EGYPT'S RENEWABLES MARKET

# ACHIEVEMENTS AND PROSPECTS

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Egypt enjoys an abundance of renewable energy resources with high deployment potential, making Egypt a primary location for projects. These are mainly hydropower, wind, solar, and biomass. Egypt recognizes the importance of having a sustainable energy mix for addressing the increasing demand and diversification of electricity generation. The government, in collaboration with local, regional, and international institutions is making significant expansion in renewable energy production.

Egypt has promising areas with high wind speeds which are suitable for establishing large projects to generate electricity. Furthermore, it is one of the most appropriate regions for exploiting solar energy as it enjoys favourable solar radiation intensity. The Nile river is Egypt's most important hydropower resource with the Aswan High Dam, where a series of hydropower stations are located. In this regard, this report focuses on the development of Egypt's renewable energy market during 2021 and 2022.

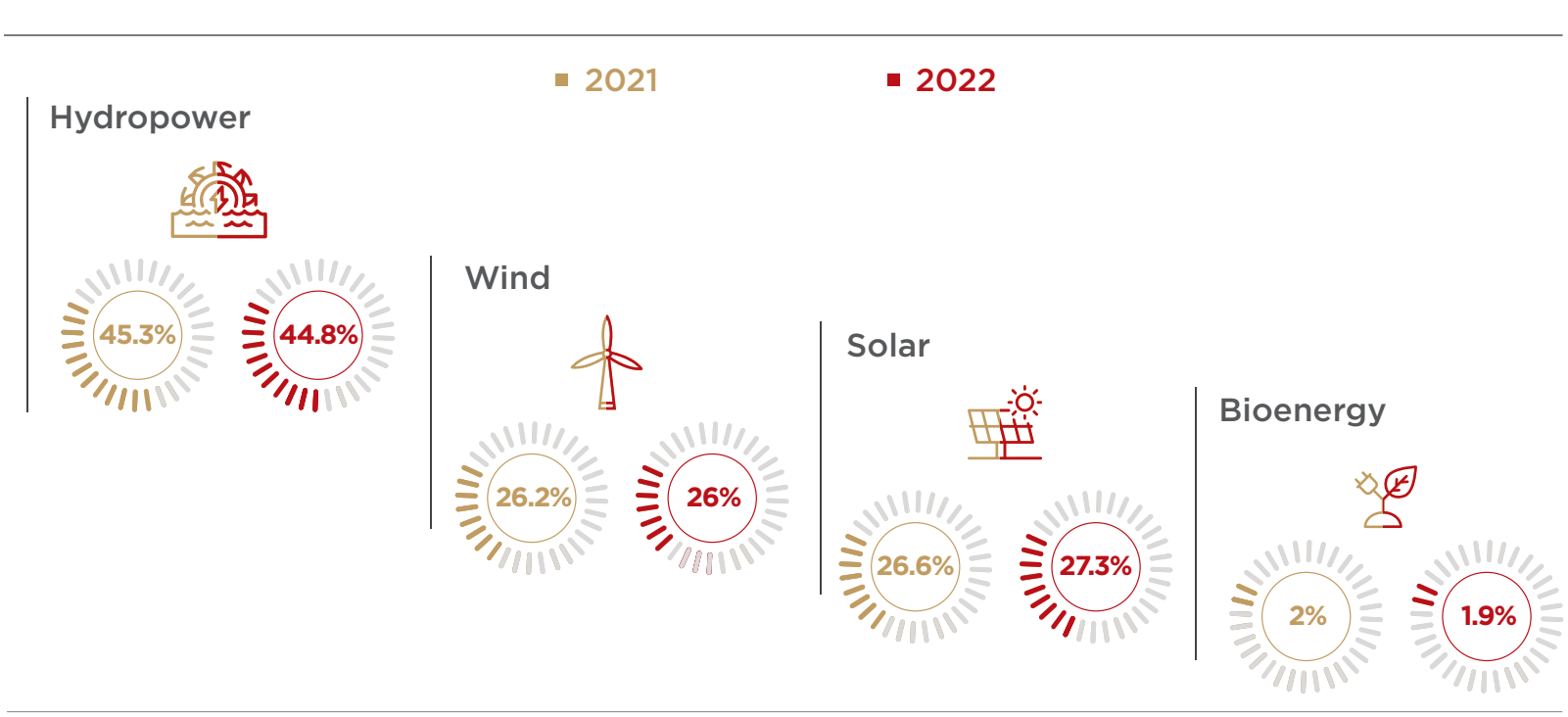
