

# Clean Energy in Oman

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## Overview

Oman's National Energy Strategy identified that the country's power demands require a greater mix of energy contributors and that at least 10% of the country's power requirements should be capable of being derived from renewable energy sources by 2025. It is expected that the majority of the renewable energy will be onshore wind and solar projects, with the state controlled Petroleum Development Oman focusing on ensuring that renewable energy infrastructure projects gain traction during 2018 and beyond. There are a number of reasons for driving forward with solar and wind projects from the Government's perspective—greater competition, reducing Oman's carbon footprint and economic diversification are key catalysts. From a socio-economic perspective, the importance of sustaining the demands of a growing, energy hungry population are unavoidable.

## Solar Power

Petroleum Development Oman (PDO), Oman's leading exploration and production company, has until very recently focused on the country's production of crude oil and supply of natural gas. PDO has made significant strides towards creating a sustainable renewable energy market through its support of a number of projects involving the installation of solar photo voltaic modules in existing concession areas. Energy from the photo voltaic modules is used to provide power for PDO's office buildings saving over 3.1 million cubic metres of gas annually. The cells provide enough electricity for approximately 1,000 homes. PDO is already using solar energy for street lighting and water heating in one of its employee housing developments and has recently completed the first block of the largest solar energy plant in the world (at full capacity) in southern Oman. The project involves using solar power (in place of natural gas) to create steam to use in thermal enhanced oil recovery.

In addition to issuing tenders for up to five 20 megawatt solar projects in Oman, PDO (soon to be renamed, Energy Development Oman) is proposing to work with Oman Power and Water Procurement Company on a solar project with an expected capacity of 500 megawatt.

## Wind Power

Oman's commitment to clean energy can be further demonstrated through the recent creation of a joint venture between the Rural Areas Electricity Company and UAE based Masdar. The joint venture awarded an EPC contract to an international consortium to build the first large scale wind farm in South Oman on a 1,900 hectare site. The wind farm is estimated to generate 50 megawatts to supply 16,000 homes, representing approximately 7% of the total installed power generation capacity in the local area. GE the consortium lead member, will supply thirteen 3.8 megawatt wind turbines with construction support being provided by TSK, another consortium member. It is expected that the success of this project will set the blueprint for other projects in Oman and across the GCC region and potentially lead to a higher contribution by wind power to the country's power requirements. The speed of growth in this sector in part depends on whether coastal regions can be made available to house wind power stations without

upsetting the natural aesthetic appeal of the landscape which might better be served to create income generating tourist infrastructure.

## **Legislative Framework and Regulator**

Legislation relating to clean energy is spread between health and safety rules and the rules relating to the electrical standards imposed on licence holders. The Authority for Electricity Regulation (“AER”) holds responsibility for ensuring the safe and secure development of the electricity and water sector and conducts regular audits to assess the policies, plans, processes and procedures of licence holders. A technical team conducts incident investigations into safety related incidents with the public prosecutor becoming involved if required.

AER is also charged with monitoring continuity of supply. This is achieved by ensuring the licencees comply with the electrical standards and related regulations.

The AER is also responsible for monitoring the efficiency of capital investments as part of general capital expenditure control. Technical reviews are undertaken at the beginning of a project and continue throughout its life to ensure technical and procurement efficiency is maintained.

The AER has also taken responsibility for monitoring abuse of market power by enforcing economic purchase conditions, approving price structures of intra-sector transactions and using retail price index controls. Consumers are at risk of escalation of electricity prices in a market where the market players are, at least currently, state owned entities with monopoly in the sector and the AER will monitor this area closely to ensure that there is no breach of Oman’s competition and consumer protection legislation.

## **Regulatory Framework for Electric Vehicles**

An area of interest for the growing electric vehicles (“EV”) market is the AER’s recent decision to introduce framework legislation in Oman to support the introduction of vehicles which are powered solely by electricity. The AER is currently undertaking a review of international best practice in relation to the regulatory framework including potential capital costs of developing public EV recharge stations, network and connection issues, safety issues, metering costs and modifications to the licensing regime.

Regulations are expected to be introduced towards the end of 2018. EVs are being adopted rapidly by other global markets and the Government of Oman is keen to ensure that infrastructure and regulations are in place to support users as the market for EVs expands. As part of the Global Electrical Vehicle Road Trip which was held in January 2018, the first charging stations were introduced in Oman’s two main commercial cities, Muscat and Sohar and additional stations are opening up across the country. The road trip involved electric vehicles conducting a 1,217km road trip starting in Abu Dhabi, stopping in Sohar, Muscat and ending in Dubai to showcase EV technology.

## **Clean Energy Opportunities in Oman**

It is clear that the clean energy market is ready for further growth in Oman over the coming 12-24 months. Through the successful implementation of the projects outlined in the paragraphs above, further tenders will be issued by Oman’s state owned entities and opportunities are likely to be created for existing providers of clean energy technology as well as financiers of large infrastructure projects.