every foreigner is applicable to employers wishing to hire foreign employees, unless specially exempted.

## 1.6 Investment Considerations

### Setting up a business

- **Incorporation** - Generally foreign investors would invest through a limited liability company (LLC) or private joint stock company (JSC). Save in certain specified sectors, 100% foreign ownership is permitted. A LLC is the simplest form of company and may be managed by one or more managers. It has no minimum capital and its capital is not divided into shares. A JSC has a minimum capital requirement of EGP 250,000 and its capital is divided into shares. It is managed by a board of directors.

FIT projects must be incorporated in the form of a JSC with a minimum capital requirement determined by NREA. This is at the moment set at EGP 15,000,000 for over 20MW up to 50MW capacity, and at EGP 6,000,000 for 20MW capacity.

Pursuant to the general corporate rules applicable, the payment of the issued capital of SPVs may be apportioned as follows: 10% of the issued capital must be paid at incorporation, to be topped up to 25% within three months from incorporation, and the remaining 75% to be paid within five years from incorporation.

The SPV (in the form of a JSC) must be incorporated by a minimum of three shareholders, including the lead developer and other qualified investors. The winning consortium (or single developer) must hold at least 51% of the capital of the SPV at least until commercial operations date (COD) and the lead developer must alone hold not less than 25% of such capital at least until the lapse of two years from COD.

- **Maximum Capacity** - The authorized MW capacity for any SPV awarded a PPA for a solar or wind project under the FIT scheme may not exceed 50MW per site.



A LLC is the simplest form of company and may be managed by one or more managers.

- 
- **Participation** - The total share capital of any member in several consortia may not exceed the total capital required to establish FIT projects with a capacity of 100MW per site per technology (solar PV or wind), provided that each shareholder shall present a declaration disclosing its shareholding percentages in the share capital of other qualified SPVs. However, after the lapse of two years from commercial operation, the total participation cap requirement will be waived.

- **Change of Ownership** - The lead developer may not be changed before the second anniversary of the commercial operation. Consortium members may be replaced or changed by an equivalent or superior party prior to the incorporation of the SPV, subject to confirmation by the Feed-in Tariff

Unit. Changes of ownership within a maximum of 49% of the share capital of the SPV are allowed provided that they are in line with the EgyptERA SPV Incorporation Guidelines and following the approval of GAFI. EgyptERA must be notified of any change in the shareholding structure following the issuance of the generation licence. The revised version of the project documents including the Cost Sharing Agreement and the Power Purchase Agreement have introduced a number of limitations of the change of ownership and control, so this issue must be carefully looked at on a case-by-case basis to ensure compliance with the legislative and contractual framework in place before effecting any changes.

## Development assets - real estate, security

NREA is responsible for the allocation of Government owned plots of land to developers for the establishment of their solar and wind FIT projects. The land is allocated to developers on a usufruct basis for a term of twenty-five years for solar projects and twenty years for wind projects in consideration for two per cent of the value of the sold energy. Material permits are already in place for such plots. A usufruct is usually provided for BOO schemes as well.

## Payment structures

For FIT schemes, following the incorporation of the SPV, agreements will be signed with EETC, NREA and the Ministry of Finance (see section 1.5(a) above). The sale of power is dealt with under the Power Purchase Agreement. For BOO schemes, a PPA is entered into with the successful bidder following evaluation of technical and commercial proposals.

## Permitting

In both BOO and FIT projects, the bidder is responsible for obtaining the necessary permits and licences to carry out operations. In addition to any permits which must be obtained for the incorporation of the SPV or the transfer of its ownership, the production and sale of energy produced from renewable sources must be authorised by EgyptERA and an operating licence must also be obtained from the Industrial Development Authority for the generation of power. Further, a construction permit must be obtained for any permanent constructions forming part of the power plants.

For the site of Benban, NREA has obtained all site-wide permits as a facilitation for the developers.

## 1.7 Support Mechanisms

### Bidding processes

Under BOO schemes, tenders tend to follow a route similar to the conventional power sector in that there will be a prequalification round following which bidders will submit technical and commercial proposals for evaluation, and subsequently EETC will enter into a PPA with the successful bidder. The government will provide the site in BOO schemes.

In the mid-1990s, independent power producers (IPPs) participated in the electricity generation field through the construction of privately-developed power plants under BOOT arrangements and 20-year power purchase agreements.

In the early-2000s, the government invited offers from private developers to qualify in international competitive bids issued by EETC to operate renewable energy farms under BOO arrangements.



The land is allocated on a first-come first-served basis based on the investors' preferences and the plots' availability.

In 2014, when the FIT scheme was launched, all qualified developers who did not have access to private land for their FIT project were entitled to apply to NREA for the allocation of land. The land is allocated on a first-come first-served basis based on the investors' preferences and the plots' availability. The developers are granted access to the land for a period not exceeding fifteen months to undertake the necessary technical measurements and studies, upon the signing of a memorandum of understanding for land access with NREA.

The capital of the SPV can be used, immediately following incorporation, towards the payment of all costs involved in the FIT project.

## Support mechanisms - key points on PPAs, FITs etc

Fichtner Consulting was recently appointed by NREA to draft/redraft the Power Purchase, Usufruct, Connectivity, Cost Sharing and Direct Agreements. These draft documents were made available to the developers on 09 April 2015. Following a series of comments raised by the developers and lenders, a revised version of the documents was produced, and the Cost Sharing Agreement was the first to be issued (in November 2015) among the revised documents.

- **Cost Sharing Agreement:** Creates a framework for each Developer to pay its share of costs to enable EETC and NREA to construct energy and road infrastructure necessary for the FIT
- **Renewable Energy Power Purchase Agreement:** Sets out all technical, commercial and legal terms and conditions for the construction, operation and maintenance of the FIT facility and the sale and purchase of electricity.
- **Network Connection Contract:** Sets out the terms and conditions on which the power producer may connect to the transmission system and use it to supply electricity to the buyer under the Power Purchase Agreement
- **Usufruct Agreement:** Establishes the user's rights of usufruct over the FIT site and the basis on which the user may use the site.
- **Renewable Energy Power Purchase Agreement Direct Agreement:** Provides for the financiers' right to step into the Power Purchase Agreement in case of an SPV default. It also includes a guarantee from the Government over the buyer's payments under the Power Purchase Agreement.



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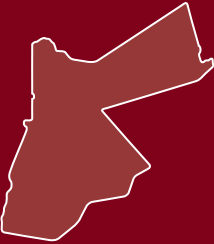
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# Chapter 2: Jordan



## Jordan Overview

Area	89,342 km <sup>2</sup> (2015)
Population	8.1 m (2015)
GDP (PPP)	Total: \$79.91 b (2014) Per capita: \$12,000 (2014)
CO <sub>2</sub> Emissions	Total: 18.74 m tons (2012) Per capita: 3.09 tons (2011)

Source: CIA Factbook, EIA

## Jordanian Power Sector (2015)

Installed capacity	4.3 GW
Peak demand	3.1 GW
Peak demand growth	6.9%
Installed capacity requirement by 2020	6.8 GW

Source: RES4MED

## Retail Price Levels (2015)

		US cents	Local Currency (Fils)
Power	Min	5/kWh	33/kWh
	Max	37/kWh	265/kWh
Fuel	Petrol	96/litre	680/litre
Water	Min	11/m <sup>3</sup>	75/m <sup>3</sup>
	Max	270/m <sup>3</sup>	1,920/m <sup>3</sup>

Source: Water Authority of Jordan, dynamic-ews, JoPetrol, Numbeo

### Key Bodies referred to:

DLS	Department of Land and Survey
EMRC	Energy and Minerals
GCC	Gulf Co-operation Council
MEMR	Ministry of Energy and Mineral Resources
MoE	Ministry of Energy
NEPCO	National Electric Power Company
OIC	Organization of the Islamic Conference
UNCITRAL	The United Nations Commission on International Trade Law

### Key Terms used:

BIT	Bilateral Investment Treaty
CSP	Concentrated Solar Power
EIA	Energy Investment Allowance
EPC	Engineering, Procurement and Construction
GDP	Gross Domestic Product
IPP	Independent Power Producer
kWh	Kilowatt Hour
MENA	Middle East and North Africa
MW	Megawatt
O&M	Operations and Maintenance
PPA	Power Purchase Agreement
PV	Photovoltaic
REEL	Renewable Energy and Efficiency Law

## 2.1. Context and Key Drivers

Jordan has the greatest incentive in the Middle East region to develop a renewable energy industry. With no oil and gas production of its own, the country currently relies on imports for 96% of its energy needs.



**40%** of the energy mix is met by gas that is supplied by the Arab Gas Pipeline from Egypt.<sup>2</sup>

40% of the energy mix is met by gas that is supplied by the Arab Gas Pipeline from Egypt.<sup>2</sup> The supply has however been disrupted a number of times, requiring the country's power backup to then run on diesel and heavy fuel oil. The unreliability and recent unavailability of supply has resulted in national energy bills reaching record levels in Jordan.

The current depression in the oil price may impact on Jordan's appetite for renewables. On the one hand, it could impact the sector negatively because of the competitiveness of oil. On the other hand, many are of the view that the fluctuations could serve to deepen Jordan's resolve for a strong renewable sector. This is because policy makers need to create a self sustaining local supply which is resistant to global oil price changes.

It is certain however that developing domestic renewable energy capacity could help ensure Jordan's long-term energy security. Related key drivers include:

- **Reduce fuel imports:** Jordan is looking to generate 30% of its electricity production from indigenous sources by 2020 to reduce its reliance on imported fuel. Renewable energy capacity development will help meet these targets.
- **Meet growing demand:** Jordan had 4,300MW of power generation capacity in 2015 which already runs at full load during both the summer and winter peaks. Peak power demand growth has averaged about 7% over the past five years although there have been spikes of almost 15% in some years, e.g. during the extended heat wave in 2010. That power surge, coupled with network failures, resulted in rolling load-shedding across the country.

- **Long term security of energy**

**supply:** Energy imports have become increasingly volatile in the past few years due to repeated instances of sabotage and political unrest in Jordan's neighbouring countries. Renewable energy has the ability to deliver long-term security of energy supply.

- **Leverage the advantageous geography and climate:**

Jordan has one of the highest solar irradiance levels in the world of 4-7kWh per square metre coupled with more than 300 days of sunshine. This provides a high potential for the development of solar power in the country. Jordan also possesses high potential of wind energy resources with annual average wind speeds exceeding 7m/s (at 10m height) in some areas of the country.



Jordan has one of the highest solar irradiance levels in the world of **4-7kWh** per square metre coupled with more than **300 days** of sunshine.



*A wind farm in Tafila, Jordan<sup>3</sup>*

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<sup>2</sup> Other imports comprise oil supplies delivered by Iraq (which, with recent developments have also been disrupted) and a small amount of electricity imported through the pan-Arab power grid.

<sup>3</sup> Picture is an illustration only. Courtesy: Jordan Wind

## 2.2. Market Readiness

The National Energy Policy mandates a strong emphasis on efficient and clean generation of power. The government of Jordan is giving considerable attention to the utilisation and implementation of renewable energy resources.

The government has started taking steps to define regulations to promote renewable energy and is actively seeking external finance. Key initiatives which demonstrate Jordan's commitment to renewable energy include:

- **Defined regulatory structure:**

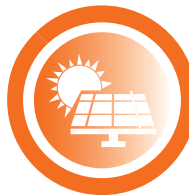
Jordan has implemented a legal framework to support its renewable energy targets. The country passed the Renewable Energy and Efficiency Law (REEL) in April 2012 which:

- established the direct proposal regime for private companies to negotiate directly with Ministry of Energy and Mineral Resources (MEMR) for renewable projects;
- requires the National Electric Power Company (NEPCO) and regional distribution companies to purchase electricity generated by renewable energy projects and to pay for the grid connection; and

- exempts all systems and equipment for renewable energy projects from customs duties and sales tax.

- **GCC and EU to assist with financing:**

The Renewable Energy and Energy Efficiency Fund was launched in 2013 by MEMR. This is financed by the Jordanian government and receives donations from the Gulf Co-operation Council (GCC). The Fund provides grants for energy projects and guarantees investors' funding requirements. In 2015, Jordan launched EU-funded renewable energy and energy efficiency demonstration projects worth 6 million euros. Towards the end of 2014, European Bank for Reconstruction and Development and the French Development Finance Institution, PROPARGO also announced they would provide \$100m loans for solar projects.



Jordan is expected to commission around **1,800 MW** of solar and wind power capacity by 2018.

- **Feed-in tariffs:** The Energy and Minerals Regulatory Commission (EMRC) announced in December 2012 the introduction of a feed-in tariff system for net metering which is designed to reduce energy demand and will allow the sale of surplus energy generated back to the national grid. This is the first feed-in tariff to be implemented in the Middle East.
- **Wheeling Regulations:** The EMRC later issued wheeling regulations designed to enable and regulate off-site renewable energy production and on-site consumption by private off takers. This market, whilst in its infancy, is particularly active.
- **Grid expansion:** The current capacity of the Jordanian grid is limited. It stands at 3,200 MW and can only accept another 500 MW. Last year, the government cancelled plans to accept proposals to build five wind-run power plants with a total capacity of 400 MW due to the grid's inability to absorb additional loads. However, towards the end of 2014, the Ministry of Energy and Mineral Resources announced the expansion of the national electricity grid capacity by 1,000 MW. This will enable more renewable energy projects to connect to the grid.

## 2.3. Current Project Status

Following on from the National Energy Strategy, the government has started moving towards implementation. Jordan's Energy Minister, in mid-2014, announced that the government expects to commission about 1,800MW of solar and wind power capacity by 2018. Of these, power purchase agreements have already been signed for 300MW of solar power projects and 200MW of wind power projects.

The government is keen to develop both wind and solar power. A 117MW wind farm in Tafila, Jordan has just recently reach commercial operations. The government is preparing to accept offers for additional wind capacity of 170MW. In the last few months of 2014, there were a series of ambitious solar PV projects announced including a 52MW plant and two 10MW PV plants all located in the southern Ma'an region.

Key Renewable Energy Facts	
Installed Capacity	180 MW
Pipeline Capacity	551 MW
Targets	10% primary energy by 2020
Implied Capacity	680 MW by 2020

Source: EIU, REN21

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
Jordan Solar One	PV	Execution	20 MW	Mafraq
Falcon Maan for Solar Energy	PV	Execution	21 MW	Maan
Foursan Capital Partners/ Shamsuna Power	PV	Execution	10 MW	Aqaba
Adenium Energy – Zahart Al Salam	PV	Execution	10 MW	Maan
Adenium Energy – Al Ward Al Joury	PV	Execution	10 MW	Maan
Adenium Energy – Al Zanbaq	PV	Execution	10 MW	Maan
Adenium Energy Capital	PV	Execution	30 MW	Maan
MEMR – Waid Araba	Wind	Main Contract Bid	25-30 MW	
MEMR – Al Harir, Wadi Araba and Maan	Wind	Execution	300-400 MW	Maan
Greenland Alternative Energy/ EJRE/Scatec JV	PV	Execution	10 MW	Maan
EJRE / Scatec JV	PV	Execution	20 MW	Maan
Scatec/Quest Energy Investment/ Kingdom Electricity JV – Oryx	PV	Execution	10 MW	Amman
MEMR – El-Quweira	PV	PPA signed	75 MW	Quweira
MEMR – Maan	Wind	Execution	66 MW	Maan
Jordan Wind Renewable Energy LLC – Tafila Wind Farm	Wind	COD	117 MW	Tafilah
SunEdison / MEMR – Maan Development Area	PV	Execution	20 MW	Maan
MEMR – Fujeij	Wind	Complete	70-90 MW	Amman
Shams Maan Power Generation	PV	Execution	52.5 MW	Maan



Current Renewable Energy Projects Status				
MEMR – Azraq Grid Connected PV Solar Plant	PV	Complete	2 MW	Zarqa
First Investment Co for Clean Energy/MEMR – Maan Devp Area	PV	Execution	23.8 MW	Maan
Mustakbal Clean Tech – Ma'an	PV	Complete	1 MW	Maan
Hofa	Wind	Complete	1 MW	Hofa
Greater Amman Municipality – Solid Waste to Energy Facility	Waste to Energy	Main Contract Bid	TBC	Amman
WAJ – As Samra Biosolids Monofill Project	Waste to Energy	Main Contract PQ	TBC	Zarqa
Kingdom Electricity Company – The Northern Badia Project	PV	Complete	10 MW	Badia

Source: MEED

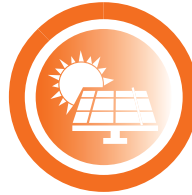
Overview of RfP Solar Rounds	
Request For Proposals round	Current status
Round 1 solar	<p>There are currently 12 Round 1 projects approved with an aggregate capacity of nearly 200MW.</p> <p>All round 1 projects are now in construction.</p>
Round 1 wind	<p>The Round 1 bidding process closed on 30 September 2014.</p> <p>There were four qualifying bids submitted.</p> <p>These proposals were for up to 250MW of wind projects. One PPA has been signed already.</p>
Round 2 solar	<p>24 Round 2 solar developers have been qualified. Only four projects will be developed, each project shall be 50MW.</p> <p>MEMR has chosen the lowest 4 tariffs from the 24 developers qualified, and is currently negotiating the PPAs. Two PPAs have already been signed for two 50MW projects to be developed in the Mafraq Development Area</p>
Round 2 wind	Round 2 wind has been cancelled by MEMR.
Round 3	<p>In February 2014, an invitation to submit expressions of interest was issued for wind and solar projects with total capacity of 100MW per project.</p> <p>Round 3 has however been cancelled by MEMR.</p> <p>It is understood that MEMR cancelled this round as a result of failing to secure the funding needed to expand the national power grid to accommodate the projects. However, recently, the Government was able to procure grants and funding to expand the grid. Such project is being called the "Green Corridor".</p>

## 2.4. Regulatory Policies

Jordan is unique in the Middle East due to the fact that there is a policy in place which requires the Government to cover the cost of grid connection for developers. Jordan's almost complete dependence on imported fossil fuels has significantly altered the discourse on renewable energy.

In many cases, the relatively high cost of renewable energy is still lower than that for energy from fossil fuels, and as a result the Government is willing to pay for feasible projects at a price almost up to their avoided cost. New regulations and the lower inherent risk in solar projects is likely to lead to more investor confidence and raise the "bankability" of projects.

Under its 2007-2020 National Energy Strategy, renewable and nuclear energy are set to transform the Kingdom into a net exporter by 2030. The aim is to have the renewable energy share of the energy mix increase to 7% by 2015 and to 10% by 2020, a substantial increase from the 1% it currently represents. In terms of capacity, this equates to some 600MW by 2015 and to double this by 2020.



New regulations and the lower inherent risk in solar projects are likely to lead to more investor confidence and raise the "bankability" of projects.

Strategy recommendations include:

- implementation of renewable energy laws (such as REEL) to stimulate private sector investments;
- implementation of wind energy projects with at least 600MW capacity by 2020; and
- the continued development of the Fund.

Under the Strategy, developers can submit their proposals for projects directly to the Government. Known as the Direct Proposal Process, the Government has received strong interest from developers (see section 1.7).

## 2.5. Governing Laws

### Counterparties and governing laws

A developer will need to enter into a number of contracts with various parties in order to develop a renewable energy project in Jordan. The appropriate counterparty to each of the key contracts is set out below:

Contract	Counterparties	Governing law
Real estate contract	Selling landowner/landlord	Jordan
Grid connection agreement and PPA	NEPCO/distribution companies	Jordan
EPC contract	Third party contractor	Negotiable
O&M contract	Third party contractor	Negotiable

Finance documents are usually governed by English law if finance is obtained from outside Jordan, which is permitted. Jordan allows both Islamic and non-Islamic financing. Many previous conventional IPPs in Jordan have been financed by foreign banks and lenders. The Government has previously accepted that IPPs can enter into direct agreements with banks funding IPP projects to grant assignment and step in rights.



Jordan allows both Islamic and non-Islamic financing.

### Dispute resolutions/ considerations

International arbitration is often favoured as a dispute resolution mechanism in key contracts under rules such as the International Chamber of Commerce and the United Nations Commission on International Trade Law (UNCITRAL) arbitration rules. This is the forum of choice for investors and developers as it allows for greater flexibility while maintaining confidentiality.

## Bilateral investment treaties

In addition to being a member of the World Trade Organization and ratifying numerous international trade and market access agreements, Jordan has also entered into a number of investment agreements aimed at further promoting the development of business in the Kingdom.

Jordan has entered into 42 Bilateral Investment Treaties (BITs) that are currently in force. These include BITs with China, France, Germany, India, Korea, the Netherlands, Russia, Switzerland, the United Kingdom, and the United States. Other treaties have been signed and may come into force, while others are under negotiation. The purpose of investment treaties is to provide favourable conditions for inward investment and cross-border economic co-operation, and reciprocal protection of the foreign nationals' investment. In return, they provide investors with certain substantive rights and protections, and, importantly, give investors the right to enforce those rights through an investment treaty arbitration against the State – a key protection in itself. Protection under one or more investment treaties can reduce the



Jordan has entered into **42 Bilateral Investment Treaties** (BITs) that are currently in force.

business risk associated with cross-border investments, and improve an investor's position in any subsequent dispute connected with those investments.

In addition, Jordan is party to several regional investment agreements, including the Agreement on Promotion, Protection and Guarantee of Investments among Member States of the Organization of the Islamic Conference (the OIC Agreement) and the Unified Agreement for the Investment of Arab Capital in the Arab State (the UAIAC). These treaties also provide investors with substantive rights, and while the position is not as certain as in relation to BITs, Arbitral Tribunals have interpreted both the OIC Agreement and the UAIAC as containing a standing offer which allows investors to enforce those rights through investment treaty arbitration.

Jordan is not a party to the Energy Charter Treaty. Although it has Observer status in that organisation, that does not allow investors to invoke the investor – state arbitration provisions in the Treaty.

