

Country Assessment Report

Country/Region Name- UAE:

UAE is situated in Western Asia on the Arabian Peninsula; bordered by Oman and Saudi Arabia. It has a population over 9.7 million and GDP worth \$421 billion, with a growth rate of 1.6%.

(World Bank Data 2018)

Economic structure and activity:

UAE is a mixed free-market economy, whose rapid growth in the mid to late 20th century was spurred by a significant oil and gas discovery. Declining reserves paired with a long-term sustainable strategy saw the UAE's economy diversify towards tourism, particularly in Dubai. The service sector now accounts for 52.47%, spearheaded by finance, international trade, air transport and tourism. Industry contributes 46.79% of GDP, recording unprecedented levels of growth amongst metal processing, furniture production, fertilisers, construction materials and aluminium production in recent years. The agricultural sector accounts for just 0.74% of GDP as the climate and desert landscape are unsuitable growing conditions. Nevertheless, fishing and date-growing remain large sectors.

(Statista 2018; Santander 2020)

Top private companies with RE commitments:

Etisilat (*telecommunications*)- the amount of base stations powered by renewable energy rose by 2.4% to 85 stations between 2017 and 2018. 140 base stations were powered by hybrid solutions in 2018, up from 123 in 2017.

Generation and demand: (e.g. type, MW, TWh)

Natural gas constitutes over 90% of power generation in the UAE. From 2008-2012, installed capacity rose by 37% with Dubai increasing capacity by 44.5 percent and Abu Dhabi by 43.6 per cent. In 2012, the total installed capacity reached 27,180 megawatts. In 2015, there were over 27 gigawatts (GW) of installed capacity to generate electricity across the seven emirates. The UAE is looking to increase its target for generating power from clean energy to 27 per cent by 2021.

(UAE Gov 2018)

Electrical Interconnection and import/export:

The UAE currently has electrical interconnection with Oman. The GCC (Gulf Cooperation Council) is planning a 400kV electrical transmission link between all member states: Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, and the UAE.

In 2016, the UAE imported 1,141,000 MWh of electricity and exported 506,000 MWh of electricity in 2016.

(IRENA 2013; Worldometers 2016)

Market Structure:

The UAE possesses one of the most advanced electricity sectors in the MENA region, with a distinct market structure and favorable regulatory and incentive policy for RE development. Each emirate has sovereignty over their own power sector and is charged with developing programs and strategies. For the purpose of clarity, this report will focus on Dubai, given it is currently the only UAE emirate I-RECs are issued in. Here, the market is governed by DEWA (Dubai Electricity and Water Authority) who are increasingly relying upon IPPs, such as the new Mohammed Bin Rashid Al Maktoum solar farm, which operates under the IPP model. Although DEWA allow for private sector participation, the state utility remain major equity shareholders. The private sector is keen to participate in the power sector due to the low risk associated with partnering with the state, in conjunction with the economic guarantees of PPAs.



Figure 1. Market structure of the UAE's power sector (UNDP and DCCE 2014).

(APICORP 2017)

Responsible Government Department: (include key contacts)

DEWA is the main government agency for managing power generation and water transmission and distribution. It is responsible for promoting sustainable development in the power industry and investing in alternative, cleaner energy sources.

Dubai Centre for Carbon Excellence is a government consultancy for sustainability, energy efficiency and other carbon related matters. It serves to advise on the design and development of greenhouse gas reduction measures.

(UAE Gov 2020)

Existing/Planned Energy Legislation: (is there a CPO)

The UAE Energy Plan 2050- introduced the targets to reduce carbon emissions by 70%, increase share of renewable energy to 50% of generation mix and improve energy efficiency by 40%.

(Siemens)

Environmental Legislation for RE:

Existing/Planned Certificate Systems: (purpose, extent)

I-REC is active, WGEO and the Abu Dhabi Department of Energy are the Accredited Issuers.

RE market potential:

Solar is the most critical renewable resource in the UAE and represents the biggest potential. Average solar irradiation is 6.5 kWh/m²/day, with over 350 sunny days annually. Dubai is in the process of building one of the largest solar farms globally set to produce 1,000MW, of which the first 200MW became operational in 2018.

The commercial prospects of wind are less promising but there is potential to develop in the northern Emirates and/or offshore along its Indian Ocean coastline in the emirate of Fujairah In Abu Dhabi, Masdar has also explored resources on Sir Bani Yas Island and identified potential for roughly 30 MW, though the project has not yet been greenlighted.

(IRENA 2015)

Market risks and challenges:

One of the main challenges for PV deployment is the dust particles/haze and humidity, collectively reducing the direct normal radiance (DNI). The soiling of panels also represents a challenge to the efficiency PV, although robots are being deployed to regularly clean them.

(IRENA 2015)

Extent of Engagement with Government: (brief summary of any contact already made with the national government regarding certification in general and I-REC)

Expected response from Government:

Current Environmental Reporting in Energy:

Any other Relevant Information:

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| Contributors | |
| Preparation Date | |

Code Manager Observation

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