## Flashbacks

**Egypt is one of the first countries to use renewable energy as a vital source. The first wind farm in Egypt was established in Hurghada in 1993 with a total capacity of 5.2 MW. In the early 2000s, the New and Renewable Energy Authority (NREA) in collaboration with Denmark, German and Spanish and Japan established a series of large-scale wind farms. Since the early 1980s, solar photovoltaic (PV) systems have been applied to pumping, lighting, advertising, cold storage, and desalination, according to the International Renewable Energy Agency (IRENA).**

## RENEWABLE ENERGY MARKET

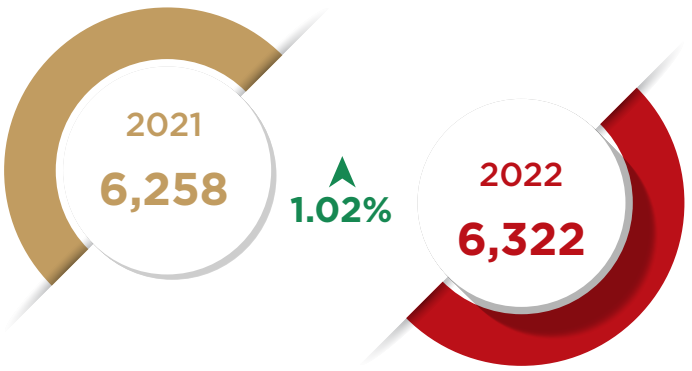
The renewable energy market in Egypt is mainly divided into hydropower, which has the largest share in total production, followed by solar, wind, and bioenergy respectively, according to IRENA 2022. Particularly, the solar energy shares in the renewable energy mix increased from 26.6% in 2021 to 27.3% in 2022 owing to the completed execution of mega projects including Kuraymat Solar Thermal, Zafarana PV, as well as other PV Roof-top Net Metering. Egypt is considered one of the distinguished countries in renewable energy in both Africa and the Middle East with a share of 10.75% and 22.15% respectively in 2022, according to IRENA.