Jordan is a contracting party to the ICSID Convention and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. Some Jordan treaties generally provide investors with a range of dispute resolution options (although provide for ICSID arbitration only).

Jordan BITs generally share the common substantive protections of fair and equitable treatment, full protection and security, most favoured nation treatment, and protection from expropriation. However, Jordan BITs offer different degrees of investor protection, and impose different requirements for an investor and its investment to qualify for protection. To give one example, some BITs (including the BITs with China, the Netherlands and the United Kingdom) include an ‘umbrella clause’, which requires the State to observe obligations entered into in respect of investments made by the investor, which can offer additional Treaty

protection in relation to breaches of contract committed by the State or State parties associated with an investor’s investment.

Accordingly, if an investor wishes to access investment protections for a clean energy investment in Jordan, it should consider not only whether a treaty is in place between Jordan and the investor’s home State, but also consider the terms of the potentially applicable treaty or treaties to evaluate whether its investment will be covered by one or more treaties. Careful structuring of an investment can allow an investor to maximise its protection under international investment protection instruments.



Jordan is a contracting party to the ICSID Convention and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

## 2.6. Investment Considerations

### Setting up a business

There are certain limitations on foreign ownership in Jordan. Whilst ownership of solar generation projects by foreign persons is unlimited, engineering and construction services are limited to 50% foreign ownership, and the retail and sale of any product is limited to 50% foreign ownership.

A foreign entity wishing to do business in Jordan has three main options:

Type of business	Maximum foreign shareholding	Minimum capital requirements	Requirements
Operating Branch of foreign company	100%	–	<ul style="list-style-type: none"><li>• Need to appoint a representative who is resident in Jordan</li><li>• Limited term, for performance of specific contract unless granted a specific licence from government authorities</li></ul>
Limited liability company	100% (50%)*	JOD 50,000 per non – Jordanian shareholder	<ul style="list-style-type: none"><li>• Minimum of two shareholders, unless exemption granted</li><li>• May only use specified memorandum and articles of association</li></ul>
Private shareholding company	100% (50%)*	JOD 50,000 per non – Jordanian shareholder	<ul style="list-style-type: none"><li>• Minimum of two shareholders, unless exemption granted</li><li>• Flexibility in terms of memorandum and articles of association</li><li>• Allows issue of different classes of share</li></ul>

*\*50% shareholding requirement if undertaking engineering and construction or retail and sale of any product*

## Tax structuring

### Corporate income tax

Corporate income tax is levied on the profits of corporate entities and foreign branches that arise in Jordan. Rates vary from 14% to 30% depending on the type of activity:

Banking	35%
Insurance, telecommunications, stockbrokers, finance companies, currency exchange companies and leasing companies	24%
Industrial sector	14%
All other	20%

### Capital gains

Capital gains are usually exempt aside from income derived from current and depreciable assets which is taxable as ordinary income.

### Dividends

Dividends are generally exempt from tax.

### Interest

Interest paid by banks to depositors is generally subject to a 5% withholding tax.

### Withholding tax

Payments of taxable income made by residents to non-residents are subject to 10% withholding tax. Withholding tax is considered to be a payment on account for companies and a final tax for individuals.

### Foreign tax relief

Foreign tax relief is granted in accordance with tax treaties signed with certain other countries.

- It is worth noting that solar and wind projects under rounds 1 and 2 have benefitted from various tax exemptions.



Interest paid by banks to depositors is generally subject to a **5%** withholding tax.

Development assets - real estate, security

Real estate

Both foreign-owned Jordanian companies and branches of foreign companies can own and lease Jordanian land but only for the purposes of their business.

Where land is purchased, the project must be completed within three years of the relevant purchase, with a possible extension of a further three years. If the project is not completed within this period, the project company will be liable to pay 5% of the land’s market value to the Department of Land and Survey (DLS) each year, for ten years, after which the land must be sold. The land shall not be transferred or sold during these three years, unless the minister of finance upon a recommendation by the general director of the Department of Land and Survey, approving such an act in accordance with the law.



Both foreign-owned Jordanian companies and branches of foreign companies can own and lease Jordanian land but only for the purposes of their business.

It must be noted that it is not possible to apply to the Government for approval of a project until the necessary land rights have been actually granted, or the landowner approves the application (notwithstanding that the land rights for the project have not been granted at this stage). In the case of pre-packaged land, the process is much simpler and less time consuming, much of the “upfront” work should have been completed.

Some structures which may be utilised to secure land rights or exclusivity prior to a formal land arrangement being entered into are as follows:

Options for lease or sale	<ul style="list-style-type: none"><li>• Not commonly used</li><li>• Not a registrable interest</li></ul>
Break clause in lease	<ul style="list-style-type: none"><li>• Termination provision exercisable after pre-determined period</li></ul>
Memorandum of understanding	<ul style="list-style-type: none"><li>• More common form of exclusivity agreement</li><li>• Deposit payable to landowner, with requirement to sell/lease by a certain date</li><li>• Only valid for a defined term</li><li>• Not a registrable interest</li></ul>



Irrevocable power of attorney	<ul style="list-style-type: none"> <li>• Granted by landowner in favour of developer's agent to transfer land when development assets secured/project awarded</li> <li>• Only legally valid for one year</li> <li>• Jordanian law prohibits grant to developer directly</li> <li>• Used to avoid payment of transfer taxes (10%)</li> <li>• Only usually granted on payment equal to full value of land, but can be used in conjunction with escrow agreement to avoid payment of full consideration at outset</li> </ul>
Escrow agreement	<ul style="list-style-type: none"> <li>• Purchase/lease amount held in escrow</li> <li>• Released to landowner when conditions fulfilled</li> <li>• Released to developer if conditions not fulfilled</li> </ul>

## Security

Land owned by a project company can be mortgaged, and leases can be assigned as security to a bank. Mortgages must be registered at the DLS to be validated. A lease will normally contain terms which require the landlord to enter into an "assignment agreement" and "notice of assignment" either when requested by the developer, or at the time the lease is entered into, but can remain undated until the actual assignment takes place and the documents are dated.

## Payment structures

It is unusual to transfer title of land in Jordan until the entire price for the land is paid. If payment is deferred, the seller would probably require that the land is mortgaged in its favour. (See the solutions suggested above regarding irrevocable powers of attorney and escrow arrangements). In lease agreements, payments can be deferred or linked to milestones. In practice, landlords are used to fixed annual lease payments.



It is unusual to transfer title of land in Jordan until the entire price for the land is paid.

## Permitting

### Consents, licences and permits

In both the tender and the Direct Proposal processes, the developer must apply for and obtain the necessary licences and permits after its bid or proposal has been accepted, even if the site has been acquired on a pre-packaged basis.

The Power Purchase Agreement (PPA) will provide the developer with a specified period of time to obtain all required licences and permits. The main licences a developer must obtain are a generation licence from the EMRC and an environmental permit.

### Grid connection

Connection to the grid will be provided for in the PPA and a connection agreement will be entered into with the grid operator. No specific grid connection consent or permit is required, other than the connection agreement which will be entered into simultaneously with the PPA.

It is likely that an Energy Investment Allowance would have to be submitted to the Ministry of Energy for approval because power plants are listed as projects that require a comprehensive. Obtaining an EIA usually takes three to four months, but there are no significant Government fees or costs associated with obtaining approval, only those associated with preparing the EIA.



An application for the generation licence is made to the ERC, which usually takes approximately two months.

An application for the generation licence is made to the EMRC, which usually takes approximately two months. Annual fees are payable under the licence at a rate of JOD 0.01 per kilowatt sold by the facility. A proposed draft of the regulation suggested amending the foregoing tariff, however this regulation is yet to be issued.

Other permits required to construct and operate the facility include a construction permit, which can only be obtained after the detailed drawings of the plant are approved by the relevant municipality. The time required to obtain such permits will vary, but is unlikely to take less than two months. Government costs associated with this permit are not significant.

## 2.7. Support Mechanisms

Renewable power projects can currently be developed either in response to Government tenders or through the Direct Proposal option.

### Tender process

Under the tender process, a site will be specified and pre-packaged.

The tenders issued to date have been for EPC and operations services only where the Government has owned the project. The developer is asked to simply build and operate.



Under the Direct Proposal process, a developer is able to source its own site for development.

### Direct Proposal process

Under the Direct Proposal process, a developer is able to source its own site for development. Whilst the developer would own the project under a Direct Proposal, the developer would be responsible for obtaining the development assets itself. The Government (or the counterparty to the PPA (the “Transmission Licensee”) would have the option to purchase the facility at the end of the PPA term. As part of the PPA, the developer would also enter into a connection agreement with the Transmission Licensee to allow for connection to the grid. To date, the Direct Proposal process has only seen projects connected to the Transmission Licensee’s grid. However, in future it may extend to projects that can be connected directly to the distribution companies’ grids.



*The Northern Badia Project<sup>4</sup>*

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<sup>4</sup> Courtesy: Philadelphia Solar

# Chapter 3: Kuwait



## Kuwait Overview

Area	17,818 km <sup>2</sup> (2015)
Population	4.0 m (2014)
GDP (PPP)	Total: \$282.6 b (2014) Per capita: \$70,700 (2014)
CO <sub>2</sub> Emissions	Total: 116.84 m tons (2012) Per capita: 42.99 tons (2011)

Source: CIA Factbook, EIA

## Kuwaiti Power Sector (2012)

Installed capacity	14.7 GW
Peak demand	12.1 GW
Peak demand growth	8%
Installed capacity requirement by 2020	24.5 GW

Source: MEED

## Retail Price Levels (2015)

		US cents	Local Currency (Fils)
Power	Min	0.3/kWh	1/kWh
	Max	4/kWh	12/kWh
Fuel	Petrol	20/litre	60/litre
Water	Min	22/m <sup>3</sup>	66/m <sup>3</sup>
	Max	70/m <sup>3</sup>	211/m <sup>3</sup>

Source: Kuwait Ministry of Electricity and Water, Numbeo

### Key Bodies referred to:

CTC	Central Tenders Committee
GCC	Gulf Cooperation Council
HC	Higher Committee
IRENA	International Agency for Renewable Energy
KFAS	Kuwait Foundation for the Advancement of Science
KIA	Kuwait Investment Authority
KISR	Kuwait Institute for Scientific Research
KSE	Kuwait Stock Exchange
MEW	Ministry of Electricity and Water
MoF	Ministry of Finance
OPEC	Organization of Petroleum Exporting Countries
PAI	Public Authority for Industry
PTB	Partnerships Technical Bureau

### Key Terms used:

BOT	Build-Operate-Transfer
EOI	Expression of Interest
FCIL	Foreign, Comparative & International Law
IPP	Independent Power Producer
ISCC	Integrated Solar Combined Cycle
LNG	Liquefied Natural Gas
MMBtu	Million British Thermal Units
PJSC	Public Joint Stock Company
PPP	Public-private partnership
RFP	Request for Proposal
RFQ	Request for Qualification



شركة البرق القابضة  
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### 3.1. Context and Key Drivers

Kuwait is a leading oil exporter, and is currently the fifth largest oil producer in the Organization of Petroleum Exporting Countries (OPEC). Despite its rich oil reserve, the country lacks gas production and recently became a net importer of natural gas leading to focus more on natural gas exploration and development for domestic consumption. As a result, there is a concern that it won't be able to meet future electricity demand (which is expected to double by 2030).

Although Kuwait had one of the healthiest power reserve margins in the region a decade ago, the rapid increase of peak load demand has resulted in the reserve margin narrowing significantly.

To maximise export capacity and reduce its dependency on oil, Kuwait recognises that it needs to diversify its energy mix. Key drivers include the following:

- **To free up oil and gas for more profitable uses:** Kuwait exports 2,767,000 barrels of oil per day with an average domestic consumption of 467,000 barrels per day. In terms of natural gas, Kuwait is a net importer.

It consumes 552 billion cubic feet per year of which about 12% is imported. Kuwait plans to increase gas production to 3 billion cubic feet per day by 2030 in efforts to satisfy domestic consumption and decrease imports of LNG. Renewable energy can also be an alternative solution for decreasing imports of LNG.

- **Meet growing demand and benefit from load tailoring:** The energy peak demand in Kuwait is increasing by 8% annually. The installed capacity needs to double to 24,500MW by 2020 to meet the peak load demand. In 2014, installed capacity was very close to peak demand without the ideal reserve of 20%. To achieve that, Kuwait needs to build more power plants. Renewable energy would allow Kuwait to meet growing demand while allowing for the maximisation of oil and gas exports. Furthermore, peak solar power output dovetails neatly with peak, temperature-driven electricity demand.



Kuwait is a net importer of natural gas. It consumes **552 billion cubic feet** per year of which about **12%** is imported.

- **Leverage the advantageous geography and climate:** Solar resources are abundant in Kuwait, and there is also a significant potential for wind power. The Global Horizontal Irradiance is 1,900 kWh/m<sup>2</sup>/year and the full load hours for wind is 1605 hours/year.<sup>5</sup>

- **Address environmental problems:** The haze that frequently hangs over Kuwait City is a consequence of the significant amount of heavy fuel oil and crude oil burned in the country's power stations. Statistically, co<sub>2</sub> emissions per capita are also very high in Kuwait. Supplementing the conventional generating capacity with renewable energy installations will help reduce the emissions and pollution significantly.



*Al Abdaliyah Integrated Solar Combined Cycle, Kuwait (ISCC)<sup>6</sup>*

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<sup>5</sup> IRENA

<sup>6</sup> Partnerships Technical Bureau, Kuwait

## 3.2. Market Readiness

Kuwait Investment Authority (KIA), the country's sovereign wealth fund, has also decided to invest in domestic renewable energy projects. The national Technology Enterprises Company, a subsidiary of KIA, is actively involved in private equity and venture capital investments on the international market in renewable technologies including a 11% stake in Heliocentris, a leading specialist in renewable energy solutions based in Berlin, Germany, \$18bn investment of Daimler AG for more efficient future of oil drilling and the use of more renewable energy sources.

Kuwait has a structured regulated power market. The Ministry of Electricity and Water (MEW) is the central regulatory body and the sole supplier of electricity and water resources. However, to achieve its goal of increasing installed capacity to 25 GW by 2020, the Kuwaiti government is employing more private capital through public-private projects (PPP) as well as independent water and power projects (IWPP).

While Kuwait is initiating deployment of renewable energy, the following challenges exist:

- **Subsidies for conventional power sources:** Kuwait's electricity tariff structure is heavily subsidised,



The Kuwaiti government is employing more private capital through public-private projects (PPP) as well as independent water and power projects (IWPP).

starting at 0.3 US cents per kWh – which is one of the lowest electricity retail prices in the world. This reflects the heavily subsidised input fuel prices. Kuwait's domestic gas price to industry is USD 2/MMBtu while the international LNG price is around USD 10-15/MMBtu. This naturally renders renewable energy less competitive in the market and investors less confident about the prospects for renewable energy.

- **Limited policies and regulations:** Renewable energy policy is not yet well established in Kuwait. Instead, the government's focus has been on reducing the environmental impact of fossil fuel used to generate electricity. Additionally, well-integrated policies will attract more renewable energy investments in Kuwait.



- **Institutional setting:** Kuwait has not yet established a dedicated renewable energy agency. However, the Kuwait Institute for Scientific Research (KISR) has focused on studying and formulating regulations and policies that may assist the Kuwaiti government in promoting renewable energy development. The Partnerships Technical Bureau (PTB) is in charge of the integrated solar combined cycle (ISCC) project at Al-Abdaliya and also assesses unsolicited proposals from renewable energy developers. Whether future renewable energy projects will fall under this body or a separate, dedicated renewable energy body will be established remains to be seen.
- **Limited region-specific R&D and talent pool:** Kuwait has two major research centres: Kuwait Institute for Scientific Research (KISR) and Kuwait Foundation for the Advancement of Science (KFAS). There is however, a shortage of qualified engineers, renewable energy companies and support services and focused capability building is required.
- **Limited infrastructure readiness:** Kuwait has not yet developed the required grid infrastructure and grid management abilities to support large-scale power supply from renewable energy, to support more variability in supply or to enable demand side management.

### 3.3. Current Project Status

Kuwait is beginning to develop its renewable energy programme, with the stated aim of achieving 5% electricity generation from renewable energy by 2020. So far, a 1MW rooftop solar project has been installed in Kuwait City, and a few other small projects are in progress. As of August 2015, the 280 MW al Abdaliya power plant in Kuwait, which combines 60 MW of solar capacity with gas fired units, is in the list of newly

approved power and infrastructure projects. In September 2015, Kuwait signed a contract with Spain's TSK Group to set up a 50 MW solar PV power project.

Despite these promising early steps, a significant number of additional projects need to be developed for Kuwait to be able to achieve its strategic 5% target.

Key Renewable Energy Facts	
Installed Capacity	2 MW
Pipeline Capacity	150 MW
Targets by 2020	5% by 2020, 15% by 2030
Implied Capacity	1,225 MW

Source: MEED, REN21

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
KOC - Umm Gudair	PV	Execution	10 MW	Umm Gudair
MEW / KISR - Shagaya Renewable Energy Complex	Solar	Execution	70 MW	Shagaya
MEW / KISR - Shagaya Renewable Energy Complex: Phase 1	PV	Execution	10 MW	Shagaya
MEW / KISR - Shagaya Renewable Energy Complex: Phase 1	CSP	Execution	50 MW	Shagaya
MEW / KISR - Shagaya Renewable Energy Complex: Phase 1	Wind	Execution	10 MW	Shagaya
KAPP/Kuwait Municipality - Kabd Municipal Solid Waste Project	Waste to Energy	Main Contract Bid	TBC	Al-Ahmadi Governorate
Al Abdaliya power plant	PV	Approved	60 MW	Abdaliya

Source: MEED

### 3.4. Regulatory Policies

Kuwait currently does not have a formal renewable energy policy framework.

Kuwait has however approved the Articles of Association of the International Agency for Renewable Energy (IRENA), which shows a

commitment to the development of renewable energy in the country. The agency’s mandate is to promote and support the increasing introduction and spread of renewable energy. The Articles are aimed at achieving sustainable development.

Furthermore, Article 122 of Law 42 of 2014 concerning Environment Protection provides that all government authorities should use power saving systems in their new facilities and that the new Environment Authority shall include the requirement of the use of power saving systems. Implementation of the same may encourage use of renewable energy systems such as solar energy.

There are IPP by-laws and feed-in tariff structures under discussion in Ministry of Electricity and Water (MEW) and government, as Kuwait is planning for renewable and conventional energy projects which will require private investment.

The new PPP Law (Law 116 of 2014) was published on the 17th of August 2014 and came into force in full on the 29th of March 2015 upon the publication of its Executive Regulations which were issued by Decree 78 of 2015. Law 116 of 2014 establishes the Kuwait Authority for Public Partnerships (KAPP) which is responsible for (amongst other things) supervising the procurement of Public – private partnerships (PPP) projects – including power projects. This authority replaces the Partnership Technical Bureau (PTB).



The new PPP Law (Law 116 of 2014) was published on the 23rd of July 2014 and is expected to come into force in early 2015.

Pursuant to Article 13 of Law 116 of 2014, the equity of the public joint stock project companies incorporated under this law, for projects worth more than KD 60 million, is to be distributed as follows:

- No less than six percent (6%) and no more than twenty four percent (24%) of the shares shall be allocated and offered to public authorities.
- No less than twenty six percent (26%) of the shares shall be offered to the winning investor (i.e. the winning bidder). This percentage may be reduced by ten percent (10%) which is to be offered to the initiator of a project if there is one.
- Fifty percent (50%) of the shares shall be allocated and offered for public subscription of all Kuwaiti citizens.

The executive regulations of the PPP law elaborate on the method of procurement of projects under the PPP system.

With respect to power projects in particular however, Law 39 of 2010 (as amended by Law 28 of 2012 and Law 19 of 2015) and its Executive Regulations specifically regulate the structure and procurement of such PPP power projects. Where Law 39 of 2010 as amended is silent, reference will be made to Law 116 of 2014 (the general PPP Law).

In this regard, Article 2 of Law 39 of 2010 (as amended), provides that the authority appointed by the Council of Ministers shall establish one or more joint stock companies, with the objective of construction, implementation, operation, management and maintenance of power generation and water desalination plants in Kuwait in

accordance with the provisions of the law. The shares of the project company (or companies) in such case shall be allocated as follows:

1. A percentage not exceeding twenty four percent (24%) of the shares shall be allocated to the government and governmental entities.
2. A percentage of not less than twenty six percent (26%) of the shares shall be offered for sale in a public auction (to the winning bidder).
3. Fifty percent (50%) of the shares shall be allocated for public subscription by all citizens.

### 3.5. Governing Laws

#### Counterparties and governing laws

Kuwaiti law freely permits the parties to an agreement to select foreign governing law and normally Kuwaiti Courts will interpret such agreement in accordance with the foreign law chosen.

In all likelihood, however, a choice of foreign law would not be upheld in Kuwait to the extent a substantive term is deemed to violate Kuwaiti public policy.

## Dispute resolutions/ considerations

As a general rule, the parties to an agreement may agree to refer disputes to either the courts (either foreign or local) or to arbitration (either foreign or local) for resolution. Even though foreign courts may have jurisdiction under the agreement to resolve disputes, the Kuwaiti Courts could (in certain circumstances) assume jurisdiction in the event of a dispute under the agreement but would apply the foreign law chosen to the extent such law does not contradict Kuwaiti public policy.

However, Article 173 of Kuwait's Civil and Commercial Procedural Law provides in part that the Kuwaiti Courts shall not have jurisdiction to hear disputes which have been agreed to be referred to arbitration. Kuwaiti Courts have become more comfortable with the idea of arbitration, both local and foreign, and should give effect to arbitration clauses provided for in agreements.

