

ENERGY SECTOR COOPERATION BETWEEN EGYPT & DENMARK, Annual report for 2019

Danish Authorities in International Cooperation



Project context

Egypt is the largest consumer of oil and gas on the African continent and with 90% of its energy supply based on fossil fuels, primarily natural gas. Egypt's total CO₂ emissions are about 220 million tons; and is heading towards a doubling until 2050; approx. half come from the energy sector.

Egypt has put in place a strategy to increase the use renewable energy, primarily wind and solar, to make up 42% of electricity generation in 2035, corresponding to 63 GW of renewable energy against the current 5 GW.

Egypt's ambitious green conversion goals require major changes in the planning and operation of the electricity system and the implementation of new regulations and policies. The challenge is to ensure sufficient flexibility in the electricity system, so that it constantly adapts to the variable electricity production from a gradually growing share of wind and solar energy. A flexible electrical system that can handle large quantities of renewable energy requires investments in a stronger transmission system and flexible power plants.

Historically, there has been close cooperation between Denmark and Egypt on the development of wind energy, which the new SSC program continues.

Key activities in year 2019

During the Inception project, the DEA and the sector Counsellor at the Embassy in Cairo, conducted a series of meetings and dialogues with the Ministry of Electricity & Renewable Energy (MERE), Egyptian Electricity Holding Company (EEHC), the Egyptian Electricity Transmission Company (EETC), the New and Renewable Energy Authority (NREA) and the Egyptian regulator of electricity sector (EgyptERA).

The dialogues have clarified that Denmark has knowledge and experience of developing the electricity system in a renewable energy friendly direction, which these Egyptian institutions can use in the management and regulation of the electricity sector of the future in Egypt.

In 2019, a study trip to Denmark for the Egyptian partners was undertaken. The purpose of the study tour was to give the Egyptian institutions a first-hand knowledge of the Danish energy model, to meet important Danish private and public players in the electricity sector and learn Danish experiences with the transition to a green and sustainable energy system.

A joint Egyptian-Danish three-year program has been formulated with three elements: 1. Long-term model-based planning in the electricity sector 2. Danish experience in improving the electricity system's ability to handle variable renewable energy and 3. Assessment of wind resources and projects in Egypt. The project documents have been prepared and the new SSC program is expected to start on April 1, 2020, and is currently awaiting approval and signatures.

The cooperation agreement requires formal approval from the Egyptian president's office, and the agreement has therefore been in process in the Egyptian system since November 2019. The agreement is expected soon to be signed after which the program will start and a joint Egyptian-Danish Steering Group established.

Main achievements and lessons learned in 2019

The main achievements in 2019 have been the formulation of the new program. The posting of the sector counsellor at the embassy has been key in establishing close relations to the key actors in the Egyptian power sector that are responsible for the developing plans, policies and regulations to support the green transition of Egypt.

Further, the study tour to Denmark contributed to open the eyes for the new opportunities for also private investments in renewable energy in Egypt, which will further be explored during the coming three years.

Through Danish Fellowship Centre staff from Egyptian partners have already started training in power system modelling, and soon also integration in Copenhagen.

Status: Inception phase

Project period: Jan 2019 to Dec 2019

Partners: Ministry of Electricity and Renewable Energy, Egyptian Electricity Holding Company, Egyptian Electricity Transmission Company, New and Renewable Energy Authority, Egypt Electricity Regulator Agency

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