### Renewable Energy Mix Development

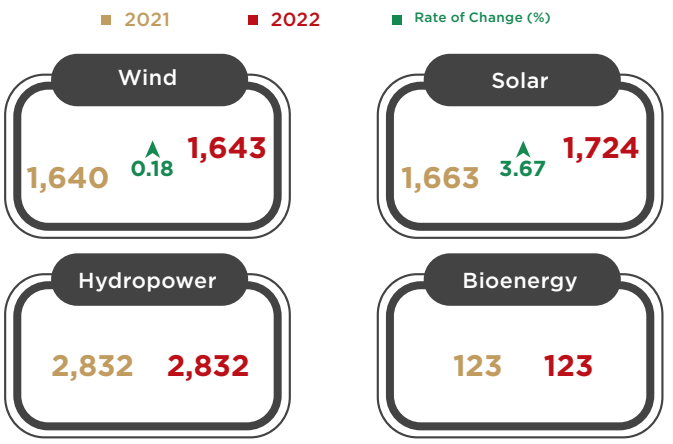


## Annual Capacity

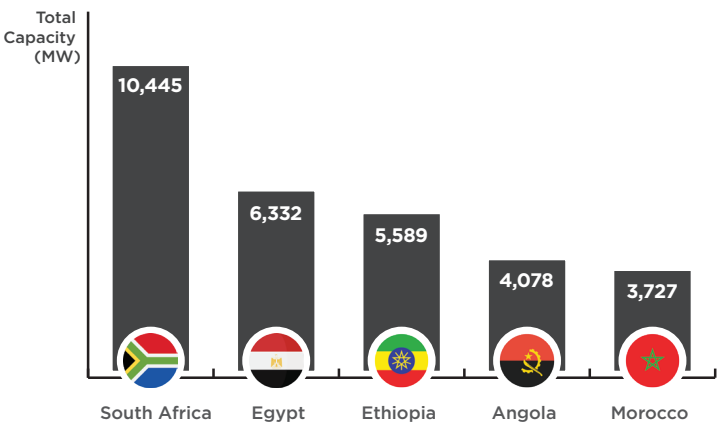
### TOTAL CAPACITY



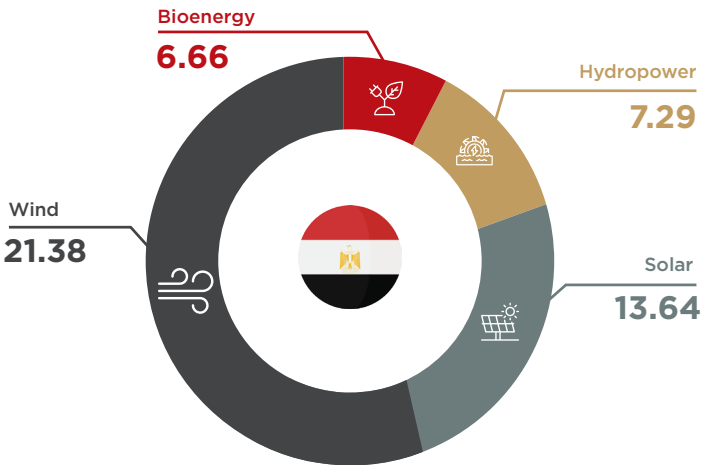

### CAPACITY BY SOURCE (MW)




### TOP 5 COUNTRIES IN AFRICA IN 2022




### EGYPT SHARE FROM AFRICA'S CAPAITY (%)




# RENEWABLES PROJECTS

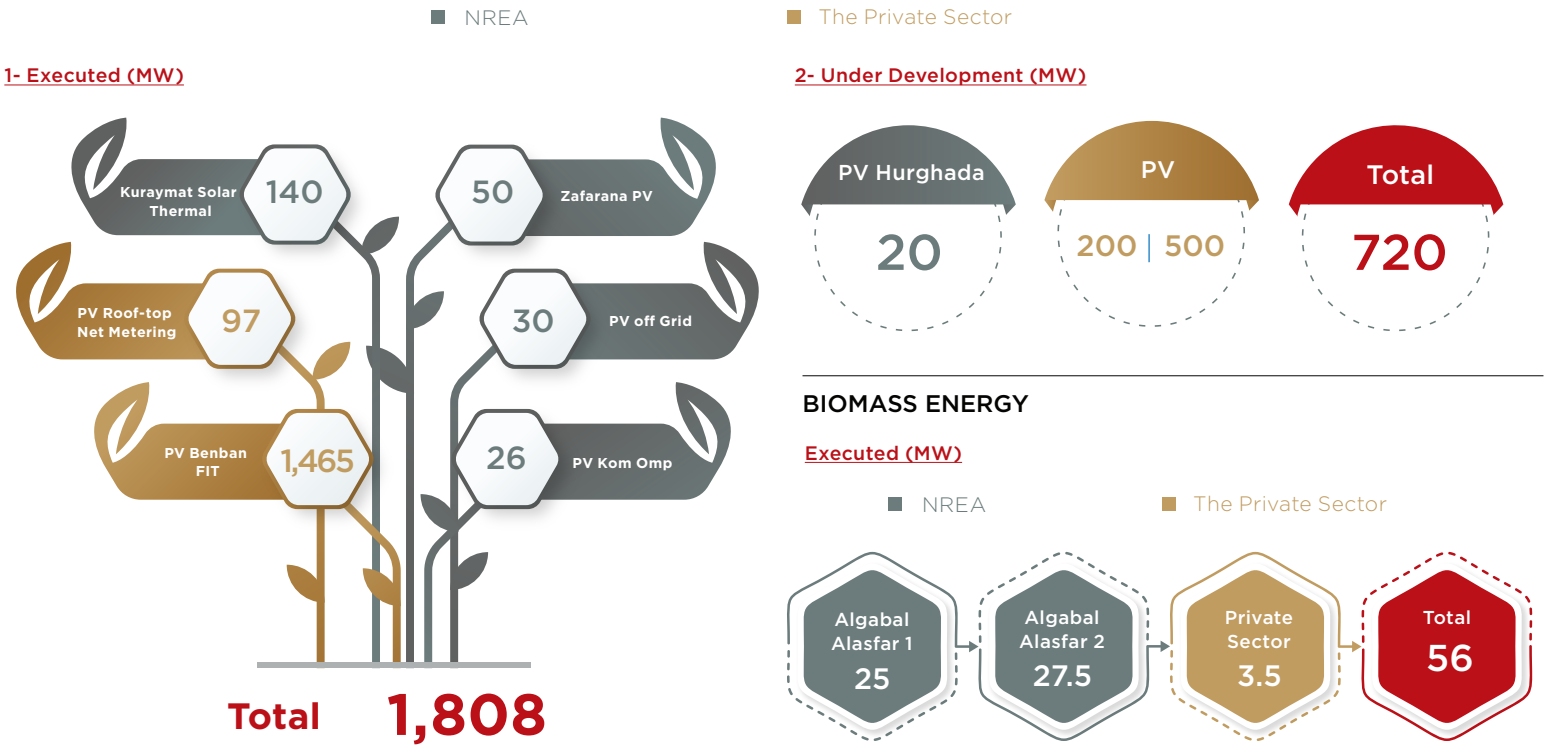
## Projects per Sector in 2022

Egypt seeks to become a global renewable energy hub by working on several projects to add to its existing solar, wind, and biomass production. The NREA and the private sector worked on implementing a group of projects in 2022, in continuation of their efforts in 2021. Reflecting the state's resolve to turn its vision into reality, NREA is now working on implementing wind energy projects that will add 252 MW to Egypt's renewable energy capacity.

This is in addition to the wind and solar projects under implementation that the private sector is responsible for, which will supply 3,500 MW of renewable energy. Thanks to the fact that Egypt is a solar belt area, the executed solar energy projects constitute the largest capacity share around 52% of the total capacity, while biomass energy represents the smallest share, according to the NREA.

### WIND ENERGY

## SOLAR ENERGY




## BIOMASS ENERGY




## Projects' Financial Indicators per Sector

### NREA FINANCIAL RESULTS IN 2022

**1.9**
Total Investment (EGP billion)

**148.6**
Net Profits (EGP million)

### PRIVATE SECTOR'S TOTAL INVESTMENT

2022