In order to enforce an arbitral award in Kuwait against a Kuwaiti entity, it must be confirmed (prior to concluding the agreement with an arbitration clause), that: (1) the articles of association of the company permits the individual signing the agreement on the company's behalf to bind the company to arbitration, or (2) the shareholders of the company must pass a resolution

authorising the individual signing the agreement on behalf of the company to bind the company to arbitration.

Additionally, the place of arbitration should be a country which is party to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958). While Kuwait is a signatory to the New York Convention, its ratification only applies to awards made in countries which are also signatories.

With respect to PPP Projects, pursuant to Article 29 of the PPP Law, the project agreements shall be subject to the provisions of the PPP Law and its Executive Regulations, as well as the provisions of applicable laws in the State of Kuwait. The project agreement will therefore likely be subject to Kuwaiti Law. The Project agreement shall regulate the mechanism for dispute resolution and in this regard Article 29 of the PPP Law provides that Kuwaiti courts shall have jurisdiction over all the disputes arising from such agreements. However, with the Supreme Committee's prior approval, disputes may be settled through arbitration.



The place of arbitration should be a country which is party to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958).

## Investment treaty protection

Kuwait has entered into 82 Bilateral Investment Treaties (BITs) that are currently in force. These include BITs with China, France, Germany, India, the Netherlands, Singapore, and Switzerland. Other treaties have been signed and may come into force, while others are under negotiation.

In addition, Kuwait is party to several regional investment agreements, including the Agreement on Promotion, Protection and Guarantee of Investments among Member States of the Organization of the Islamic Conference (the OIC Agreement) and the Unified Agreement for the Investment of Arab Capital in the Arab State (the UAIAC). These treaties also provide investors with substantive rights, and while the position is not as certain as in relation to BITs, Arbitral Tribunals have interpreted both the OIC Agreement and the UAIAC as containing a standing offer which allows investors to enforce those rights through investment treaty arbitration.

Kuwait is not a party to the Energy Charter Treaty. Although it has Observer status in that organisation, that does not allow investors to invoke the investor – state arbitration provisions in the Treaty.

Kuwait is a contracting party to the ICSID Convention and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

Kuwait treaties generally provide investors with a range of dispute resolution options, and generally require a ‘cooling off’ period for negotiations between an initial notice of dispute and the commencement of arbitration. Some Kuwait treaties (including the BITs with the Netherlands and India) require an investor to elect between local courts and international arbitration in the event of a dispute.

Kuwait BITs generally share the common substantive protections of fair and equitable treatment, full protection and security, most favoured nation treatment, and protection from expropriation; many BITs (including those with China, India and the Netherlands) also contain an ‘umbrella clause’, which requires the State to observe obligations entered into in respect of investments made by the investor, which can offer additional Treaty protection in relation to breaches of contract committed by the State or State parties associated with an investor’s investment.

However, all Kuwait BITs offer different degrees of investor protection, and impose different requirements for an investor and its investment to qualify for protection. Accordingly, if an investor wishes to access investment protections for a clean energy investment in Kuwait, it should consider not only whether a treaty is in place between Kuwait and the investor's home State, but also consider the terms of the potentially applicable treaty or treaties to evaluate whether its investment will be covered by one or more treaties. Careful structuring of an investment can allow an investor to maximise its protection under international investment protection instruments.

## Legislation implementing energy treaties

In addition to bilateral investment treaties, there are also a number of bilateral agreements concerning renewable energy and the development/co-operation in the same entered into by the Kuwait government with other governments. Decrees relating to these agreements include:

- Decree No. 55 of 2011 ratifying the agreement between the government of the State of Kuwait and the government of the French Republic in the areas of environment, sustainable development and renewable energy.
- Decree No. 194 of 2011 ratifying the Memorandum of Understanding for co-operation in areas of oil, gas, new and renewable energy sources between the government of the State of Kuwait and the government of the People's Democratic Republic of Algeria.
- Decree No. 159 of 2011 ratifying the Memorandum of Understanding for Power (Electricity) Co-operation between the government of the State of Kuwait and the government of the Arab Republic of Egypt.

These agreements basically provide for an agreement between the two parties to co-operate in the electricity/power/oil and gas/renewable energy sectors by way of provision of technical, consultancy and training support and the exchange of human resources and expertise, the objective being the improvement of efficient power use and the development of alternative power sources, including renewable energy sources.



Kuwait has entered into **45** BITs, other treaties have been signed and may come into force, while others are under negotiation.



Shagaya Phase One<sup>7</sup>

## 3.6. Investment Considerations

### Setting up a business

Kuwaiti law generally provides that foreign companies conducting business in Kuwait must – except in limited circumstances – do so either through an agent or through a Kuwaiti “partner”. This is generally facilitated through the establishment of a Kuwaiti company with Kuwaiti participants. The Kuwaiti participant must own at least 51% of the capital of the company (Articles 23 and 24 of Law No. 68 of 1980, the Commercial Law).



The income tax rate in Kuwait at the time of writing is 15%.

There are exceptions to the restrictions prescribed in the law including:

- GCC entities;
- wholly owned by GCC individuals / entities, which are permitted to establish and wholly own a local

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<sup>7</sup> Courtesy: CSP Today



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Kuwaiti entity or set up a branch through which they may carry on business (with a few limitations) in Kuwait;

- foreign companies licensed to operate in the Kuwait Free Trade Zone; and
- foreign companies establishing a local entity under Law 116 of 2013 promoting direct investment in Kuwait .

There are typically restrictions on the percentage participation of foreigners however recent legislation including the Kuwait Direct Investment Law and the new PPP Law have made provision for possible majority foreign ownership.

## **Tax structuring**

### **Corporate income tax**

Foreign entities doing business in Kuwait (whether through an agent or as shareholders in a local entity), are subject to income tax.

### **Rates of corporate income tax**

The income tax rate at the time of writing is 15%.

## **Development assets - real estate, security**

As a general premise, non-Kuwaitis may not – except in limited circumstances – own real estate in Kuwait. Freehold ownership of real estate is generally limited to nationals of Kuwait or corporate entities wholly owned by them. There are, however, exceptions to this general rule which include:

- GCC nationals as well as corporate entities wholly owned by them who may own land (freehold) in Kuwait;
- foreign states may own real estate properties for purposes of their diplomatic missions;
- companies incorporated under the Kuwait Direct Investment Law; and
- Kuwaiti companies for purposes of building their head offices, etc.

However, all nationalities may enjoy the benefit of a lease (ownership based on a contract between the landowner/ freehold owner and a leasee). If such lease is for more than 10 years, it may be registered at the Land Register which is held at the Ministry of Justice.



Leases on State owned land are not registered in the same manner as leases on privately owned land.

Leases on State owned land are however not typically registered in the same manner as leases on privately owned land. With State owned land, the lease contract signed and stamped by the relevant government authority (typically the Ministry of Finance “MOF”) is evidence of such lease and records of the same are maintained at the Kuwait Municipality and the State Real Estate Department of the MOF.

Leases granted by the State for industrial development are managed by the Public Authority for Industry (PAI) and these agreements are signed by the PAI.

## Security

Land is typically a common source of security granted to the financiers of a project. However, as a general rule, the mortgage of any real property belonging to the State that may have been leased to an investor (or project owner) may not be mortgaged or granted as any form of security.

The law is less straightforward with respect to buildings or fixtures erected on the land. More recent developments in the law, including the new PPP Law, Law 116 of 2014 provide for the possibility of separation of assets belonging to the project and those that belong to the developer. This may open the door further to differentiating between the land and fixtures and may therefore permit the mortgage of fixtures. In this regard, Article 23 of the PPP Law provides that the investor / developer or the project company may, for the purpose of financing the implementation of the project, mortgage or grant in kind security on any assets they own from among the assets comprising the project. However, those assets that belong to the project and that will be transferred to the State at the end of the term of the agreement term may not be granted as security either.

Generally, under Kuwait law a mortgage/pledge over specific movable assets may be taken by virtue of a possessory mortgage while a business premises mortgage may be used as a type of “blanket” security interest over all movable assets on the business premises.



Project companies will typically have the right to receive certain payments under the project contract which may serve as a source of collateral.

Project companies will typically have the right to receive certain payments under the project contract which may serve as a source of collateral.

Insurance proceeds over project assets may provide another source of security. However, much will depend on the nature of the particular insurance coverage, and whether the counterparty would view insurance proceeds as merely a transmutation of project assets from tangible into monetary form.

The project investor may generally pledge its shares in the project company as security. However, other matters concerning Kuwaiti law, including the Companies Law will have implications on the ability of the investor to pledge its shares as collateral. If security is granted, the security documents would typically be governed by local law.

As general rule assets of the State cannot be attached and can therefore not be provided as security.



At the time of writing there are no specific laws or regulations governing renewable power projects.

## Payment structures

There is no legislation regulating the payment structures for the energy generated by such PPP projects. This is typically provided for in the project agreement. However, given the Ministry of Electricity (MEW) mandate (with respect to the production and distribution of power nationwide), such projects would likely have to sell their power to the MEW (the off taker) which would then on-sell to the consumers. Only the MEW has authority to grant grid connection and regulates the process.

Payment will likely be based on the production cost and the negotiated unit price. MEW will pay for what is delivered to the National Grid which is owned and managed by the MEW.

Smaller projects may be able to sell to one large client directly (e.g. to one of the government owned oil company facilities) depending on the licensing and approval granted to such projects.

## Permitting

Any form of renewable energy project would most likely have to be licensed and regulated by the (MEW). At the time of writing there are no specific laws or regulations governing renewable power projects.

## 3.7. Support Mechanisms

### Bidding processes

Projects which are procured by Kuwait Government entities, including MEW, are typically governed by the Public Tenders Law (Law 37 of 1964). Any procurement made by the Kuwait Government entities which are in excess of KD5,000 must be conducted through the Central Tenders Committee (CTC) in accordance with the CTC procedures.

Pursuant to the Public Tenders Law, a foreign corporate bidder that has not set up a local legal entity would be required to appoint a local agent and submit certain supporting documentation with its bid for tender, along with its price quotation and technical proposal.

Any consultants wishing to provide consultancy services to governmental entities must register with the Consultants Selection Committee (CSC).

Projects that are being structured as public private partnerships (PPPs) may however be procured under:

- Law 116 of 2014 concerning partnerships between the public and private sector
- Law 105 of 1980 on State Properties Systems (as amended);
- Law 39 of 2010 on the establishment of joint stock companies to undertake the building and execution of electric power plants, water desalination; and any laws amending the above.

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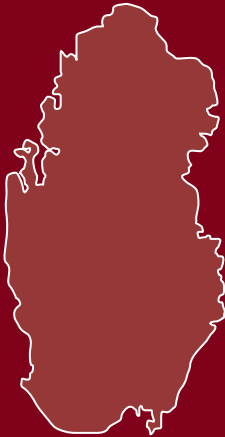
Article 9 of the PPP Law however provides that projects procured under the PPP Law will be exempt from the Public Tenders Law and that such projects will be procured pursuant to the PPP Law and its executive regulations. The law and regulations will provide the rules and procedures for the submission of proposals and their technical and financial evaluation and the competent authority to undertake such evaluation.

KAPP is expected to publish a Project Guide book that outlines the procedures for the procurement of the PPP projects generally.

As the government will retain control of the project process, the power project will require a number of approvals, during its construction and operation phases, from various authorities such as the:

- Ministry of Electricity and Water;
- Ministry of Commerce and Industry;
- Kuwait Municipality; and
- Environment Protection Authority

# Chapter 4: Qatar



## Qatar Overview

Area	11,586 km <sup>2</sup>
Population	2.2 m (2015)
GDP (PPP)	Total: \$306.6 b (2014) Per capita: \$137,200 (2014)
CO <sub>2</sub> Emissions	Total: 109.13 m tons (2012) Per capita: 48.50 tons (2011)

Source: CIA Factbook, EIA

## Qatari Power Sector (2014)

Installed capacity	11,015 MW
Peak demand	6,740 MW
Peak demand growth	12.3%
Installed capacity requirement by 2020	18,715 MW

Source: Qatar Tribune, EIU

## Retail Price Levels (2015)

		US cents	Local Currency (Fils)
Power	Min	2/kWh	7/kWh
	Max	6/kWh	22/kWh
Fuel	Petrol	27/litre	100/litre
Water	Min	121/m <sup>3</sup>	440/m <sup>3</sup>
	Max	258/m <sup>3</sup>	940/m <sup>3</sup>

Source: KAHRAMAA, Numbeo

### Key Bodies referred to:

CSEE	Chevron Center for Sustainable Energy Efficiency
GCC	Gulf Cooperation Council
KAHRAMAA	Qatar General Electricity & Water Corporation
MEC	Ministry of Economy and Commerce
MEI	Ministry of Energy & Industry
MMAA	Ministry of Municipal Affairs and Agriculture
MMUP	Ministry of Municipality and Urban Planning
MoE	Ministry of Environment
MoF	Ministry of Finance
MoJ	Ministry of Justice
QEWC	Qatar Electric and Water Company
QEERI	Qatar Environment and Energy Research Institute
QFC	Qatar Financial Center
QICA	Qatar International Center for Arbitration
QP	Qatar Petroleum
QSTP	Qatar Science and Technology Park
SCENR	Supreme Council of Environment and Natural Resources

### Key Terms used:

BOO	Build-own-operate
BOOT	Build-own-operate and transfer
EPC	Engineering, procurement and construction
GDP	Gross Domestic Product
ICC	International Chamber of Commerce
IPP	Independent power producer
IWPP	Independent water and power producer
O&M	Operation and management
PPA	Power purchase agreement
PV	Photovoltaic
PWPA	Power and water purchase agreement

## 4.1. Context and Key Drivers

Qatar is the largest supplier of liquefied natural gas globally and also a major oil supplier with its small population enjoying one of the highest GDP per capita levels. On the downside, Qatar also has one of the world's highest emissions per capita in the world.

To reduce emissions and meet its rising domestic energy demand, Qatar has started developing a renewable energy programme. The first step aims for 2% of installed capacity to come from renewable energy by 2020.

Similar to the other oil producing countries in the Middle East, the key drivers for developing renewable energy in Qatar include the following:

- **To free up oil and gas for more profitable uses:** Qatar produces over 2 million barrels of oil per day, with reserves of 25.24 billion barrels. Projections show that current oil reserves will provide supply for a further 23 years. Qatar's natural gas consumption has increased by 80% in the past five years driven by increasing demand of electricity and water. Electricity provided by renewable energy would free up oil and gas used domestically, and increase international exports.



Qatar produces over **2 million** barrels of oil per day, with reserves of **25.24 billion** barrels.

- **Meet growing demand:** The electricity consumption per capita in Qatar is 19,000 kWh which is almost six times the world average. The annual growth rate of peak load demand is above 12%. Demand for electricity will continue growing with the growing population, especially due to increasing workers for the FIFA World Cup related projects. Qatar currently produces 9,000 MW. Around 6,500 MW of this is used to meet domestic demand and the rest is exported to Bahrain and Kuwait. More electricity generation demand could increase the need and case for renewable energy.
- **Leverage the advantageous geography and climate:** Qatar also has great solar resources with high global horizontal irradiance of around 2,140 kWh/m<sup>2</sup>/year.<sup>8</sup>
- **Address environmental problems:** Qatar emits over 48 tons of CO<sub>2</sub> per capita which is the highest in the world. Renewable energy will be required as part of the solution to lower these emissions.





*Kahramaa Solar Project<sup>9</sup>*

## 4.2. Market Readiness

Qatar deregulated its power and water markets in 2000, leading to the privatisation of electricity generation and water production services. This has provided opportunities to private investors and international developers to grow Qatar's power generation and water production.

However, the power market is still dominated by the state-owned utility Qatar General Electricity & Water Corporation (KAHRAMAA). To achieve a significant scaling up of renewable energy deployment, Qatar – like other countries in the region – still faces barriers to renewable energy deployment that need to be addressed.

- **Subsidies for conventional power sources:** Power is heavily subsidised in Qatar. Qatar citizens (around 13% of the population) receive free electricity, and expatriates and companies pay heavily subsidized rates. The industrial tariff is just 1.9 US cents

per kWh. Low electricity tariffs make renewable energy less competitive and limit investment in renewable energy projects. Qatar is now thinking to decrease the subsidy of gas to domestic industries. This will create a more favourable environment for renewable energy investment.

- **Limited policies and regulations:** Qatar currently has no renewables legislation in place governing issues such as a feed-in tariff or grid access.
- **Emerging institutional setting:** Qatar does not have a dedicated renewable energy agency. However, there are renewable energy units at the national utility KAHRAMAA and the Qatar Petroleum Company. The Qatar Environment and Energy Research Institute (QEERI) (launched in 2011) aims to develop knowledge to address critical energy and environmental challenges.

<sup>8</sup> IRENA

<sup>9</sup> Courtesy: Qatar Foundation

- **Limited region-specific R&D and talent pool:** There are several research centres in Qatar such as QEERI, the Chevron Center for Sustainable Energy Efficiency (CSEE) and the Qatar Science and Technology Park (QSTP). More local expertise will still be needed, ideally through local, specialised education and training.



Qatar has set a renewable target of 2% of installed capacity by 2020.

### 4.3. Current Project Status

Qatar has set a renewable energy target of 2% of installed capacity by 2020. To help achieve this, a 200 MW solar power project developed by KAHRAMAA is planned to be fully operational by 2020 according to the local press.

Key Renewable Energy Facts	
Installed Capacity	41 MW
Pipeline Capacity	230 MW
Targets by 2020	2% by 2020
Implied Capacity	900 MW

Source: EIU, REN21

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
KAHRAMAA – Solar Energy Power Plant	PV	Main Contract Bid	220 MW	Duhail
KAHRAMAA – Solar Energy Power Plant	PV	Main Contract Bid	10 MW	Duhail

Source: MEED

## 4.4. Regulatory Policies

Qatar currently does not have a formal renewable energy policy framework, but the State has a long history of successful financing of conventional power projects, particularly in the oil and gas sector. As with any other jurisdiction, concrete projects with defined payment terms and ones that operate within a clear and transparent regulatory framework should be able to access a multitude of financing sources.

KAHRAMAA's goal of being a leading global utility in the next few years also bodes well for creating an environment for investment in the sector that is lower in risk. Qatar is expected to play an active role in the roof-top sector. Although there is no formal Government policy on solar rooftop systems, we expect to see many showcase real estate projects adopt a solar component as we have seen in several cases including the Qatar National Convention Centre and the QSTP.

## 4.5. Governing Laws

A developer will have to enter into a number of contracts in order to develop a renewable energy project in Qatar. Below we set out the counterparty to each of the key contracts:

Contract	Counterparties	Governing Law
Real Estate Contract	Selling landowner/landlord	Qatar
Joint venture agreement	With Strategic National Investors usually including QEWC and a QP-related party	Qatar
PPA / PWPA	Likely to be KAHRAMAA	Qatar
EPC contract	Third party contractor	Negotiable
O&M contract	Third party contractor	Negotiable
Finance documents	Bank/finance provider	Negotiable

Funding agreements often adopt English law but there is no legal reason why this should be the case where the project is funded by Qatari banks and the funding is secured against assets in Qatar. There is no requirement in Qatar to use either conventional or Islamic funding structures and it is not unusual to see funding structures that combine both.

Under Qatari law, the agreement struck between the parties to a contract is binding on them unless the subject matter is illegal or some other mandatory provision of Qatari law applies. Therefore, the choice of law made by the parties to a contract should be enforceable under Qatari law. However, the courts in Qatar have wide discretion and power and may take jurisdiction over a dispute or apply Qatari law even though that runs contrary to the position agreed in the contract.

### Dispute resolutions/ considerations

Whilst the local courts are the default jurisdiction for the resolution of disputes in Qatar, the Qatar International Center for Arbitration (QICA) has published its own Arbitration Rules which were introduced in order to find an appropriate mechanism to resolve disputes both between local companies and international companies.



It is usual practice in Qatar for the main project documents to be governed by the law of the State of Qatar.

These rules were introduced due to the complexity surrounding the legal structure in Qatar. There are two separate legal jurisdictions in Qatar, the State of Qatar and the Qatar Financial Center (QFC). The QFC has its own laws governing arbitration of commercial disputes in relation to contracts that have concluded under QFC law however it is uncommon for international contracts to be concluded under QFC law.

Contracts involving international companies increasingly provide for disputes to be resolved through arbitration proceedings, seated in Qatar, conducted in the English language with the ICC rules being those most commonly adopted.

### Investment treaty protection

Qatar has entered into 18 Bilateral Investment Treaties (BITs) that are currently in force. These include BITs with China, France, Germany, India, Korea, Russia, and Switzerland.

The purpose of investment treaties is to provide favourable conditions for inward investment and cross-border economic co-operation, and reciprocal protection of the foreign nationals' investment. In return, they provide investors with certain substantive rights and protections, and, importantly, give investors the right to enforce those rights through an investment treaty arbitration against the State – a key protection in itself. Protection under one or more investment treaties can reduce the business risk associated with cross – border investments, and improve an investor's position in any subsequent dispute connected with those investments.

In addition, Qatar is party to several regional investment agreements, including the Agreement on Promotion, Protection and Guarantee of Investments among Member States of the Organization of the Islamic Conference (the OIC Agreement) and the Unified Agreement for the Investment of Arab Capital in the Arab State (the UAIAC). These treaties also provide investors with substantive rights, and while the position is not as certain as in relation to BITs, Arbitral Tribunals have interpreted both the OIC Agreement and the UAIAC as containing a standing offer which allows investors to enforce those rights through investment treaty arbitration.



Qatar treaties generally provide investors with a range of dispute resolution options.

Qatar is not a party to the Energy Charter Treaty. Although it has Observer status in that organisation, that does not allow investors to invoke the investor-state arbitration provisions in the Treaty.

Qatar is a contracting party to the ICSID Convention and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. Qatar treaties generally provide investors with a range of dispute resolution options, and generally require a 'cooling off' period for negotiations between an initial notice of dispute and the commencement of arbitration. Some Qatar treaties also require an investor to exhaust local remedies before commencing investment arbitration, while others (including the India/ Qatar BIT) require an investor to elect between local courts and international arbitration in the event of a dispute.

Qatar BITs generally share the common substantive protections of fair and equitable treatment, full protection and security, most favoured nation treatment, and protection from expropriation. However, Qatar BITs offer different degrees of investor protection, and impose different requirements for an investor and its investment to qualify for protection. To give one example, some BITs (including the Germany/Qatar and Korea/Qatar BIT) include an 'umbrella clause', which requires the State to observe obligations entered into in respect of investments made by the investor, which can offer additional Treaty protection in relation to

breaches of contract committed by the State or State parties associated with an investor's investment..

Accordingly, if an investor wishes to access investment protections for a clean energy investment in Qatar, it should consider not only whether a treaty is in place between Qatar and the investor's home State, but also consider the terms of the potentially applicable treaty or treaties to evaluate whether its investment will be covered by one or more treaties. Careful structuring of an investment can allow an investor to maximise its protection under international investment protection instruments.

## **4.6. Investment Considerations**

### **Setting up a business**

The State of Qatar currently has an AA rating from Standard & Poor's. The Government has made public its intention to secure an AAA rating.



The State of Qatar currently has an AA rating from Standard & Poor's.

Foreign participation in business activities in Qatar is allowed in almost all sectors of the national economy with the exception of banking and insurance (to the extent excluded by a Decision of the Cabinet of Ministers), commercial agency and real estate trading sectors amongst other areas such as specific types of security services and manpower agencies.

There are various corporate entities which may be applicable to a developer setting up a presence in Qatar. The most commonly used forms are limited liability companies and branch offices, but there are also other options which have certain advantages and could be reviewed in further detail at the time of any investment decision.

Type of business	Maximum foreign shareholding	Minimum capital requirements	Requirements
Branch of foreign company	100%	-	<ul style="list-style-type: none"> <li>Generally linked to carrying out a specific Government/quasi government contract</li> </ul>
Limited liability company	49%*	QAR 200,000	
Article 68 company	49%**	-	<ul style="list-style-type: none"> <li>Can be used for joint ventures where the Government is a joint venture partner</li> <li>High level of freedom in respect of its articles of association</li> </ul>
QSTP entity	100%		<ul style="list-style-type: none"> <li>Tax advantages</li> <li>Must have commitment to research and development</li> <li>Probably not suitable for a transmission company</li> </ul>
Qatar Financial Centre (QFC) entity	100%	Activity dependent	<ul style="list-style-type: none"> <li>Tax advantages</li> <li>Separate legal system based on common law</li> <li>Whilst traditionally focused on the finance sectors, QFC is expanding its remit to cover               <ul style="list-style-type: none"> <li>a wide range of business-to                   <ul style="list-style-type: none"> <li>business services, SPVs and holding companies</li> </ul> </li> </ul> </li> <li>Probably not suitable for a transmission company, but consideration should be given to this option at the time of investment</li> </ul>
Free zone entity***	100%		<ul style="list-style-type: none"> <li>Tax advantages</li> <li>Limited to certain sectors.</li> </ul>

\* A foreign shareholding of up to 100% is available if an exemption from the MEC has been obtained, which can be a lengthy process. This is only available for certain sectors, but the list includes energy and the development of natural resources.

\*\* Can be increased by consent of the Council of Ministers.

\*\*\* Investment free zones are still in the early development stages. Aside from the QSTP none are operational in Qatar. It is not clear what rules and regulations will apply to the establishment of companies in these investment free zones or indeed when it will be possible to establish companies in them.

## Tax Structuring

### Corporate income tax

Foreign companies doing business in Qatar are subject to tax. Tax is imposed on foreign entities operating in Qatar, regardless of whether they operate through a branch or in a joint venture with a locally registered company.

### Rates of corporate income tax

Corporate income is generally subject to tax at a standard rate of 10%.

### Withholding taxes

Withholding taxes were introduced from 1 January 2010.

### Capital gains

Capital gains are aggregated with other income and are subject to tax at the regular corporate income tax rate. However, capital gains on the disposal of real estate and securities which do not form part of the assets of a taxable activity and are derived by natural persons are tax-exempt.



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### Dividends

Dividends are generally not taxed. Tax is assessed on the share of profits applicable to foreign shareholders according to the annually audited financial statements. Income distributed from profits that have already been subject to Qatar taxation will not be subject to double taxation in the hands of the recipient where these are included in the investment income of a taxpayer. Dividends paid by an entity that has a tax exemption are tax-exempt in the hands of the recipient.

### Supply and installation contracts

Profits from “supply only” contracts whereby the supply activity is performed from outside Qatar are exempt from tax because the supplier trades “with” but not “in” Qatar.

Performing construction works with EPC contracts in Qatar may render the revenues arising outside Qatar taxable unless the contract clearly includes a split of revenue between work done inside and outside of Qatar.



## Retention of final payments

All ministries, Government departments, public and semi-public establishments and companies are required to retain a final payment of 3% of the contract value until a tax clearance from the tax administration is presented.

Retention shall apply on payments made to Qatar temporary branches (i.e. branches whose registration is valid only for the duration of a particular contract) with a valid commercial registration and tax card in Qatar for a specific project or contract. Non-resident entities with no commercial registration and tax card in Qatar, shall be subject to withholding tax instead of retention.

## Development assets - real estate, security

Unless the project company is 100% Qatari owned, the company will not be able to own land unless the land is granted to that company through a specific order issued by His Highness the Emir through an "Emiri decree". Even where an Emiri decree is granted, the right granted is likely to be a usufruct right (a right to use a property and to enjoy the benefits of it) rather than a freehold right. A foreign entity can, however, take the benefit of a lease although there are limitations on the length of term.



The land structure is an important part of the bankability aspects of a project and, as such, would need to be established early on in the procurement process.

Although foreign developers can take leases of property, leases are not registrable at the MoJ (where the register of title is held). Leases are sometimes registrable with the authorities responsible for the area where industrial projects are located.

A number of power and water projects in Qatar have been concluded on the basis of the grant of an Emiri decree to the project company giving the project company the right to use the site for the purposes of the project. We would anticipate that renewable power would be treated in a similar way. Lenders may prefer the grant of an Emiri decree giving a usufruct right because this right is registrable on the title of the land.

As a general rule, the procuring authority will have identified the site where the project is to be constructed. The developer will need to carry out due diligence over the proposed site in the usual way and should seek the assistance of the procuring authority in understanding who owns the land that has been allocated to the project and what the intended method of granting the land rights to the project company will be. Obtaining an Emiri decree can be a lengthy process and, if one is required, the developer should seek assurances from the procuring authority that the process has been commenced as soon as is appropriate.



There are significant restrictions on the ownership of land in Qatar by foreign entities.

KAHRAMAA may license third parties to carry out any of the works listed above, in accordance with applicable laws and regulations, and in compliance with the terms and conditions specified in the licence itself. In short, a developer would require, at the very least, a licence to set up and operate from KAHRAMAA under this law. This includes connections to the grid.

## Permitting

KAHRAMAA has the sole right to carry out:

- works for the connection of electric current and water to buildings and facilities;
- any additions, amendments or alterations thereto; and
- all works for the connection or disconnection to the public network.

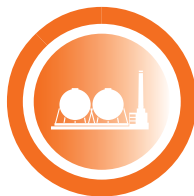
We interpret the laws in this area to cover all power plants, including renewable energy projects, given they would be connected to the Qatari national electricity grid.

Any industrial project in the GCC, including Qatar, requires a licence from the Ministry of Energy & Industry (MEI) in the relevant country. Whilst there are no particular regulations applying specifically to solar energy in Qatar, it is likely that an industrial licence will be required for setting up a renewable energy power plant.

These types of projects also usually require prior approval from the Supreme Council of Environment and Natural Resources (SCENR) in Qatar.

In addition, a building permit issued by the planning department of the MMAA may be needed and an environmental approval (or letter of no objection)

may be required from the Ministry of Environment (MoE).



KAHRAMAA issued its tender for the EPC Contract for Duhail Solar PV Power Plant.

## 4.7. Support Mechanisms

### Bidding processes

Currently there are no formal rules or regulations which expressly apply to how a renewable energy project would be procured in Qatar. In some power and water projects the MoF has provided a Government guarantee (guaranteeing liabilities under the PPA or equivalent agreement) to specific projects, therefore ensuring their bankability. It is feasible that a similar approach may be taken for large scale renewable energy projects.

At the time of writing, KAHRAMAA issued its tender for the EPC Contract for Duhail Solar PV Power Plant. It is clear that the present intention is for the procurement of renewable energy projects to be carried out by KAHRAMMA.

Unless rules and regulations are introduced to deal specifically with the procurement of renewable energy projects, we anticipate that the procurement process will be run on a similar basis to a power and water project or a water project. These are procured by KAHRAMAA using a procurement strategy that complies with both the tender law and KAHRAMAA's internal tender regulations. For a substantial solar project, one could anticipate any procurement being conducted on an open, international basis and that project would be structured on a BOO or BOOT basis.

Land to be utilised in the project would probably be identified by KAHRAMAA and details of the site would be included in the documentation issued as part of the tender process. Land would also need to be land zoned by the MMUP for industrial use and it is likely that any such land would be owned by the Government or by a Government entity.

# Chapter 5: Saudi Arabia



## Saudi Arabia Overview

Area	2,149,690 km <sup>2</sup> (2015)
Population	27.8 m (2015)
GDP (PPP)	Total: \$1,610 b (2014) Per capita: \$52,300 (2014)
CO <sub>2</sub> Emissions	Total: 642.65 m tons (2012) Per capita: 23.15 tons (2011)

Source: CIA Factbook, EIA

## Saudi Power Sector (2015)

Installed capacity	68,854 MW
Peak demand	62,260 MW
Peak demand growth	10.2%
Installed capacity requirement by 2020	81,615 MW

Source: Gulfbusinesss, EIU

## Retail Price Levels (2015)

		US cents	Local Currency (Halala)
Power	Min	1/kWh	5/kWh
	Max	7/kWh	26/kWh
Fuel	Petrol	13/litre	50/litre
Water	Min	3/m <sup>3</sup>	10/m <sup>3</sup>
	Max	240/m <sup>3</sup>	900/m <sup>3</sup>

Source: SEC, NWC. Arabnews, Numbeo

### Key Bodies referred to:

ECRA	The Electricity Co-Generation Regulatory Authority
KACARE	King Abdullah City for Atomic and Renewable Energy
KAUST	King Abdullah University of Science and Technology
LMA	Labour Market Authority
MoA	Ministry of Agriculture
Mol	Ministry of Interior Kingdom of Saudi Arabia
MOMRA	Ministry of Municipal and Rural Affairs
MOPM	Ministry of Petroleum and Mineral Resources
MoT	Ministry of Transport
MWE	Ministry of Water and Energy
NGC	National Grid Company
NWC	National Water Company
PME	Presidency of Meteorology and Environment
SEC	Saudi Electric Company
SEPC	Sustainable Energy Procurement Company
SWCC	Saline Water Conversion Corporation

### Key Terms used:

GCC	Gulf Cooperation Council
IPP	Independent power producer
IWPP	Independent water and power producer
KSA	Kingdom of Saudi Arabia
MENA	Middle East and North Africa
PPA	Power Purchase Agreement

## 5.1. Context and Key Drivers

Saudi Arabia boasts the world's largest oil reserves and is home to the fourth largest concentration of natural gas resource in the world.

The country currently produces approximately 12 million barrels of crude oil per day, of which about 3 million barrels are consumed domestically.

With the rapid increase in population and industrial growth, the country's domestic consumption continues to rise and is expected to reach 7 million barrels per day by 2030. As 80% of Saudi Arabia's revenue is dependent on oil exports, the amount available for export will continue to decrease, having by consequence, a significant impact on Saudi Arabia's revenues.

The key drivers for the development of renewable energy in Saudi Arabia are similar to those of other GCC countries and include:

- **To free up oil and gas for more profitable uses:** Saudi Arabia's domestic consumption of hydrocarbons is rising rapidly leading to significant impacts on its export revenues which in turn are directly dependent on oil exports although this now needs to be considered in the context of the recent oil price depression.



Saudi Arabia boasts the world's largest oil reserves and is home to the fourth largest concentration of natural gas resource in the world.

- **Meet growing demand:** Saudi Arabia's power sector is the biggest in the region with installed generating capacity of over 61GW in 2014. Saudi Arabia is planning to double its capacity to 120 GW by 2032 by developing solar and nuclear power generation. Peak power demand has been growing at 7-10% a year in the last decade.
- **Drive economic diversification and create jobs:** The current rate of unemployment in Saudi Arabia stands at 5.7%. The government believes renewable energy can contribute to reducing this, engaging and developing the younger talent pool. The key focus of the Kingdom's renewable energy plan is therefore to develop local expertise and encourage the development of a local supply chain which will create employment opportunities for its young and growing population.

- **Leverage the advantageous geography and climate:** Saudi Arabia has the greatest potential for renewable energy in the MENA region. There is high potential for renewable energy development, namely in solar owing to generally high direct normal irradiation of 2,500 kWh/m<sup>2</sup>/year.<sup>10</sup> The Kingdom has high wind potential with net wind speed of over 7m/s in some areas and the availability of space to develop large utility scale plants.

- **Address environmental problems:** Saudi Arabia is one of six GCC countries that are in the top 15 per capita emitters of carbon dioxide in the world, mostly due to a high reliance on heavy fuel oil to generate electricity.

Saudi Arabia understands the economic and social gains achievable through the transition to renewable energies and it is widely acknowledged that sector diversification can add value at a local level through knowledge creation, employment and economic resilience.

Further, the Saudi Arabian appetite for solar also rests on a desire to exploit an infinite natural resource that can be sold at world market prices whilst also



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creating infrastructure that will be used by future generations.

In this regard, the most important 'driving force for making atomic and renewable energy an integral part of a national sustainable energy mix' in the Kingdom is the King Abdullah City for Atomic and Renewable Energy (KACARE).

Established by Royal Decree in April 2010, KACARE is mandated to design and facilitate the procurement process, advance and implement policy and regulation development and also create a legal and commercial structure for both renewable energy and nuclear energy sectors. It has sought to undertake these activities through the creation of a Sustainable Energy Procurement Company (SEPC) and National Grid Company (NGC).

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<sup>10</sup> IRENA

## 5.2. Market Readiness

Although Saudi's energy generation mix is almost wholly dominated by fossil fuels, the Saudi market is still seen as having the potential to attract investments in clean energy. The country hosts several major Independent Power Producers (IPPs) and Independent Water and Power Producers (IWPPs) delivered under long-term Power Purchase Agreements (PPAs) that are proven to be bankable and have already attracted billions of dollars of domestic and international investment. As the private sector gets more involved in power generation, a process of introducing market based tariffs is encouraged by the government to lower the subsidies which were worth US\$40 bn in 2013.

KACARE unveiled ambitious plans to develop 54 GW of renewable energy by 2032. This is an extremely ambitious target considering there are currently no utility scale operational renewable energy projects in the Kingdom. In 2013 KACARE released a white paper detailing the proposed competitive procurement process for the Kingdom's renewable energy plan and also initial aspects of the required infrastructure and regulatory framework.

The White Paper details the first three procurement rounds, being an introductory round of 500–800 MW, a first round of 2,000–3,000 MW and a second round of 3,000–4,000 MW.

Further rounds were to be announced thereafter.

The Introductory Round was to consist of five to seven projects at pre-packaged sites identified by KACARE which could be easily connected to the grid. It is understood that these pre-packaged sites would be supplied with the required real estate rights needed by a project, along with the consents and permits required to build and operate and a grid connection.

Following the introductory round, developers would be permitted to find their own sites, in which event they would be responsible for obtaining their own development assets.

Unlike in other jurisdictions, the renewable energy projects envisaged by the White Paper were to be developed on a build-own-operate model by the developer, who will enter into a 20 year PPA with the SEPC.

Not much has formally progressed in Saudi since the launch of the White Paper and there has been more speculation than action in the market. Notwithstanding this, market participants keep Saudi in focus because it has the potential to deliver significantly. There are mixed views on the potential impact of a sustained depressed oil price on the Saudi renewables market.



Whilst some believe it will reduce the Saudi appetite for renewables because of the impact on funding, others are of the firm view that this will cause Saudi Arabia to positively reconsider a

renewables programme because of the need to export oil rather than to utilise it internally, coupled with the need to create employment which a local content requirement could help deliver.

### 5.3. Current Project Status

The Kingdom has already deployed and completed a variety of renewable energy projects and there will no doubt be many sub 1MW projects taking shape in 2015.

KAUST solar power plant was the first solar infrastructure project in the Kingdom consisting of two rooftop solar installations with a capacity of 1MW each installed on the north and south laboratories of the university.

The King Abdullah Petroleum Studies and Research Center, built by Saudi Aramco, includes solar panels with a capacity of 3.5MW.

Solar Frontier completed the 1MW CPV power plant at the Nofa Equestrian Resort, near Riyadh.



*KACARE master plan<sup>11</sup>*

Saudi Aramco's KAPSARC II project will extend their existing solar plant from 3.5 MW to 5.3.

Saudi Aramco was awarded the Mecca Municipality 100MW solar project and the SEC changed its expressions of interest in the country's first CSP plant – Duba 1, near Tabuk – which aims to provide 550 megawatts (MW) of electricity to the national grid to an EPC tender in 2014.

As this report went to print, the Saudi Electricity Company (SEC) signed a SR4.5 billion contract with General Electric to establish the Kingdom's first fossil fuel and solar power plant near the Red Sea port of Dhuba in the Tabuk region. The 600MW integrated solar combined cycle (ISCC) plant will primarily burn natural gas, but will also generate 50MW from solar energy to increase fuel efficiency. It is estimated that 25 Saudi engineers and 80 technicians will be trained to run the plant, and 30-35% of the construction materials will come from sources within the Kingdom.

Key Renewable Energy Facts	
Installed Capacity	17MW
Pipeline Capacity	125 MW (not including 2 GW for K.A.CARE Round 1)
Targets	54 GW by 2032
Implied Capacity	160 MW by 2020

Source: EIU, REN21

Current Renewable Energy Projects Status				
Project	Technology	Status	Size	Location
SEC - Duba Integrated Solar Combined Cycle (ISCC) Power Plant Phase I	CSP	Execution	600 MW (CSP: 20-30 MW)	Duba
Saudi Aramco - KAPSARC	PV	Complete	3.5 MW	Riyadh
KAPSARC II	PV	Complete	1.8 MW	Riyadh
SEC - Farasan Island Solar Project	PV	Complete	500 kW	Farasan Island
KAUST	PV	Complete	2 MW	Thuwal
North Park	PV	Complete	10 MW	Dhahran
Tabuk KJC CPV	PV	Execution	1 MW	Tabuk

Source: MEED

## 5.4. Regulatory Policies

Whilst the White Paper published by KACARE included details of a competitive procurement process, comprising of three tendering rounds for the creation of 7 GW capacity of renewable energy, it failed to provide details or clarification on a number

of issues that must be addressed to attract investors.

For example, the White Paper does not outline how renewable energy will be subsidised or how the establishment of a supply chain will be incentivised.

As matters currently stand, there are a number of regulatory, institutional and capability challenges, as with other GCC countries, that need to be addressed.

These include:

- **Subsidies for conventional power sources:** Subsidies for conventional energies remain high in Saudi Arabia and act as an obstacle to the private sector's development of renewable energy sources. There is also a distorting effect on consumption due to an electricity tariff system that makes power in the Kingdom among the cheapest in the world.
- **Fragmented power generation sector:** The fragmented nature of the Kingdom's power generation sector raises questions about Saudi Arabia's energy strategy and the regulation of the electricity sector. The largest source of electric power is SEC with SWCC and Saudi Aramco who also own and develop their own conventional power stations.
- **Emerging policies and regulations:** The Kingdom is still in the process of establishing a regulatory framework to support power supply from renewable sources and grid connections.



KACARE was established to foster renewable energy development and R&D.

- **Emerging institutional setting:** The entities that will lead renewable energy initiatives are still nascent and have yet to establish the required capabilities and partnerships to achieve their goals.
- **Limited region-specific R&D and talent pool:** KACARE was established to foster renewable energy development and R&D. It is still early days and results are yet to materialise. The localisation of capabilities and technologies is seen as a top priority by Saudi Arabia in common with many other Gulf governments.
- **Limited infrastructure readiness:** The grid is also not ready to accommodate the extra input derived from renewable energies. Saudi Electric Company is responsible for the grid infrastructure in the country and there will need to be significant co-ordination between SEC and KACARE.

As mentioned in section 4.3 above, there has been little progress with the White paper and the KACARE programme.

## 5.5. Governing Laws

### Counterparties and governing laws

Contract	Counterparties	Governing Law
Real estate contract	Selling landowner/landlord	KSA
Grid connection agreement	National Grid Saudi Arabia	KSA
PPA	SEPC	KSA
Shareholders agreement	SEPC/Public Investment Fund	KSA
EPC contract	Third party contractor	Negotiable
O&M contract	Third party contractor	Negotiable
Finance documents	Bank/finance provider	Negotiable, but likely to be KSA if a local bank

Whilst parties to an agreement retain their freedom to choose the applicable law, provided that one of the parties is not Saudi, Saudi law does not have a concept of conflict of laws.

Saudi Arabian law, and the applicable principles of Sharia law, applies to contracts which are not codified. There is no all-embracing theory of contract law which applies to all types of contracts.

Therefore whilst the Saudi courts generally respect the foreign law clause, it is possible that a Saudi court may on its initiative assume jurisdiction applying Saudi law to the exclusion of the party’s intentions. Further, unlike other jurisdictions, foreign law will not be applied by Saudi courts when

hearing cases and therefore contractual interpretation by the Courts will follow the applicable principles of Sharia law.