> $2.8 billion

## REGIONAL AND INTERNATIONAL COOPERATION

Egypt has been always exploring ways of cooperation on the regional as well as international levels. Therefore, Egypt embarked on collaborating with leading organizations to enhance its progress in the energy transition including Japan International Cooperation Agency (JICA), the European Union (EU), the United Nations Development Programme (UNDP), World Bank (WB), EBRD, and Agence Française de Développement (ADF). Furthermore, Egypt's cooperation widened to include International Renewable Energy Agency (IRENA), the League of Arab States (LAS), the Egyptian-German Joint Committee on Renewable Energies and Energy Efficiency (JCEE), Kreditanstalt für Wiederaufbau (KFW), the Regional Center for Renewable Energy and Energy Efficiency (RCREEE), as well as the Nile Basin. These collaborations mark a significant milestone towards promoting the renewable energy sector in Egypt.

Egypt is blessed with a strong potential in renewable energy resources. Therefore, the state efforts to best exploit the abundant renewable resources within the framework of Egypt's Sustainable Energy Strategy 2035 to accelerate the energy transition, and modernize the energy sector. Moreover, Egypt devotes attention to developing and upgrading its energy strategy in 2035 to be up to the developments of the era in order for renewable energy resources to reach 42% of the total production of electric energy by 2035.

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