Local Counsel rely on judicial practice and their own knowledge of legal practice as applied to similar cases or in similar circumstances in the past. Saudi courts do not follow a precedent system and therefore, the judge presiding over a case is not bound by decisions in similar, previous cases and thus has the discretion to issue a decision that he feels is adequate and appropriate, even if this goes against previous case law decisions.

In view of the substantial freedom of contract that is afforded under Sharia law, contracting parties should afford careful consideration to the preparation, review and negotiation of contractual arrangements in Saudi Arabia.

## Investment treaty protection

Saudi Arabia has entered into 17 Bilateral Investment Treaties (BITs) that are currently in force. These include BITs with China, France, Germany, India, Korea, Singapore, and Switzerland. Other treaties have been signed and may come into force, while others are under negotiation.

The purpose of investment treaties is to provide favourable conditions for inward investment and cross-border economic co-operation, and reciprocal protection of the foreign nationals' investment. In return, they provide investors with certain substantive rights and protections, and, importantly, give investors the right to enforce those rights through an investment treaty arbitration against the State – a key protection in itself. Protection under one or more investment treaties can reduce the business risk associated with cross-border investments, and improve an investor's position in any subsequent dispute connected with those investments.



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Accordingly, if an investor wishes to access investment protections for a clean energy investment in Saudi Arabia, it should consider not only whether a treaty is in place between Saudi Arabia and the investor's home State, but also consider the terms of the potentially applicable treaty or treaties to evaluate whether its investment will be covered by one or more treaties. Careful structuring of an investment can allow an investor to maximise its protection under international investment protection instruments.

## 5.6. Investment

### Setting up a business

In order to secure land to develop a renewable energy project (whether through the purchase or lease of the land), foreign developers must first establish a legal business presence in Saudi Arabia.

Set out below is a brief description of the types of legal structures available.

Type of business	Maximum foreign shareholding	Minimum capital requirements	Requirements
Branch of foreign company	100%	SAR 500,000	<ul style="list-style-type: none"> <li>Set up for a specified number of years</li> <li>Scope limited to activities undertaken by parent company</li> <li>Investment licence for foreign shareholder</li> <li>Commercial registration certificate</li> </ul>
Limited liability company <sup>12</sup>	100% (75% <sup>13</sup> )	SAR 500,000 (SAR 20,000,000 <sup>14</sup> )	<ul style="list-style-type: none"> <li>Set up for a specified number of years</li> <li>Minimum of two shareholders</li> <li>Investment licence for foreign shareholder</li> <li>Commercial registration certificate</li> <li>"Industrial licence" required from Saudi Arabian General Investment Authority for renewable projects</li> </ul>

<sup>12</sup> Before incorporating a company in the Kingdom, the Foreign shareholder(s) must obtain an investment licence from SAGIA and a commercial registration certificate from the MCI.

<sup>13</sup> Where the company undertakes trading activities, the maximum permitted shareholding is 75%.

<sup>14</sup> The initial capital requirement is SAR 20,000,000 for an entity undertaking trading activities.

## Tax structuring

### Corporate income tax

Generally, companies are taxed at 20%.

It is worth noting that non-Saudi partners in companies are subject to tax rather than the actual companies themselves. For corporate income tax purposes, non-Saudis do not include GCC citizens.

The share of profits attributable to interests owned by GCC nationals are subject to Zakat (further explained below). The share of profits attributable to interests owned by non-GCC nationals and non-GCC entities in a company or partnership are subject to income tax.

### Capital gains

In general, capital gains are treated as ordinary income and taxed at the regular corporate tax rate. Capital gains tax is not applicable to a resident Saudi shareholder.



Capital gains tax is not applicable to a resident Saudi shareholder.

### Supply and installation contracts

Profits from “supply only” operations by non-residents to the Kingdom are exempt from income tax because the non-resident supplier trades “with” but not “in” the Kingdom. The provision of associated services, such as maintenance or training, would not be exempt.



## Withholding tax

A Saudi resident entity or a permanent establishment of a non-resident are required to withhold tax from payments made to non-residents

(including non – resident GCC nationals and entities) that do not have a legal registration or a permanent establishment in Saudi Arabia. Tax is withheld at the following rates:

Asset group	Rate %
Rent, payments made for technical and consulting services, payments for air tickets, payments for freight or marine shipping, payments for international telecommunications, dividends, interest and insurance or reinsurance premiums	5
Remittance of post-tax profits of a branch office and undistributed profits attributable to an outgoing shareholder	5
Royalties and payments made to head office or an affiliated company for services	15
Management fees payments	15
For other services	15

## Zakat

Zakat is a religious levy on Saudis and companies that are wholly or partially owned by Saudi or GCC nationals. It is levied at a flat rate of 2.5%, and is chargeable on the total of the taxpayer's capital resources and income that are not invested in fixed assets. Complex rules apply to the calculation of Zakat liabilities.

## Development assets - real estate, security

An important factor is identifying appropriate land for the proposed project. Saudi land is zoned according

to permissible uses. One key challenge is the fact that it is very difficult to obtain approval from the relevant LMA to change the permitted use of zoned land which has been allocated for a different use.

Once an appropriate portion of land has been identified, the developer must ascertain who the owner of the land is, obtain the approval of the landowner and, where land belongs to the Government, obtain prior consents from the relevant authorities. This must be undertaken for all access rights necessary to develop, construct and operate the project.

Provided that the requirements have been adhered to, there are four principal ways in which a foreign developer may try and secure their rights to land:

Conditional purchase	<ul style="list-style-type: none"><li>• Full purchase price only paid after specific time period</li><li>• Developer required to pay a non-refundable deposit</li><li>• Termination/break clause</li><li>• Payment of full purchase price if land is adequate</li><li>• Landowner not able to negotiate or contract with any third party</li></ul>
Conditional lease	<ul style="list-style-type: none"><li>• Lease of land, including during due diligence period</li><li>• Termination provisions (period of advance notice)</li><li>• Clause preventing landlord from terminating contract</li><li>• Landowner not able to negotiate or contract with any third party</li></ul>
Outright purchase	<ul style="list-style-type: none"><li>• No option in place</li><li>• Landowner free to contract with any third party during due diligence period</li></ul>
Lease with right to purchase	<ul style="list-style-type: none"><li>• Lease for specific period of time</li><li>• Right to purchase exercisable after a certain period</li></ul>

Security

A bank interest can be:

- stated in writing on the title deed;
- recorded in the contract; or
- registered on the land itself in the name of bank as title holder until all repayments have been made.

Payment structure

It is possible to structure payments so that these are triggered by certain milestones, or to otherwise defer part of the total payment until financial close. Deferring the entire payment until financial close may not be enforceable under Sharia law.



## Permitting

Developers will need to obtain a number of approvals and consents. The SEPC website provides a list of the main consents and approvals that will be required under the KACARE regime. Some of the key approvals may need to be obtained from the following:

- KACARE, when relevant
- Landowner for the lease or purchase of the land
- MOMRA
- MoA
- MoT
- ECRA
- Civil Defense Directorate of the MoI
- Saudi Telecom Company
- MWE
- PME
- NWC
- LMA
- Saudi Aramco/MOPM (for land located in the Eastern Province of Saudi Arabia)

Obtaining all of the required permits can be expected to take at least two to four calendar months and it is recommended that the approvals are sought early in the development process.



Obtaining all of the required permits can be expected to take at least two to four calendar months.

## 5.7. Support Mechanisms

### Bidding processes

In 2000, the Kingdom restructured the power sector through the establishment of SEC whereby all the regional electricity companies were brought together as a single entity, although there are plans to unbundle the sector in the near future. A regulatory body, the Electricity Co-Generation Regulatory Authority (ECRA), was established along with other measures for improving the investment environment in order to attract private capital into IPP projects.

The Kingdom commenced an IPP program in 2007 to meet the huge growth in demand from both the residential and industrial sectors and has successfully procured a number of plants since that date.

SEC runs the procurement process to identify a developer, which will typically hold around 50% of shares in the project company, with SEC owning the remainder. The developer's responsibility includes the design, financing, construction, commissioning, testing, ownership, operation and maintenance of the IPP.



*Saudi Aramco Rooftop PV System<sup>15</sup>*

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<sup>15</sup> Courtesy: PV magazine

During the procurement process, SEC provides detailed instructions in terms of the financing of the project. Requirements as to the source of senior debt, the minimum debt component of the project cost, the composition of committed facilities, the number of Saudi financing parties and the requirements under bond financing are detailed in the request for proposal along with clear instructions on what can constitute a non-compliant proposal.

As noted above, KACARE was finalising a program for procuring up to 54 GW of renewable energy over multiple competitive rounds. If this is implemented as envisaged, SEPC, a separate standalone Government-guaranteed entity will be responsible for administering the procurement and executing and managing the power purchase agreements. The proposal evaluation criteria will include price and non-price factors.

### Typical bidding process flow chart



# Chapter 6: United Arab Emirates



## UAE Overview

Area	83,600 km <sup>2</sup> (2015)
Population	9.4 m (2014)
GDP (PPP)	Total: \$617.1 b (2014) Per capita: \$66,300 (2014)
CO <sub>2</sub> Emissions	Total: 257,941 m tons (2012) Per capita: 48.50 tons (2011)

Source: CIA Factbook, EIA

## UAE Power Sector (2012)

Installed capacity	27 GW
Peak demand	19 GW
Peak demand growth	7.3%
Installed capacity requirement by 2020	45,202 MW

Source: Ontario-sea, UAE Ministry of Energy, BMI

## Abu Dhabi

### Retail Price Levels (2015)

		US cents	Local Currency (Fils)
Power	Min	0/kWh	0/kWh
	Max	9/kWh	32/kWh
Fuel	Petrol	53/litre	195/litre
Water	Min	0/m <sup>3</sup>	0/m <sup>3</sup>
	Max	270/m <sup>3</sup>	990/m <sup>3</sup>

Source: ADDC, Numbeo

## Dubai

### Retail Price Levels (2015)

		US cents	Local Currency (Fils)
Power	Min	6/kWh	23/kWh
	Max	10/kWh	38/kWh
Fuel	Petrol	53/litre	195/litre
Water	Min	210/m <sup>3</sup>	770/m <sup>3</sup>
	Max	276/m <sup>3</sup>	1012/m <sup>3</sup>

Source: DEWA, Numbeo

### Key Bodies referred to:

AADC	Al Ain Distribution Company
ADDC	Abu Dhabi Distribution Company
ADRSB	Regulatory and Supervision Bureau of Abu Dhabi
ADWEA	Abu Dhabi Water and Electricity Authority
ADWEC	Abu Dhabi Water and Electricity Corporation
DEWA	Dubai Electricity and Water Authority
DIAC	Dubai International Arbitration Centre
DIFC	Dubai International Financial Centre
DSCE	Dubai Supreme Council for Energy
DRSB	Regulatory and Supervision Bureau of Dubai
FEWA	Federal Electricity & Water Authority
ICC	International Chamber of Commerce
ICSID	International Centre for the Settlement of Investment Disputes
IRENA	International Renewable Energy Agency
KACARE	King Abdullah City for Atomic and Renewable Energy
LCIA	London Court of International Arbitration
Masdar	Abu Dhabi Future Energy Company PJSC
MoL	Ministry of Labour
TAQA	Abu Dhabi National Energy Company PJSC
TRANSCO	Abu Dhabi Transmission & Dispatch Company UAE

### Key Terms used:

BOO	Build-own-operate
BIT	Bilateral Investment Treaty
EPC	Engineering, procurement and construction
IPP	Independent power producer
IWPP	Independent water and power producer
PPA	Power purchase agreement
RFP	Request for proposal

## 6.1. Context and Key Drivers

The UAE is a federation of seven independent Emirates. Economic development and government policy is managed both at the federal level and at that of the individual Emirate.

This chapter mainly focuses on the Emirates of Abu Dhabi and Dubai as these represent the majority of the population, land mass and current ambitions for renewable energy within the UAE.

Both of these Emirates have also been behind the majority of renewable energy developments in the UAE to date.

Generally there are other engineering, procurement and construction (EPC) opportunities in Northern Emirates and in off grid areas. Of note is a 40MW solar PV project in Ras Al Khaimah (RAK), which held an RFQ stage in March 2014. It is a standalone Solar IPP being co-developed by Utico on a design, build, own, finance, operate basis but at the time of writing we understand there is an intention for it to be connected to the grid. The plant will also power a desalination plant for which there was a contract award in 2015, and the expected technology is PV.



The annual economic growth rate has been around **5-7 per cent** in both Abu Dhabi and Dubai.

The drivers for these developments have included the following:

- **To free up oil and gas for more profitable uses:** There is increasing focus on renewable energy namely solar energy, to mitigate gas shortage and free oil for more profitable uses. Although the UAE has the seventh largest reserves of natural gas in the world, dry gas production is comparatively low. The UAE thus became a net gas importer in 2008 and imports via the Dolphin pipeline from Qatar.
- **Meet growing demand and benefit from load tailoring:** The annual economic growth rate has been around 5-7 per cent in both Abu Dhabi and Dubai. Not surprisingly, regional electricity consumption is growing at approximately 8% a year. Solar power generation in particular fits well with the UAE's power demand patterns and there is great potential for distributed generation.



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- **Drive economic diversification and create jobs:**

There is a high strategic focus in Abu Dhabi on diversifying the economy into sectors that are less dependent on oil and gas to ensure long-term security of energy supply. The UAE is also focusing on the localisation of technologies and capabilities to create jobs for a young and fast growing population.

- **Leverage the advantageous geography and climate:**

There is high potential for renewable energy development, namely in solar owing to generally high solar irradiation which is 2,120 kWh/m<sup>2</sup>/year and the availability of space to develop large utility scale plants.

- **Address environmental problems:**

The UAE is one of six GCC countries that are in the top 15 per capita emitters of carbon dioxide in the world, mostly due to a high reliance on gas to generate electricity and potable water, and energy intensive practices.

The UAE has the sixth largest oil reserves and the seventh largest gas reserves in the world. It also relies on imported gas for the production of some of its electricity. In 2008, the UAE began to look at alternatives to gas-fired generation, indicating that gas could no longer be relied upon to meet all future power capacity.

Currently, by global standards the UAE renewable energy market is still small even though it is the first GCC state to take actions towards a low carbon future and is looking to take a regional leadership in this area. Looking ahead, the UAE renewable market is expected to continue to grow rapidly supported by Government targets, initiatives and recent project development activity.

The UAE government announced the plan to increase its clean energy to 24% of the energy mix by 2021 in its INDC (Intended Nationally Determined Contribution) submission for the UNFCCC Conference of the Parties (COP 21) in Paris in December 2015.

## Abu Dhabi

Although it has the bulk of the UAE's oil and gas reserves, Abu Dhabi has for some time been at the forefront of renewable energy development in the GCC. Long term gas contracts with Qatar provide excellent rates, but for only half of Abu Dhabi's current energy needs, leaving it heavily dependent upon its more expensive domestic sour gas. Sensibly the Emirate has responded to this challenge and through the launch of the Masdar initiative in 2006, Abu Dhabi seized an opportunity to be a regional "first mover" and placed renewables on the Gulf political agenda. Abu Dhabi Future Energy Company (Masdar) is a subsidiary of the Mubadala Development Company, which is wholly owned by the Abu Dhabi government. Masdar is guided by The Abu Dhabi Economic Vision 2030, a programme that drives new sources of income for the Emirate and strengthens its knowledge-based economic sectors.

Masdar has four business units that are interconnected and a research arm that complements their work. The business units are Masdar Capital, Masdar Clean Energy, Masdar Special Projects and Masdar City. Masdar Institute, an independent, research-driven graduate university, rounds out the organisation.



Abu Dhabi seized an opportunity to be a regional "first mover" and placed renewables on the Gulf political agenda.

This leadership has continued with the establishment of an annual international conference series targeting renewable energy (the World Future Energy Summit), but most importantly through the hosting of the International Renewable Energy Agency (IRENA), an inter-governmental agency dedicated to the promotion of renewable energy.

The development of renewable energy projects to date has largely been driven by Masdar:

- It has developed its own 10 MW PV project to provide electricity to Masdar City as well as a 1MW rooftop scheme.
- It has recently commissioned the Shams 1 solar power project. This is a 100 MW CSP project based on the build, own, operate (BOO) model similar to that used by the Emirate in the conventional power sector. The project company, which is 60% owned by Masdar, sells energy to ADWEC under a long-term, bespoke PPA.

- It is developing carbon capture and sequestration projects that seek to add value to the national economy while also reducing industrial carbon emissions
- In September 2014 it re-issued an EPC tender for a 100MW solar PV project after changing a requirement that 50% of panels had to be of Masdar's own manufacture. This project has not progressed further, but ADWEA has announced that a tender for a 350MW solar PV IPP will be launched in early 2016. As such it appears that future IPPs in the Emirate will be led by ADWEC/ADWEA.
- Internationally, Masdar Clean Energy has invested in high-profile, utility-scale renewable energy projects like Torresol Energy, a joint venture in Spain with SENER that operates 120 megawatts of concentrated solar power plants, and the London Array, a 650-megawatt offshore wind farm in the Thames Estuary. It is also implementing wind farms in Egypt, Jordan and Oman.

Both Emirates have signalled their interest in developing roof top solar programmes and Dubai launched its "Shams Dubai" net metering scheme in 2015 (see section below).

The regulations for implementing a scheme in Abu Dhabi are yet to be drafted. The exact capacity figures are yet to be announced but are anticipated shortly.

Abu Dhabi has recently granted a number of solar generation licences to various test sites and off-grid schemes at institutions including schools, the judiciary and the Al Ain Zoo for on-site rooftop solar projects to be developed by site owners. We understand that a further 28 licences are pending.

To facilitate this, the Bureau has established a regulatory framework with the two distribution companies, Abu Dhabi Distribution Company (ADDC) and Al Ain Distribution Company (AADC), to allow for the private installation and generation of electricity using PV. The framework includes a special Self-Regulating Licence and an inspection program for all would-be self-generators.

However, solar and wind power are only ever likely to make a minor contribution to the Emirate's energy mix. They will lag well behind another alternative energy, nuclear. In December 2009, the Emirates Nuclear Energy Corporation (ENEC) contracted with the Korea Electric Power Company (KEPCO), to construct four 1,400MW nuclear reactors, with the first due to commence operations in 2017.

Whilst not a renewable energy source, ENEC's 5.6 GW will deliver 50% of Abu Dhabi's ambitious carbon reduction targets, and stimulate a high tech industry in the region.

The principal agencies involved with the production, transmission and distribution of electricity in Abu Dhabi

are the Abu Dhabi Water & Electricity Authority (ADWEA), its associated regulator (Regulations & Supervision Bureau - RSB), single buyer (Abu Dhabi Water & Electricity Company - ADWEC), transmission company (TransCo) and distribution companies (Abu Dhabi and Al Ain Distribution Companies - ADDC & AADC). One of the features of the Abu Dhabi power sector is the increasingly important role of ADWEA in meeting power demand outside of its home emirate. Peak exports by the utility doubled in the period 2008-10, reaching 1,737MW.



*Masdar City, Abu Dhabi<sup>16</sup>*

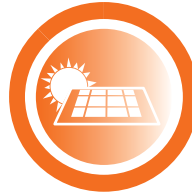
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*16 Photo courtesy: One Planet Living*

## Dubai

Dubai has only 4% of the UAE's total fossil fuel reserves and thus relies on imports of gas from both Abu Dhabi and Qatar for its electricity generation. Dubai power tariffs have increased three times as a result of rising traded gas prices and the need to burn more expensive liquid fuels in its power stations to meet rising peak demand.

The Dubai Electricity and Water Authority (DEWA) is the exclusive provider of electricity and water services in Dubai. DEWA's historical priorities have been to meet rising demand through large-scale plants that deliver value for money at scale. However, this is shifting to smaller capacity, cleaner, renewable energy schemes that require lower levels of OPEX. It has however undertaken a number of renewable energy studies and commitments were raised significantly in early 2012 and again in 2015.

Although not as early to engage with renewables as Abu Dhabi, Dubai's position has become more active and prominent over the past couple of years, reflecting its rising input fuel prices and success of its first IPP.



Dubai is considering a rooftop solar programme which we understand is being ratified by the Executive Counsel in Dubai at the time of publication.

In November 2015 the Emirate of Dubai unveiled an revised program which will see **7% of its power generation come from solar energy by 2020**, 25% by 2030 and 75% by 2050. Currently production is 1%. The Dubai Clean Energy Strategy 2050 program is expected to result **AED 50 billion of new solar investments**.

Developments will be driven through a combination of utility scale projects and greater use of roof top solar. DEWA will continue to lead with its large-scale solar procurement plan through a combination of EPC and IPP projects. DEWA now plans to install **5000MW of solar PV** at the Sheikh Mohammed Bin Rashid Al Maktoum Solar Park by 2030. Once completed this will become **the largest solar park** in the world. Phase II of the park (a 200MW IPP) set the lowest global levelised tariff for a PV project and the RFP for phase III was released to prequalified developers in December 2015.

The Emirate has also announced plans for **solar panels to be installed on the roofs of all buildings in Dubai by 2030**. The Emirate launched the regulations for a net-metering scheme known as “Shams Dubai” in December 2014 targeting large scale roofs/energy intensive customers (<https://new.dewa.gov.ae/en/customer/innovation/smart-initiatives/shams-dubai>). It is likely that additional schemes will be launched in coming years. Plans include establishing a AED 100 billion Dubai Green Fund, providing soft loans for investors in the sector.

The Emirate has also announced the establishment of a AED 500 million Innovation Centre at the Solar park and a **new free zone called the Dubai Green Zone (DGZ)**. The DGZ is expected to house solar energy companies from around the world.



*A model of Dubai Solar Park, UAE<sup>17</sup>*

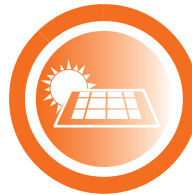
<sup>17</sup> Source: <http://gulfnews.com/business/general/uae-gears-up-for-mega-energy-conference-1.1079845>

## 6.2. Market Readiness

With the UAE being a federation of independent Emirates which have most of the rights of sovereign states, there are, from time to time, differences in approaches and policies, especially energy policy. One consequence of this is that a national energy management and regulatory body currently does not exist, nor is there yet a coherent long-term energy strategy encompassing renewables.

For project developers and the private sector players looking to take advantage of the opportunity renewable energy presents, this has meant a lack of certainty. With much of the drive behind developments in the UAE's renewable energy industry originating in the governments of each of the Emirates, what was needed was clarity on the terms of any PPA or feed-in tariff structure that would apply to renewable energy project developments.

It is clear that a federal approach to this is unlikely to be seen in the near future with the exception of the Northern Emirates where FEWA may take the lead. In terms of the PPA the approach used by Abu Dhabi in its conventional IPP program appears to be the primary basis for contracting with a joint venture company established between the private sector and state entity.



Multiple R&D groups were established in the past **3-5 years** but results are yet to materialize.

At a National level there are a number of regulatory, institutional and capability challenges that need to be addressed.

- **Subsidies for conventional power sources:** Subsidies for conventional power act as a barrier on the private sector's development of renewable energy sources especially in Abu Dhabi, although the growing sentiment for energy efficiency, partly driven by the recent Green Growth Strategy, has started the public debate about addressing this. Dubai has raised prices threefold in the past three years and now links a portion of the electricity tariff to international prices.

In November 2014 a new electricity and water tariff structure was implemented in Abu Dhabi, under which expatriates have seen a significant increase in utility bills, while UAE nationals will for the first time have to pay a water tariff. Under the revised structure, 'low-use' expatriates will have to pay AED 5.95 water tariff per 1,000 litres

a day, increased from the current tariff of AED 2.2. Expatriates will also be subject to a rise of 40% of their electricity tariff, from 15 fils/kWh to 21 fils/kWh, provided that daily consumption is within the respective limits. Consumption beyond the respective limits will be subject to a cost reflective tariff. Emiratis will pay a water tariff for the first time, but at a much lower rate starting from Dh1.7 per 1,000 litres for residents of apartments consuming up to 700 litres. The electricity tariff for UAE nationals will be increased from 5 0fils/kWh to 5.5fils/kWh, but only in respect of consumption in excess of 30kWh for residents living in an apartment, or in excess of 400kWh for residents living in a villa. For petrol, the subsidy was removed from 1 August 2015 and now tied to international prices. As at Jan 2016 Super is AED 1.69/l and Special AED 1.58/l.

- **Emerging policies and regulations:** Abu Dhabi is still in the process of establishing the full set of regulatory frameworks to support power supply from renewable sources and grid connections.
- **Limited region-specific R&D and talent pool:** Multiple R&D groups were established in the past 3-5 years but results are yet to materialise. The localisation of capabilities and technologies is seen as a top priority by the UAE in common with many other Gulf governments.
- **Improving infrastructure readiness:** Abu Dhabi and Dubai utilities have started to consider and develop the required grid infrastructure and grid management abilities to support large-scale power supply from solar energy, or the grid capabilities to support more variability or demand side management.



## 6.3. Current Project Status

As stated above, both Abu Dhabi and Dubai have started planning and developing renewable energy projects. Some of the completed and upcoming key projects are listed below and can also be found in (Appendix 3).

### Key Renewable Energy Facts

Installed Capacity	185MW
Pipeline Capacity	270 MW
Targets	24% of total energy mix by 2021
Implied Capacity	810 MW MW by 2020

Source: EIU, REN21

### Current Renewable Energy Projects Status

Project	Technology	Status	Size	Location
Shuaa Energy 1 – Mohammad Bin Rashid Al Maktoum PV Solar Power Plant (IPP) – Phase 2	PV	Execution	200 MW	Dubai
Masdar – Noor 1	PV	Main Contract PQ	100 MW	Al Ain
CWM / TAQA – Waste-to-Energy Plant	Waste to Energy	Main Contract PQ	1-2 MW	Abu Dhabi
Utico FZ – Ras Al Khaimah	PV	Main Contract PQ	40 MW	Ras Al-Khaimah
Bee'ah – Waste-to-Energy Facility	Waste to Energy	Execution	TBC	Sharjah
Bee'ah – Solar Energy Plant	PV	Main Contract PQ	TBC	Sharjah
Masdar – Sir Bani Yas Island	Wind	Main Contract Bid	30 MW	Abu Dhabi
DEWA – Mohammad Bin Rashid Al Maktoum Solar Power Plant (Phase 1)	PV	Complete	13 MW	Dubai
Masdar / Abengoa / Total – Shams I	CSP	Complete	100 MW	Abu Dhabi
Dubai Municipality – Al-Warsan Waste-to-Energy Plant	Waste to Energy	Main Contract PQ	TBC	Dubai
Rooftop	PV	Execution	1 MW	Dubai
Masdar/ADFECE	PV	Complete	10 MW	Abu Dhabi
SunPower Masdar City	PV	Complete	1 MW	Abu Dhabi
DEWA – Mohammad Bin Rashid Al Maktoum Solar Power Plant (Phase 3)	PV	Main Contract PQ	800 MW	Dubai

Source: MEED

## 6.4. Regulatory Policies

### Abu Dhabi

The 100 MW Noor I Solar PV plant and the 30 MW Sir Bani Yas wind farm (under construction) have been procured on an EPC model. At the time of writing, TAQA, the Abu Dhabi national energy company, is awaiting final approval from the Abu Dhabi government to build one of the largest waste-to-energy facilities in the world, aiming to generate 100MW by 2017.

The recent development of the Shams I 100MW solar power plant which was procured on the basis of ADWEA's independent power project model, is the first such facility in the Gulf region to have been procured on an IPP basis.

Roof top solar generation is also on the agenda and a regulatory framework is being established alongside the running of a pilot scheme. The pilot scheme included schools, the Abu Dhabi Judiciary and Al Ain Zoo. 28 further licences To facilitate the anticipated growth in the roof top sector, two distribution companies have been established, the Abu Dhabi Distribution are currently under review at the time of writing; these are mostly from schools within the scope of the Abu Dhabi Education Council.



To facilitate the anticipated growth in the roof top sector, two distribution companies have been established, the Abu Dhabi Distribution Company (ADDC) and Al Ain Distribution Company (AADC).

This progress is an integral part of the measured approach taken by Abu Dhabi in creating a sustainable roof top solar market that is to be capable of feeding excess generation back into the grid. Residential generation is also on the agenda and wiring regulations were published in March 2014 allowing private property owners to utilise solar generation. The framework also includes a Self-Regulating Licence and inspection program for use by self-generators.

### Dubai

In December 2014 Dubai issued Resolution No (46) of 2014 (the "Resolution") regulating the linkage of solar power generating units to Dubai's electricity grid. The scheme is based on net metering rather than a feed in tariff scheme. It is expected that the Resolution will be the basis for a stable legal framework which will enable much greater deployment of solar PV across the Emirate.

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This Resolution sets the legislative framework regulating the process of linkage of solar power generating units to Dubai's electricity grid, with the aim of allowing residents and business to generate solar power on their rooftops and feed any excess energy back to the grid, subject to certain conditions. Residents and business owners who have installed solar energy panels to power their buildings can now feed the excess power generated back into the power grid. In contrast to what many industry players anticipated, there is no feed-in tariff (FIT) or similar incentive, and the whole scheme operates on a net metering basis, whereby the consumer offsets imports from the grid with exports from the PV installation. DEWA has confirmed that under the scheme there is no time limit to the period during which excess generation can be banked.

There is also no requirement under the scheme for the consumer to be the owner of the PV system. Any solar equipment that will be used for these systems will first need to pass DEWA's certification process to ensure that the highest international standards. DEWA has a published list of companies qualified to act as consultants or contractors for the rooftop programme. DEWA has issued a number of guidelines and publications to guide consumers in relation to the rooftop program. This includes the DEWA

Standards for Distributed Renewable Resources Generators Connected to the Distribution Network, DEWA Connection Guidelines for Distributed Renewable Resources Generators Connected to the Distribution Network, DEWA Inspection & Testing Requirements for Distributed Renewable Resources Generators Connected to the Distribution Network, DEWA Safety Documents for Distributed Renewable Resources Generators Connected to the Distribution Network, DEWA Connection Agreement and Conditions. For further information, please see <https://www.dewa.gov.ae/smartinitiatives/firstinitiative/publications/default.aspx>

DEWA has already completed Phase One of the Sheikh Mohammed Bin Rashid Solar Park program through the construction of a 13 MW ground-mounted PV system in March 2013, procured under an EPC model. DEWA announced that subsequent development will be under an IPP model, and has recently successfully awarded Phase Two of the Solar Park, a 200MW solar plant to a consortium of ACWA Power and TSK under an IPP model. The procurement was very successful for DEWA, securing one of the lowest tariffs to date for a PV plant of this size of 5.98 US cents/kWh. Phase 3 is now being procured, which is a 800MW solar PV project and tender documents were issued in December 2015.

## 6.5. Governing Laws

A number of contracts will have to be entered into by the developer with various parties in order to develop a renewable energy project in the UAE. Below we set out the likely counterparty to each of the key contracts based on current regulatory framework:

Contract	Counterparties	Governing Law
Musataha (Lease)	Landlord (ADWEA/DEWA)	UAE
PPA	ADWEC/DEWA	UAE
Shareholders Agreement	TAQA/Masdar or another ADWEA controlled entity in Abu Dhabi/ DEWA in Dubai	UAE
EPC contract	Third party contractor	Negotiable
O&M contract	Third party contractor	Negotiable
Finance documents	Banks/finance provider	Negotiable

Finance documents are usually governed by English law if finance is obtained from outside the UAE, since it need not be obtained from local banks. The UAE allows both Islamic and non-Islamic financing.



## Employment Law Overview

Federal Law No. 8 of 1980 Regulating Labour Relations, as amended (“Labour Law”) governs all employment relations in the UAE, other than the employment arrangements in the Dubai International Financial Centre (DIFC), Abu Dhabi Global Market (ADGM) and the Government. If the employing entity is based in one of the Free Zones then additional laws and regulations will apply to the employment relationship. The Labour Law covers all UAE employees, including foreign nationals. The Labour Law is administered and enforced by the Ministry of Labour. It issues regular ministerial decisions and administrative circulars for the execution of Labour Law and which are supplementary to it. The Free Zones have their own authority, which administers and enforces that free zone’s employment regulations and the UAE Labour Law.

Emiratisation is the concept of increasing the number of UAE nationals employed in the workforce and granting those UAE nationals additional protections. As Emirati employees receive special protection under the law. There are also



UAE labour law is governed at a federal level, and has mandatory application on any individual working within the UAE (outside of the Dubai International Finance Centre).

restrictions regarding the termination of employment for UAE nationals.

In the UAE employment is linked to immigration. All foreign employees working in the UAE are required to secure a residency visa and work permit through their employers in order to work and live in the UAE. To obtain their residency visa and work permit, employees must enter into a standard form employment contract which must be registered with the Ministry of Labour/relevant Free Zone authority.

There is currently no applicable minimum wage in the UAE. However, there is increasing regulation with regard to promoting the employment of UAE nationals within the private sector and within specific sectors. In order for a UAE national to be counted towards the employing entity’s quota, the UAE national must be paid a minimum salary in accordance with the Ministry of Labour guidance from time to time.

## Dispute resolutions/ considerations

Disputes in the UAE are most commonly resolved by litigation or arbitration, with arbitration generally being preferred by foreign investors.

Local court proceedings are conducted in Arabic and parties must be represented by a UAE advocate or in limited circumstances, a specially licensed advocate. Whilst the complexity of a claim will determine the time taken to achieve a resolution, the process is generally regarded as being fairly cumbersome and slow in delivering a result.

Where court proceedings are the chosen form of dispute resolution, it is becoming increasingly common for construction contracts to be subject to the jurisdiction of the Courts of the DIFC. Proceedings are held in English and English common law principles are applied by internationally renowned commercial and civil law Judges. International investors are attracted to the standards and procedures employed and the greater clarity that is given regarding the process and Abu Dhabi has introduced a similar mechanism in the recently established Abu Dhabi Global Market (ADGM) free zone. Arbitration is regularly seen as a



The UAE has entered into 32 Bilateral Investment Treaties (BITs) that are currently in force.

primary dispute resolution mechanism in construction contracts and there are several institutions that can be used, including, the Dubai International Arbitration Centre (DIAC), Abu Dhabi Chamber of Commerce, DIFC -LCIA, and the International Chamber of Commerce (ICC).

Whilst adjudication and other forms of alternative dispute resolution are not as common as in other jurisdictions, there are signs that this concept is developing, with adjudication leading the way as a quick and effective alternative to arbitration or court proceedings.

## Investment treaty protection

The UAE has entered into 32 Bilateral Investment Treaties (BITs) that are currently in force. These include BITs with China, France, Germany, Korea, Russia, Switzerland, the United Kingdom, and the United States.

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In addition, the UAE is party to several regional investment agreements, including the Agreement on Promotion, Protection and Guarantee of Investments among Member States of the Organization of the Islamic Conference (the OIC Agreement) and the Unified Agreement for the Investment of Arab Capital in the Arab State (the UAIAC). These treaties also provide investors with substantive rights, and while the position is not as certain as in relation to BITs, Arbitral Tribunals have interpreted both the OIC Agreement and the UAIAC as containing a standing offer which allows investors to enforce those rights through investment treaty arbitration.

The UAE is not a party to the Energy Charter Treaty. Although it has Observer status in that organisation, that does not allow investors to invoke the investor-state arbitration provisions in the Treaty.

## **Dispute Settlement**

The UAE is a contracting party to the ICSID Convention and the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. UAE treaties generally provide investors with a range of dispute resolution options, and generally require a 'cooling off' period for negotiations between an initial notice of dispute and the commencement of arbitration. Many UAE treaties also require an investor to exhaust local remedies before commencing investment arbitration.

## **Substantive Protections**

UAE BITs generally share the common substantive protections as set out in Appendix 2. Some UAE BITs, including the Switzerland/UAE and United Kingdom/ UAE BITs, also contain an 'umbrella clause'. An umbrella clause requires the State to observe obligations entered into in respect of investments made by the investor. Such a clause can provide additional Treaty protections, especially in relation to breaches of contract committed by the State or State parties associated with an investor's investment.

## 6.6. Investment Considerations

### Setting up a business

Companies are primarily governed by UAE federal law, although additional local laws and regulations apply on an Emirate by Emirate basis. Free Zones have their own rules and regulations governing businesses within them. Power producing companies are often subject to specific regulations governing them. In relation to ownership, the Commercial Companies Law requires that at least 51% of a company, incorporated on the mainland, must be owned by Emirati nationals or wholly owned Emirati companies.

Whilst there has been much debate about relaxing this requirement it was not included in the new Companies Law. It has been suggested that it will now be addressed in the new Investment Law and that the 51% threshold will be relaxed for certain sectors of business. Under Abu Dhabi's IWPP program, joint ventures are formed between foreign private companies and the Abu Dhabi Government. Usually 60% of the project company is owned by the Government,



Free Zones have their own rules and regulations governing businesses within them.

although this is not a legal requirement. In Dubai it is proposed that DEWA owns at least 51% of project companies participating in generation, with the balance held by the private sector.

It is unlikely that a foreign entity would be permitted to set up a company which is not compliant with UAE federal law on foreign ownership except in the context of a government-sponsored project for which a bespoke structure is deemed necessary and a special exception made.



There are essentially four main options available for a foreign entity wishing to do business in the UAE as per the table below

Type of Business	Maximum Foreign Shareholding	Requirements
Branch of Foreign Company	100%	<ul style="list-style-type: none"> <li>• Which as an extension of the parent is foreign owned</li> <li>• Conduct of business is limited to that of the parent and subject to authorization from the relevant Emirate</li> <li>• Must appoint a UAE service agent</li> </ul>
Limited Liability Company	49%	<ul style="list-style-type: none"> <li>• Simplest form of corporate entity</li> <li>• Capital divided into shares</li> <li>• Two partners and at least one manager must be appointed</li> <li>• No minimum capital threshold is stipulated, but the agreed value will depend on the nature of the business</li> </ul>
Joint Stock Company	49%	<ul style="list-style-type: none"> <li>• May be public or private</li> <li>• Capital divided into shares and at least three shareholders required</li> <li>• Majority of the board and the Chairman must be UAE nationals</li> <li>• Minimum capital AED 2 million (private) and AED 10 Million (public)</li> </ul>
Free Zone Company	100%	<ul style="list-style-type: none"> <li>• Subject to the relevant legislation in the specific free zone, but the forms of entity available are generally similar to those mentioned above</li> <li>• Limited to activities specified for the particular free zone</li> </ul>

Tax structuring

Corporate income tax

Taxation is generally regulated at an Emirate level. Within Abu Dhabi and Dubai, in principle, all corporate entities carrying out trade or business are technically subject to tax. However, in practice, corporate income tax is only levied on the oil and gas and banking sectors. There are no general exemptions in the law; this is merely how the practice has evolved. As such, the risk is always present that tax laws

may be applied more generally, and it is understood that the 2030 Abu Dhabi Economic Vision provides for implementing taxes on the mainland with the possibility of VAT and corporation tax being introduced at low levels in the coming years.

Pursuant to existing legislation companies and branches carrying on a trade or business in either Emirate will be subject to income tax on such trade or business carried out in that Emirate as follows:

Taxable Income (AED)		Rate %
Lower boundary:	Not exceeding:	
0	1,000,000	0
1,000,000	2,000,000	10
2,000,000	3,000,000	20
3,000,000	4,000,000	30
4,000,000	5,000,000	40
5,000,000	-	55

Free zones offer a tax free environment for a period set out in their rules and regulations; frequently this is renewable periods of 50 years.

## Other taxes

Tax	Current position
Withholding tax	None
Personal income tax	None
Capital gains	Currently none, although for tax-paying entities capital gains are taxed as part of business profits
VAT	Currently none, however this is currently subject to discussions at a federal and GCC level
Social security	None imposed on expatriates, but UAE/GCC nationals contribute to retirement/pension funds
Property leasing	Annual municipal fees may apply which may be passed on to the tenant
Property sales	In Dubai both the buyer and seller must each pay a registration fee of 1% of the value of the land. Only UAE nationals have the right to buy in Abu Dhabi although a 99 year usufruct is possible
Customs Duty	Payable on the import of goods into mainland UAE, this is usually 5%

## Development assets - real estate, security

### Ability to develop own sites

In Dubai, foreigners or foreign owned companies can only own land in certain designated areas, such areas being predominantly residential. Dubai has an established system of title registration for completed properties and an interim property register where off-plan sale contracts must be registered. Almost all property in Dubai now has a registered title. Citizens of other GCC member states have land ownership rights akin to those of UAE nationals.



In Dubai, foreigners or foreign owned companies can only own land in certain designated areas, such areas being predominantly residential.

For corporate entities, 100% local or GCC ownership composition is required for ownership of land outside of those areas in which foreign ownership is permitted.

In Abu Dhabi, UAE nationals and companies wholly owned by UAE nationals may freely buy and sell residential, commercial, investment, and agricultural land and buildings. Foreigners (non-UAE nationals and non-GCC nationals) are given the right to own buildings in investment zones, but non-GCC nationals may not own the underlying plots of land. Non-GCC nationals are allowed to enjoy usufruct rights over the underlying land pursuant to agreements of up to 99 years and musataha rights pursuant to agreements of up to 50 years.

Real estate transactions in Abu Dhabi must be registered in the Land Register if they concern the creation, transfer or relinquishment of real or derivative property rights. Failure to register renders the disposition void. This provision also applies to lease agreements in excess of four years. In practice, few registrations have been made in Abu Dhabi either inside Foreigners (non – UAE nationals and



Foreigners (non-UAE nationals and non-GCC nationals) are given the right to own buildings in investment zones, but non-GCC nationals may not own the underlying plots of land.

non-GCC nationals) are given the right or outside of the investment areas, but recent amendments to property legislation (which are now similar in approach to those in Dubai) are likely to change this. This is the same for long leases including musataha and usufruct.

Securing land rights

In light of the above issues, a lease or musataha are likely to be the most common means of securing land. We set out below some key concepts which are commonly utilised to secure land rights or exclusivity prior to a formal land arrangement being entered into, and their potential application in the UAE:

Options for lease or sale	<ul style="list-style-type: none"><li>• Not commonly used</li><li>• Not a registrable interest</li></ul>
Break clause in lease	<ul style="list-style-type: none"><li>• Termination provision exercisable after pre-determined period and typically subject to provisions</li></ul>
Memorandum of understanding	<ul style="list-style-type: none"><li>• More common form of exclusivity agreement</li><li>• Deposit payable to landowner, with requirement to sell/ lease by a certain date</li><li>• Not a registrable interest</li><li>• No specific performance, only damages</li><li>• Only valid for a defined term</li></ul>
Irrevocable power of attorney	<ul style="list-style-type: none"><li>• Not valid in the UAE</li></ul>

Escrow agreement	<ul style="list-style-type: none"> <li>• Purchase/lease amount held in escrow</li> <li>• Release to landowner when conditions fulfilled</li> <li>• Release to developer if conditions are not fulfilled</li> </ul>
Checklist for entering into lease	<ul style="list-style-type: none"> <li>• That the person purporting to lease the land owns title</li> <li>• That the prospective tenant is properly set up (e.g. as a company) to lease the land</li> <li>• Whether the lease can be registered</li> <li>• The purported use of the land is permitted and appropriate approvals have been obtained</li> </ul>

## Security

In Dubai, the holder of a usufruct or lease of between 10 and 99 years may mortgage the interest in the property for the term of the usufruct or lease. Only registered mortgages are recognised and mortgages can only be granted in respect of property interests that are capable of registration.

In Abu Dhabi, mortgages are capable in relation to freehold, usufruct/musataha with terms of 10 years or more and leases with a term of 25 years or more. The mortgagee must be licensed by the Central Bank. A mortgage which is not registered shall be void.

## Payment structures

Transfer of title to land in the UAE will only take place once the entire price for the land is paid and a 'No Objection Certificate' from the developer is obtained. The latter is normally granted only once arrears (such as service charges) on the land are settled. Lease payments are typically made annually in advance although some landlords may be willing to accept multiple instalments.

## Permitting

### Abu Dhabi and Dubai

An application must be submitted, by the parent company for incorporation of a foreign branch, and the shareholders for a limited liability company, to the relevant authority in order to incorporate the entity at which point a trade licence will be issued.

The local authorities may require that the licensed entity take a certain legal form and/or have a minimum capital. It may therefore be a requirement of the authorities that the legal entity be a locally incorporated entity, rather than a branch office. This would need to be investigated further in specific cases.



At present the only entity with a licence to generate electricity by means of a solar plant is Masdar.

In the conventional power sector, joint venture companies have taken the form of private joint stock companies. It is this entity which must apply for a generation licence.

At present the only entity with a licence to generate electricity by means of a solar plant in Abu Dhabi is Masdar, which has a self-supply licence for the development of Masdar City and also exports excess capacity to the grid.



*Shams 1<sup>18</sup>*

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*18 Courtesy: Masdar*

## 6.7. Support Mechanisms

### The IPP process

#### Abu Dhabi

Abu Dhabi has had a successful IWPP program for the procurement of conventional plants in place for a number of years. In 1998, ADWEA was established with the authority (amongst other matters) to engage with the private sector for the production of power and water in the Emirate. Its subsidiaries include ADWEC, which is responsible for the purchase and sale of water and electricity and acts as the government off taker for IWPPs, and TRANSCO which transmits water and electricity from ADWEC to distribution companies. Since the IWPP program commenced in Abu Dhabi, nine transactions have been successfully completed with a cumulative power capacity creation of around 14GW.

Abu Dhabi follows a "single buyer model", i.e.:

- (a) (The off taker assumes the demand risk in the market; the project company undertakes to provide 100% of the generating capacity and energy produced to the off taker under a long-term PPA



Since the IWPP program commenced in Abu Dhabi, nine transactions have been successfully completed with a cumulative power capacity creation of around **14GW**.

- (b) The off taker and the project company's revenue streams are not directly linked to customer bill payments or subsidies
- (c) Lenders look to the credit worthiness of the off taker (as a single entity).

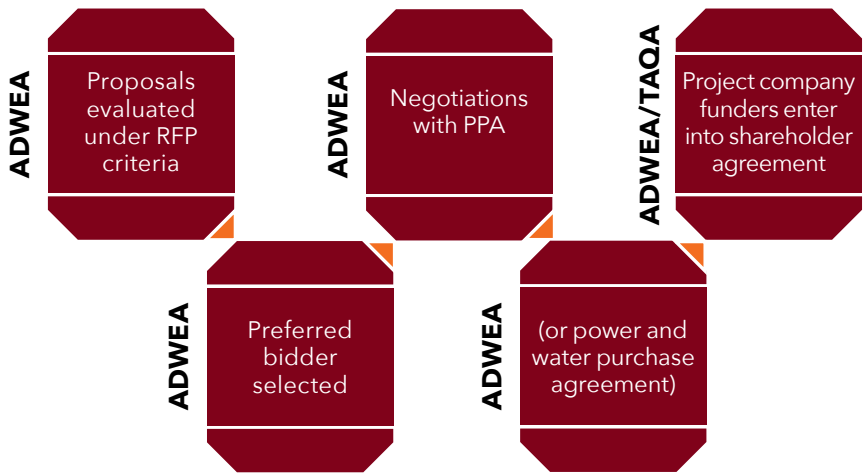
The sector is unbundled into functional entities which are regulated by an independent regulator in Abu Dhabi, the ADRSB. All these entities remain under Government control at this time. ADWEC, a regulated entity, has the responsibility for developing forecasts of demand and also planning for capacities that are required for meeting the demand.

The selection of the developer, typically as a consortium, is undertaken by ADWEA.

ADWEA releases an RFP to the market which contains the relevant draft project agreements in addition to functional specifications and instructions to bidders.

The selection process is designed to be a two stage process:

STAGE 1:	Qualification	<ul style="list-style-type: none"><li>• Fulfillment of minimum financial and capability criteria</li></ul>
STAGE 2:	Technical Financial	<ul style="list-style-type: none"><li>• Compliant solutions to RFP requirement</li><li>• Operation and maintenance plans</li><li>• Cost basis of certain operating profiles</li><li>• Finance plan with commitment letters from lenders</li></ul>



The project company must also secure a licence to operate from the ADRSB and maintain this during the tenure of the PPA or power and water purchase agreement. It is therefore a regulated entity throughout its operation.

The successful procurement of the Shams 1 project through the conventional IWPP model lends itself to be repeated for other large scale renewable energy projects in Abu Dhabi.



## Dubai

Dubai has established the DSCE to provide direction to the energy sector, which has representation from various stakeholders involved in the energy sector. The DSCE has pledged funding to renewable energy development alongside public-private partnerships.

DEWA is responsible for the supply of electricity within Dubai and hence would be the off taker in this Emirate. DEWA is based on an integrated utility model with ownership of generation, transmission and distribution assets. As with Abu Dhabi, an electricity and water sector regulator, the DRSB, has also been established and is responsible for the development of an effective, independent and transparent regulatory regime within the Emirate.

Until 2014, the Emirate of Dubai had procured its power and water plants on a traditional basis (eg EPC) although in 2011, DEWA was given the authority to engage with the private sector for the development of IWPPs through joint ventures. Dubai commenced an IWPP program in 2010 with the 1500 MW Hassayan IPP; however, due to a negation of the need for additional capacity, this project was deferred by DEWA although the model is intended to be utilised in the future.



IPPs are expected to play an increasing role in Dubai and will be licensed by the DRSB.

IPPs are expected to play an increasing role in Dubai and will be licensed by the DRSB. They will also have to meet technical standards contained in the IWPP Code issued by the DRSB in 2012. Dubai's current energy strategy envisages clean coal and renewable electricity generation coming from IPPs and the approach followed is similar to that in Abu Dhabi. DEWA commenced tenders in 2014 for two projects on an IPP basis, the Hassyan clean coal project and a 200MW Solar PV IPP. Contract awards have since been made and a tender commenced for an 800MW solar PV IPP.

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# Appendix 1:

## Green sukuk to finance low-carbon and climate resilient infrastructure in the Middle East

Prepared by the Climate Bonds  
Initiative for Eversheds Lawyers  
December 2015



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*1 For a full overview of assets classified as climate-aligned, see the Climate Bonds Initiative Taxonomy - available from <http://www.climatebonds.net/standards/taxonomy2>*

## 1.1 Introduction

The growing sukuk market is well suited to channel capital to fund renewable energy and other climate mitigation and adaptation projects.

Sukuk are tradeable Islamic finance instruments, consistent with the principles of Shari'ah. Sukuk represent an ownership in underlying assets or earnings from those assets. Fixed-income sukuk with no risk sharing are similar to conventional bonds and account for the largest share of the sukuk markets, but there are also types of sukuk that have equity-type risk-sharing structures.

### Green sukuk are a subset of sukuk that fund green assets or projects

Green assets and projects can include solar and wind parks, energy efficient buildings, rail and other low-carbon transport projects, climate-resilient water projects and more.<sup>1</sup> The potential for a rapidly growing market for green sukuk is increasingly recognised in the markets, as green sukuk tap into two of the fastest growing segments of the financial markets; the sukuk market and the green bond market.

Green bonds are bonds where the proceeds are earmarked for green projects. This is how green sukuk would be structured as well. The green bonds market has shown that this "use of proceeds" structure can work well but that robust and trusted guidelines for issuance and standards of what is green are needed. Green sukuk can benefit from the progress the green bond market is making in this area.

## 1.2 Benefits of sukuk as a financial instrument for green investment

### Green credentials arise from the assets financed, not the issuing entity

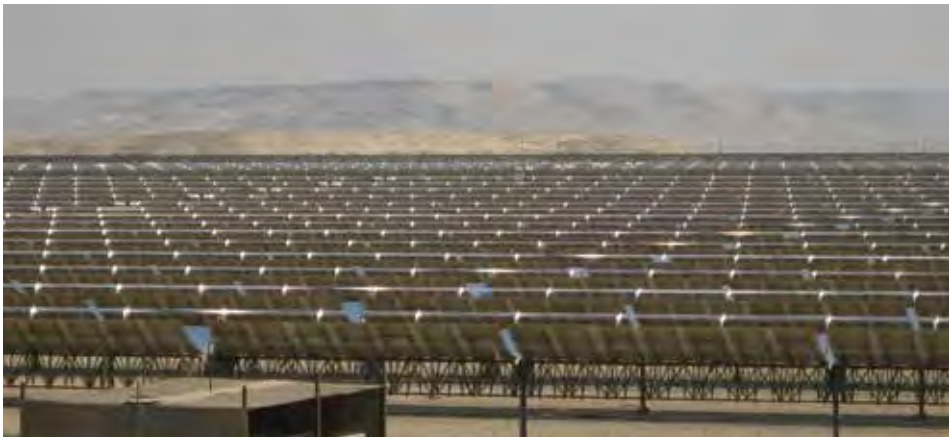
This means any sukuk issuer that has a pool of green assets to finance can issue green sukuk, regardless of the green credentials of the overall issuing entity. This broadens the pool of potential issuers, enabling market scale and a faster transition to a low-carbon economy. For example, an oil company could issue a green sukuk with funds allocated to solar investment, provided robust management of proceeds were put in place to ensure funds are allocated only to the company's green projects.



From an issuer perspective, green Sukuk allows entities seeking funding to access a different set of investors, both those focused on sustainable investing and those focused on Islamic finance.

### Green sukuk would have comparable risk-return to non-green sukuk

From an investor perspective, green sukuk could have the same risk-return characteristics of other sukuk investments, as the credit ratings of the



61 Kuwait Finance House

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originator typically determine sukuk ratings. The investor is not directly exposed to the green project risk. This characteristic, with the issuer rather than the investor absorbing the green investment risk, has been a key factor to the rapid growth of the green bond market.

### **Green sukuk could access a broader investor base**

Green sukuk benefit from tapping into two distinct investor bases. First, it can allow Islamic investors to more easily address Shari'ah concern for environmental protection in their investment choices. Secondly, green sukuk also has the potential to attract non-Islamic investors who otherwise would not have invested in sukuk but invest due to the green credentials.<sup>2</sup>

The pool of investors looking to address environmental concerns in their investment decisions now accounts for a large share of the market. For example, in September 2014, a coalition

of investors representing USD24 trillion of assets under management – coordinated by the Global Investor Council on Climate Change, the PRI and the UNEP Finance Initiative – made a statement saying they are ready to invest in climate. The coalition called on governments to support increased investment in climate solutions.<sup>3</sup>

### **Marketing of green credentials to stakeholders**

Another benefit from issuers of green sukuk is marketing of their green credentials to investors and other stakeholders. In the green bond market, this is cited as one of the main benefits by issuers.

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<sup>2</sup> Vizcaino (2014): *Islamic finance seeks to go green with environment-based products*. Reuters. September 2014.

<sup>3</sup> Climate Bonds Initiative and UNEP Inquiry (2015): *Scaling green bond markets*. December 2015.

## 1.3 Global trends signals significant potential for green sukuk

### The sukuk market has grown rapidly the last 15 years

The issuance of sukuk the last decades has risen steeply, with annual global issuance increasing from just over US\$1bn in 2001 to over US\$137bn in 2012. Since then, annual issuance has decreased slightly, but still remained at over US\$120bn in 2014.<sup>4</sup> This growth in the sukuk market has increased the potential for green sukuk to be issued as well.

### Sukuk is a proven instrument for financing non-green infrastructure in the Middle East

Sukuk has long been used to finance a variety of conventional, non-green infrastructure projects in the Middle East. Globally, more than US\$65bn of sukuk were issued between 2001 and 2012 to finance infrastructure projects. Countries in the Middle East accounted for a significant share of this infrastructure sukuk, with UAE accounting for 11.4% of the global total, and Saudi Arabia 10.3%.<sup>5</sup>

The projects financed in UAE and Saudi Arabia included power and utilities.

Regional power sector projects tend to have stable and predictable cash flows, a return-profile typically coveted by sukuk investors. Stable and predictable cash flows can increasingly also be offered by green infrastructure projects, as the technologies and businesses in this space are maturing. There are many green infrastructure projects in the Middle East that could be financed by green sukuk, for example projects proposed under the clean energy strategies by Abu Dhabi's and Dubai's governments in the UAE.<sup>6</sup>

### The green bond market proves there is strong investor demand for green

The rapid growth in the green bond market has shown in practice that the capital markets provide a promising channel to finance green investments. USD36bn of labelled green bonds was issued in 2014, up from \$11bn in 2013. Per December 2015, more than USD40bn of green bonds had been issued in 2015.<sup>7</sup>

Labelled green bonds are defined as bonds with proceeds used for green projects and labelled accordingly by the issuer. The vast majority of these green

projects are focused on climate change mitigation or adaptation, but there is a small share of the market, which also funds green, non-climate projects, such as public green spaces. Per June 2015, the largest share of labelled green bonds has been issued for renewable energy, low-carbon buildings and industry and transport.<sup>8</sup>

### Market players are increasingly seeing the potential for green sukuk

The potential for green sukuk was discussed at the Global Islamic Finance Forum in both 2014 and 2015. In 2015, the Forum dedicated a session exclusively to Islamic Finance for Green Technologies, and the Prime Minister of Malaysia discussed the concept of green sukuk explicitly in his address to the Forum.<sup>9</sup>

In Malaysia, there have been several developments signalling strong interest in developing a green sukuk market. Developments in Malaysia can influence developments of green sukuk in the Middle East, as Malaysia is the largest market for sukuk globally. In 2014, Malaysia's Securities Commission announced guidelines for the issuance of socially responsible sukuk.<sup>10</sup> While socially responsible sukuk also includes social, non-environmental projects, it shows that sukuk investments are increasingly incorporating criteria beyond traditional Shari'ah compliance.

RAM ratings, a Malaysian ratings agency, has announced that they see "great potential" in green sukuk, and one of the Malaysian banks has also stated that the country's Islamic finance sector is ready to enter the green finance market.<sup>11,12</sup>

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4 Alvi, I.A. (2015): *Global Sukuk Market Trends & Findings from IIFM Sukuk Report 4th Edition* citing International Islamic Financial Market Sukuk Database

5 Maierbugger (2013): *Sukuk bridge the investment gap in infrastructure*. Gulf News. Available from: <http://gulfnews.com/gn-focus/islamic-finance/sukuk-bridge-the-investment-gap-in-infrastructure-1.1160489>

6 Samir and Moghul (2013): *A 'greener' sukuk? Islamic Finance*, November 2013

7 Climate Bonds Initiative data

8 *ibid.*

9 Climate Bonds Initiative (2015) *Green Sukuk: Hot Topic at the World Islamic Economic Forum-Malaysia*

10 Securities Commission Malaysia (2014): *SC Introduces Sustainable and Responsible Investment Sukuk framework*. Press release, August 2014.

11 RAM ratings (2014): *RAM sees great potential in green sukuk*. Press release, September 2014.

12 Mamood (2014): *Malaysia's Islamic finance ready to go green*. September 2014.

Development banks are other market players that are recognising the potential of green sukuk. Support from development banks was instrumental to kick-starting the green bond market back in 2007/2008, and they can also play a role in kick-starting a green sukuk market.

The World Bank, a pioneer in the issuance of green bonds, is increasingly considering the use of green sukuk specifically to finance green infrastructure investments in the Middle East. In 2014, the World Bank entered a partnership with Dubai's Supreme Council of Energy to develop a funding strategy for Dubai's green investment programme, and specifically mentioned green sukuk as a potential instrument to raise finance.<sup>13</sup>

### Demonstration deals in the market: social responsible sukuk issued and sukuk for renewable energy in the pipeline

The first labelled green sukuk has yet to be issued, however, there have been other of relevant deals in the global sukuk market.

In December 2014, the International Finance Facility for Immunization (IFFIm) issued the first socially responsible sukuk, a US\$500m, 3-year sukuk with proceeds for vaccination programs. The World Bank Treasury managed the fundraising, as the treasury manager for IFFIm. A second sukuk for the same purpose was issued in September 2015, for US\$200m.<sup>14</sup>

2015 saw a socially responsible sukuk issued in Malaysia. The funds from the deal were allocated to education rather than environmental projects.<sup>15</sup>

While not green, these successful deals indicate a step towards sukuk with non-financial criteria going beyond simply Shari'ah compliance, and set the scene for green sukuk to follow.

In 2015, SGI-Mitabu, a consortium of two Australian solar companies, revived their plans, first announced in 2012, to issue sukuk to finance the construction of a solar power plant in Indonesia. The deal was delayed due to planning issues for the solar project. The deal is planned for A\$150m (US\$117m) in the Malaysian sukuk market, however the deal has not yet closed.<sup>16</sup>

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13 World Bank (2014): *Dubai Supreme Council of Energy and World Bank Partner to Design a Funding Strategy for Dubai's Green Investment Program*. Press release, April 2014.

14 Bennett, M. (2015) *Vaccine Sukuks: Islamic securities deliver economic and social returns*. World Bank. Available from: <http://blogs.worldbank.org/arabvoices/vaccine-sukuks-islamic-securities-deliver-economic-and-social-returns>

15 Khouri, C. (2015): *Investors on the hook in first SRI sukuk from Malaysia*. Global Capital. Available from: <http://www.globalcapital.com/article/rvx3xg2yk9yg/investors-on-the-hook-in-first-sri-sukuk-from-malaysia>

16 Y-Sing, L. (2015): *Solar Sukuk Marks Australia's Debut Choosing Labuan Haven*. Bloomberg. Available from: <http://www.bloomberg.com/news/articles/2015-02-11/solar-sukuk-marks-australia-s-debut-in-malaysia-islamic-finance>



## 1.4 Suitability for different types of sukuk for different parts of the renewable energy supply chain

The renewable energy supply chain provides opportunities for different types of sukuk issuance to cover investment needs. An overview of the suitability of the different types of sukuk to finance renewable energy in the

Middle East is set out in the table below. The types of sukuk identified as suitable for renewable energy financing are discussed in further detail in the text.

**Table 1:** Types of sukuk in the renewable energy financing chain in the Middle East

Type of Sukuk	Suitability	Where in renewable energy supply chain
<b>Debt</b>		
Istisna	Yes <sup>17</sup>	Construction
Ijara	Yes: Most common sukuk in the Middle East <sup>18</sup>	Operations
Murabaha	No: Shari'ah compliance in secondary markets debated, not widely used in the Middle East	N/A
Salam	No: Short-term tenor, used for liquidity management. <sup>19</sup> Shari'ah compliance in secondary markets debated, not widely used in the Middle East.	N/A
<b>Equity-style (risk sharing, but no ownership)</b>		
Musharaka	Yes; Risk-sharing between issuers and investors, higher return opportunity for investors <sup>20</sup>	Construction or operations
Mudaraba	N/A	N/A
Wakala	N/A	N/A

<sup>17</sup> Eversheds (2013): *Developing renewable energy projects. A guide to achieving success in the Middle East*

<sup>18</sup> Thomson Reuters Zaywa (2014): *Sukuk perceptions and forecast study 2014*

<sup>19</sup> Islamic Banker (n.d.): *Sukuk al-Salam*. Available from: <http://www.islamicbanker.com/education/sukuk-al-salam>

<sup>20</sup> Zahid (2014): *Bridging Asia's infrastructure deficit with sukuk*. Islamic Finance and Ethics Society. Available from: <http://www.the-ifes.org/2014/09/01/bridging-asias-infrastructure-deficit-with-sukuk/>

### 1.4.1 Istisna (Islamic project bond)

Istisna only applies to assets which are not in existence and which need to be manufactured. With istisna, one party promises to deliver a product according to certain specifications, at an agreed time and at an agreed price. This can include any commodity or asset, such as buildings, factories, aircraft or vessels. It can therefore also be used for construction of renewable energy assets, such as solar and wind farms. Istisna can be used to finance construction or capital expenditure. It allows for financing to be paid in instalments before or after delivery of the asset as agreed between the parties.



The renewable energy supply chain provides opportunities for different types of Sukuk issuance to cover investment needs.

Istisna is widely tried and tested, so the documentation is fairly standard with general consensus among Shari'ah scholars and boards. However, intricacies can exist within the scope of the actual asset and its manufacture.

### 1.4.2 Ijara (lease-based sukuk)

Ijara is the most common sukuk structure in the Middle East, and can only be used with existing, real assets that are fixed, such as land or office buildings. This makes it applicable to finance renewable energy infrastructure in the operational phase, after construction is finished. The underlying green asset pool should consist of assets with a market value at least equal to the sukuk issue amount. Ijara works on a sale-and buy-back model where

an SPV is formed to purchase assets, for example a solar plant, from the sukuk issuer. Investors buy the green assets, and then lease them back to the issuer, with the lease payments providing the return to the investor.

Ijara has fairly standard documentation and general consensus among most Shari'ah scholars on the structure's compliance with Islamic law.

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### 1.4.3 Musharaka (Islamic joint venture)

Musharaka offers partnerships in tangible assets. The asset pool can be made up of existing assets, or new assets purchased with the sukuk proceeds that comply with the criteria set for the asset pool. The key difference from istisna and ijara is that the investor also takes a share in losses, on a capital participation basis. This moves it closer to conventional equity than bonds, although the investors do not have an ownership share in the issuing entity, only the assets, under any sukuk structure.

Green musharaka sukuk can therefore provide an opportunity for investors with higher risk-return preferences. The

risk exposure would vary depending on which stage of the renewable energy project is financed: Risk is higher in the construction phase, and relatively low in the operational phase. Profit sharing can be set on a pre-agreed ratio, which can differ from the loss-sharing ratio. An SPV is set up which leases its share of the assets to the obligor. Return to Sukuk holders is made through periodic rental payments.

Musharaka are tried and tested and were widely accepted in the Middle East.

## 1.5 Kick-starting green sukuk markets: standards, demonstration issuance, and further policy support

### Establishing standards for green sukuk – ‘what is green’

There is a need for a green sukuk market to have robust green credentials, as investors want to know that the green sukuk they invest in will have a genuine environmental impact. While there is a balance to find between stringency for the green impact of individual issuances and overall scale of the market, ensuring some level of environmental ambition in the sukuk issuances is necessary. Developing clear guidelines and standards for what is green, with a specific focus on climate, therefore establishes the foundation for a green sukuk market.

The green standards that are being developed for the green bond market can also be adapted to work for green sukuk issuance. To date, the Climate Bonds Standards and Certification scheme is the only tool in the market that provides science-based standards for what assets are defined as green.<sup>21</sup>

Implementing standards to ensure green credibility of assets in a green sukuk issuance can be easier than it has been in the green bond market, as it can build on the processes already established in the sukuk market to

ensure a Shari’ah compliant asset pool. Conventional sukuk issuance already has processes in place to ensure transparency with regards to use of proceeds being Shari’ah compliant. The process for ensuring that the assets financed with the sukuk comply with green criteria and Shari’ah can be similar, as both are cases of integrating non-financial criteria in the issuance process.

Standards to ensure Shari’ah compliance would be the same for green sukuk as normal sukuk issuance; although, it is worth noting that the Shari’ah standards can differ by region, as different scholars interpret Shari’ah differently. The interpretation in the Middle East is generally stricter than in Asia.

### Demonstration issuance to prove concept to market players

Strategic green sukuk issuance from trusted and well-known entities plays an important role in kick-starting the green sukuk market in its initial stages. Demonstration issuance can help engage investors and educate them about the asset class but with greater comfort, since the issuer would be a well-recognized entity.

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<sup>21</sup> *Climate Bonds Initiative (2014): Standards. Available from: <http://www.climatebonds.net/standards>*

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Public entities such as development bank, municipalities and sovereigns are well placed to provide initial demonstration issuance to the market. Demonstration issuance has been instrumental in growing the green bond market, where development banks and municipalities have been active in providing strategic issuance.

### **Further public sector support: demonstration investment, tax incentives and more**

Public sector action is vital to kick-start a green sukuk market. The need for public sector support is not specific to green; for any new financial market there is a central role for the government to create an enabling environment to support healthy and dynamic growth in initial stages of the market.

The most fundamental actions are market – building activities that have low fiscal impacts, and that have proven success in supporting new financial markets. This includes supporting the development of standards and providing demonstration issuance, as mentioned above, but also developing pipelines of green infrastructure projects suitable to be financed with green sukuk.<sup>22</sup>

Next, there are proven support tools that have been used to further support capital market growth, but their use for green sukuk will vary depending on the policy priorities and fiscal space in different countries. This includes strategic public investment in green sukuk, tax incentives and credit enhancement. The fundamental actions and proven market boosters are tools commonly used in a transition phase to jump-start general capital market development. The difference here is that they are being applied specifically to facilitate investment in green projects.<sup>23</sup>

### **Collaboration: Green Sukuk Working Group**

Cooperation among key institutions is a key component of developing a well-functioning green sukuk market. Financial sector players must cooperate with environmental experts to ensure green bond markets are robust from both an environmental and financial perspective. A Green Sukuk Working Group has been established, by The Clean Energy Business Council of the Middle East and North Africa, the Climate Bonds Initiative and the Gulf Bond and Sukuk Association, to channel market expertise to develop leading practices and promote the issuance of green sukuk.

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<sup>22</sup> *Climate Bonds Initiative and UNEP Inquiry (2015): Scaling up green bond markets for sustainable development – a strategic guide for the public sector. Available from: <http://www.climatebonds.net/resources/publications/scaling-green-bond-markets-sustainable-development>*

<sup>23</sup> *ibid.*

## Appendix 2:

# Renewable energy project financing: environmental and social considerations

The development of all solar and wind projects will have both environmental and social implications, with the scale and nature of such impacts dependent on a number of factors including, among others, plant size, location, nearest settlements and proximity to environmental designations.

This chapter discusses some of the key international environmental and social standards and principles. These requirements should be considered to enable successful delivery of a renewable energy project which will be acceptable to international lending institutions.

In order to deliver a project, work should be carried out in accordance with the requirements of the key standards and principles set out in the following sections.

## Equator principles

The Equator Principles (EP) consist of ten principles which relate to environmental and social assessment and management. In addition, they include reporting and monitoring requirements for Equator Principles Financial Institutions (EPFIs).

The EPs set a financial industry benchmark, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects.

There are currently 78 EPFIs in 34 different countries. These financial institutions have officially adopted the EP standards, and will therefore not provide finance to clients who do not, or are unable to, comply with the EPs.

Some of these lenders such as the European Bank for Reconstruction and Development (EBRD) or other international or local financial institutions may have additional standards to be adhered to.

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The EPs apply globally and to all industry sectors, including the solar and wind industries.

The ten EPs are as follows:

- .....  
EP1 – Review and Categorisation.  
.....
- .....  
EP2 – Environment and Social Assessment.  
.....
- .....  
EP3 – Applicable Environmental and Social Standards.  
.....
- .....  
EP4 – Environmental and Social Management System and Equator Principles Action Plan.  
.....
- .....  
EP5 – Stakeholder Engagement.  
.....
- .....  
EP6 – Grievance mechanism.  
.....
- .....  
EP7 – Independent Review.  
.....
- .....  
EP8 – Covenants.  
.....
- .....  
EP9 – Independent Monitoring and Reporting.  
.....
- .....  
EP10 – Reporting and Transparency.  
.....

## **IFC performance standards on social and environmental sustainability**

Equator Principal 3 states that countries not designated as High Income OECD countries should apply the social and environmental sustainability standards laid down by the International Finance Corporation (IFC).

These standards have been developed for the IFC's own investment projects but have set an example for private companies and financial institutions worldwide.

The IFC Performance Standards on Environmental and Social Sustainability relate to the following key topics:

- .....  
Performance Standard 1:  
Assessment and Management of  
Environmental and Social Risks and Impacts.  
.....
- Performance Standard 2:  
Labour and Working Conditions.  
.....
- Performance Standard 3:  
Resource Efficiency and Pollution Prevention  
.....
- Performance Standard 4:  
Community Health, Safety and Security.  
.....
- Performance Standard 5:  
Land Acquisition and Involuntary Resettlement.  
.....
- Performance Standard 6:  
Biodiversity Conservation and Sustainable  
Management of Living Natural Resources.  
.....
- Performance Standard 7: Indigenous Peoples.  
.....
- Performance Standard 8: Cultural Heritage.  
.....

Compliance with the IFC Performance Standards will not only facilitate a socially and environmentally sustainable project but will also facilitate the sourcing of finance for the project. In addition, a set of Guidance Notes, corresponding to the Performance Standards, was developed by IFC to offer helpful guidance on the requirements contained in the Performance Standards, including reference materials, and on good sustainability practices to improve project performance.

In addition to Equator Principal 1, which discusses impact assessment where there are multiple projects located within close vicinity, the cumulative nature of impacts must be considered for both wind and solar projects. Please refer to the IFC Good Practice Handbook on Cumulative Impacts Assessment for further information.



## World bank group environmental health and safety (EHS) guidelines

The World Bank Group EHS Guidelines are a set of technical reference documents containing general and industry specific examples of good international industry practice.

The General EHS Guidelines contain guidance relating to environmental, health and safety issues which are applicable across all industry sectors.

The industry sector EHS guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs and are designed to be used together with the General EHS Guidelines document.

Specific EHS Guidelines which are recommended for reference include the EHS Guideline for Wind Energy and the EHS Guideline on Electric Power, Transmission and Distribution.

## Local, national and international environmental and social legislation and regulations

As is commonly known, environmental and social legislation and regulations vary between countries and specific regions, however; the EP and IFC Performance Standards set the minimum acceptable standard for developments worldwide.

A large number of countries have national legislative requirements which are on a par with or higher than the EP / IFC standards and guidelines. In this instance, the more stringent national requirements should be reviewed and adhered to.

In countries where environmental and social legislation requirements are less demanding, a project seeking financing by the IFC / EPFI must be developed in accordance with these requirements but must also commit to comply with the EP / IFC standards.

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## Appendix 3: An Overview of Investment Treaty Protection

The purpose of investment treaties for States is to provide favourable conditions for inward investment and cross – border economic co-operation, and reciprocal protection of its nationals’ investment in other States.

In return, States provide investors with certain substantive rights and protections, and, importantly, generally give investors the right to enforce those rights through an investment treaty arbitration against the State – a key protection in itself.

Protection under one or more investment treaties can reduce the business risk associated with cross-border investments, and improve an investor’s position in any subsequent dispute connected with those investments.

However, in order to qualify for protection, an investor must show that it qualifies as an “investor” under the investment treaty, and that its interests in the host State qualify as an “investment” under the investment treaty in question. If these conditions are not met, the investor or their investment will not be protected.

Investment treaties generally confer the following substantive protections on qualifying investors and investments:

- **Protection from expropriation:** protection from governmental taking of the investment (which may be a direct seizure of property but also includes indirect measures which result in a substantial deprivation of an investor’s investment)).
- **Fair and equitable treatment:** obliges the State to provide fair and equitable treatment. A wide range of State conduct can potentially breach this standard: examples include denial of justice, lack of due process, denial of legitimate expectations, lack of stability, lack of transparency, coercion, lack of good faith, failure to comply with contractual obligations, revocation, refusal to issue or renew, or delaying in issuing or renewing an operating licence or permit, unilateral termination of an investment contract, disagreements over contractually fixed tariffs, refusal to negotiate contractual disputes, closure of investor’s business following a change in law, political statements against foreign investment/investors, discriminatory refusal to provide financial assistance,

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and miscarriage or denial of justice by domestic courts. This is a key and commonly invoked protection

- **Full protection and security:** obliges the State to protect an investor's property and provide a secure environment. This is generally invoked in relation to the physical protection of an investor's property and the exercise of the State's police powers (but can in some cases also extend to legal protection).

- **Most-favoured nation protection (MFN):** requires the State not to treat investors or their investments less favourably than the investors of any third State of their investments. This protection can entitle an investor to access favourable protections in other treaties even where these are unavailable in the treaty between the host State and the investor's home State. A related protection, national treatment, requires the State not to treat investors or their investments less favourably than the host State's own investors and their investments.

While all almost all investment treaties share the above common features, each investment treaty offers different degrees of investor protection, and imposes different requirements for an investor and its investment to qualify for protection. Some of these differences are noted within the State chapters of this guide.

If an investor wishes to access investment protections for a clean energy investment in the Middle East, it must therefore consider not only whether a treaty is in place between the host country and the investor's home State, but also consider the provisions of the potentially applicable treaty or treaties to evaluate whether its investment will be protected under one or more treaties, and if so, which protections are available.

Careful structuring of an investment can allow an investor to maximise its protection under one or more international investment protection instruments. For example, an investment can be routed through a company established in a third State that has entered into an investment treaty with the relevant host State.

## Appendix 4: Current Renewable Energy Projects as at January 2016

Country	Project Name	Technology	Status	Size	Location
<b>Egypt</b>	Kom Ombo PV	PV	Main Contract Bid	200 MW	Aswan
<b>Egypt</b>	Gabal El Zeit	Wind	Execution	220MW	Suez
<b>Egypt</b>	Gulf of Suez	Wind	Main Contract Bid	250 MW	Suez
<b>Egypt</b>	Gulf of Zayt	Wind	Execution	120MW	Red Sea
<b>Egypt</b>	Assiut Barrage & Hydropower Plant	Hydro	Execution	40 MW	Asyut
<b>Egypt</b>	Egypt Ministry of Electricity & Energy – Gabal El Zeit Wind Farm	Wind	Complete	200 MW	Red Sea
<b>Egypt</b>	Kureimat Hybrid Power Plant: Solar Island Package	PV	Complete	20 MW out of 140 MW	Cairo
<b>Egypt</b>	Zafarana	Wind	Complete	545MW	Suez
<b>Egypt</b>	Naga Hammadi Barrage	Hydro	Complete	64 MW	Naga Hammadi
<b>Egypt</b>	Power Plant in Benban	PV	Execution	100 MW	Benban
<b>Jordan</b>	Jordan Solar One	PV	Execution	20 MW	Mafrq
<b>Jordan</b>	Falcon Maan for Solar Energy	PV	Execution	21 MW	Maan
<b>Jordan</b>	Foursan Capital Partners/Shamsuna Power	PV	Execution	10 MW	Aqaba
<b>Jordan</b>	Adenium Energy – Zahart Al Salam	PV	Execution	10 MW	Maan

Country	Project Name	Technology	Status	Size	Location
<b>Jordan</b>	Adenium Energy – Al Ward Al Joury	PV	Execution	10 MW	Maan
<b>Jordan</b>	Adenium Energy – Al Zanbaq	PV	Execution	10 MW	Maan
<b>Jordan</b>	Adenium Energy Capital	PV	Execution	30 MW	Maan
<b>Jordan</b>	MEMR – Wadi Araba	Wind	Main Contract Bid	25-30 MW	Maan
<b>Jordan</b>	MEMR – Al Harir, Wadi Araba and Maan	Wind	Execution	300-400 MW	Maan
<b>Jordan</b>	Greenland Alternative Energy/ EJRE/Scatec JV	PV	Execution	10 MW	Maan
<b>Jordan</b>	EJRE / Scatec JV	PV	Execution	20 MW	Maan
<b>Jordan</b>	Scatec/Quest Energy Investment/Kingdom Electricity JV – Oryx	PV	Execution	10 MW	Amman
<b>Jordan</b>	MEMR – El-Quweira	PV	Main Contract Bid	75 MW	Maan
<b>Jordan</b>	MEMR – Maan	Wind	Execution	66 MW	Maan
<b>Jordan</b>	Jordan Wind Renewable Energy LLC – Tafila Wind Farm	Wind	Complete	117 MW	Tafilah
<b>Jordan</b>	SunEdison / MEMR – Maan Development Area	PV	Execution	20 MW	Maan

Country	Project Name	Technology	Status	Size	Location
<b>Jordan</b>	MEMR - Fujeij	Wind	Complete	70-90 MW	Amman
<b>Jordan</b>	Shams Maan Power Generation	PV	Execution	52.5 MW	Maan
<b>Jordan</b>	MEMR - Azraq Grid Connected PV Solar Plant	PV	Complete	2 MW	Zarqa
<b>Jordan</b>	First Investment Co for Clean Energy/ MEMR - Maan Devp Area	PV	Execution	23.8 MW	Maan
<b>Jordan</b>	Mustakbal Clean Tech - Ma'an	PV	Complete	1 MW	Maan
<b>Jordan</b>	Hofa	Wind	Complete	1 MW	Hofa
<b>Jordan</b>	Greater Amman Municipality - Solid Waste to Energy Facility	Waste to Energy	Main Contract Bid	TBD	Amman
<b>Jordan</b>	WAJ - As Samra Biosolids Monofill Project	Waste to Energy	Main Contract PQ	TBD	Zarqa
<b>Jordan</b>	Kingdom Electricity Company - The Northern Badia Project	PV	Complete	10 MW	Badia
<b>Kuwait</b>	KOC - Umm Gudair	PV	Execution	10 MW	Umm Gudair
<b>Kuwait</b>	MEW / KISR - Shagaya Renewable Energy Complex	Solar	Execution	70 MW	Shagaya
<b>Kuwait</b>	MEW / KISR - Shagaya Renewable Energy Complex: Phase 1	PV	Execution	10 MW	Shagaya

Country	Project Name	Technology	Status	Size	Location
<b>Kuwait</b>	MEW / KISR – Shagaya Renewable Energy Complex: Phase 1	CSP	Execution	50 MW	Shagaya
<b>Kuwait</b>	MEW / KISR – Shagaya Renewable Energy Complex: Phase 1	Wind	Execution	10 MW	Shagaya
<b>Kuwait</b>	KAPP/Kuwait Municipality – Kabd Municipal Solid Waste Project	Waste to Energy	Main Contract Bid	TBD	Al-Ahmadi Governorate
<b>Kuwait</b>	Al Abdaliya power plant	PV	Approved	60 MW	Abdaliya
<b>Qatar</b>	KAHRAMAA – Solar Energy Power Plant	PV	Main Contract Bid	220 MW	Duhail
<b>Qatar</b>	KAHRAMAA – Solar Energy Power Plant	PV	Main Contract Bid	10 MW	Duhail
<b>Saudi Arabia</b>	SEC – Duba Integrated Solar Combined Cycle (ISCC) Power Plant Phase I	CSP	Execution	600 MW (CSP: 20-30 MW)	Duba
<b>Saudi Arabia</b>	Saudi Aramco – KAPSARC	PV	Complete	3.5 MW	Riyadh
<b>Saudi Arabia</b>	KAPSARC II	PV	Complete	1.8 MW	Riyadh
<b>Saudi Arabia</b>	SEC – Farasan Island Solar Project	PV	Complete	500 kW	Farasan Island
<b>Saudi Arabia</b>	KAUST	PV	Complete	2 MW	Thuwal
<b>Saudi Arabia</b>	North Park	PV	Complete	10 MW	Dhahran
<b>Saudi Arabia</b>	Tabuk KJC CPV	PV	Execution	1 MW	Tabuk

Country	Project Name	Technology	Status	Size	Location
<b>UAE</b>	Shuaa Energy 1 – Mohammad Bin Rashid Al Maktoum PV Solar Power Plant (IPP) – Phase 2	PV	Execution	100 MW	Dubai
<b>UAE</b>	Masdar – Noor 1	PV	Main Contract PQ	100 MW	Al Ain
<b>UAE</b>	CWM / TAQA – Waste-to-Energy Plant	Waste to Energy	Main Contract PQ	1-2 MW	Abu Dhabi
<b>UAE</b>	Utico FZ – Ras Al Khaimah	PV	Main Contract PQ	40 MW	Ras Al-Khaimah
<b>UAE</b>	Bee'ah – Waste-to-Energy Facility	Waste to Energy	Execution	TBD	Sharjah
<b>UAE</b>	Bee'ah – Solar Energy Plant	PV	Main Contract PQ	TBD	Sharjah
<b>UAE</b>	Masdar – Sir Bani Yas Island	Wind	Main Contract Bid	30 MW	Abu Dhabi
<b>UAE</b>	DEWA – Mohammad Bin Rashid Al Maktoum Solar Power Plant (Phase 1)	PV	Complete	13 MW	Dubai
<b>UAE</b>	Masdar / Abengoa / Total – Shams I	CSP	Complete	100 MW	Abu Dhabi
<b>UAE</b>	Dubai Municipality – Al-Warsan Waste-to-Energy Plant	Waste to Energy	Main Contract PQ	TBD	Dubai
<b>UAE</b>	Rooftop	PV	Execution	1 MW	Dubai
<b>UAE</b>	Masdar/ADFEC	PV	Complete	10 MW	Abu Dhabi
<b>UAE</b>	SunPower Masdar City	PV	Complete	1 MW	Abu Dhabi
<b>UAE</b>	DEWA – Mohammad Bin Rashid Al Maktoum Solar Power Plant (Phase 3)	PV	Main Contract PQ	800 MW	Dubai



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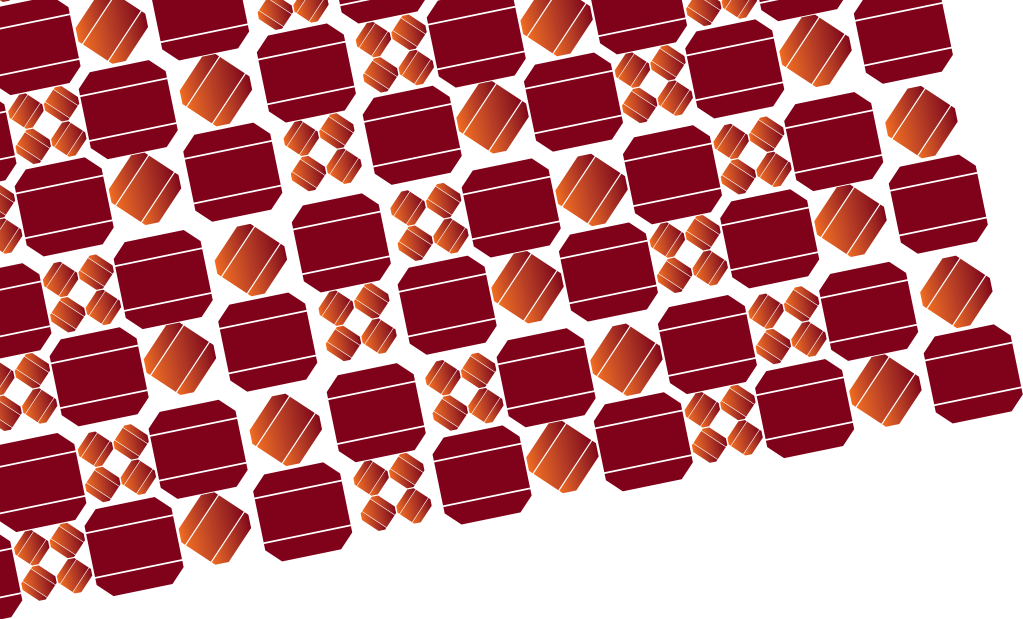


*Mohammed bin Rashid Al Maktoum Solar Park*

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Courtesy: DEWA





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