

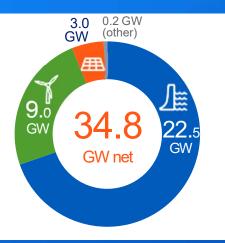




## GenX / Gen Y – PV Solar plants evolution

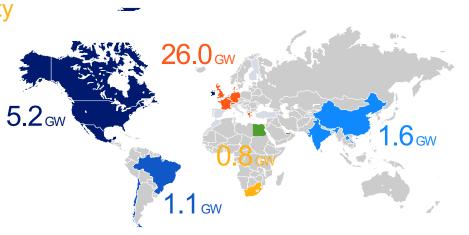
#### EDF: global leader for low-carbon electricity generation

A diversified mix of renewables



1/4
of the Group's strength

Net installed capacity of renewables: 34.8 GW



#### No 1 FOR RENEWABLES IN FRANCE:





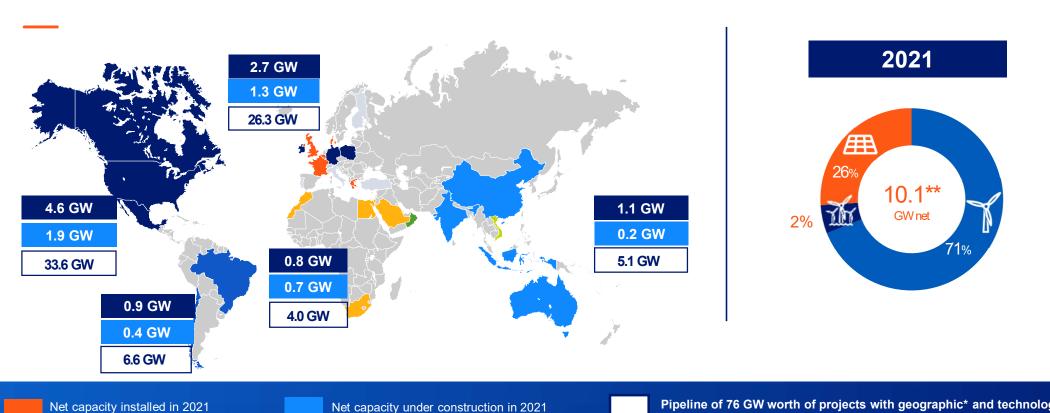
for renewables in the European Union



for renewables worldwide

#### Sustained growth worldwide

Diverse geographic\* and technological presence worldwide...



Between North America and Europe (historic markets), and emerging markets (South America, Africa, Middle east and Asia)

Pipeline of 76 GW worth of projects with geographic\* and technological rebalance between wind and solar

\*15.6 GW total gross capacity

#### Integrated expertise

#### Multi-technology expert



Onshore **Wind** 



Offshore Wind



(photovoltaic, agri-PV, floating PV)



Storage (batteries, etc.)



**Microgrids** 

#### Key integrated expertise

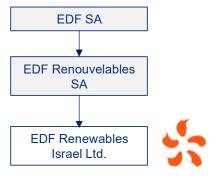








#### **EDF Renewables - Israel**



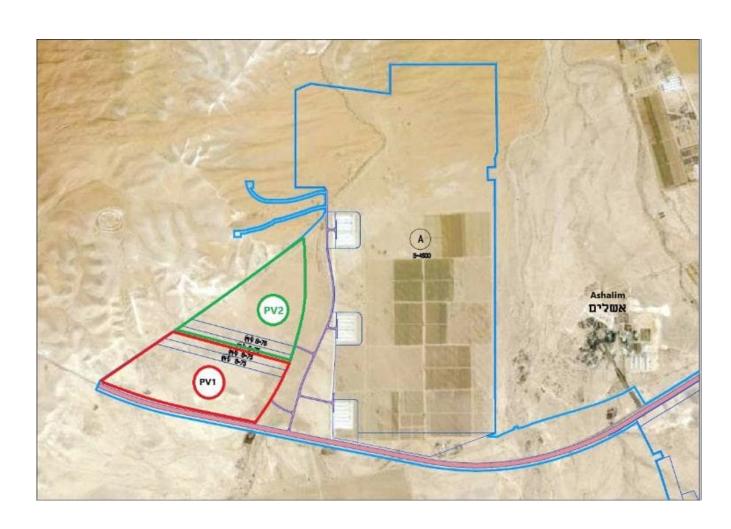


- ❖ EDF Renewables Israel has been active since 2009 with offices in Herzliya. It is the leading company in the solar field in the Israeli market.
- The company has proven capabilities and extensive experience in the complete value chain of solar projects: Initiation, development, planning, engineering, procurement, construction, operation and management.
- ❖ Traditionally, the company remains a shareholder throughout the life of the project, manages and owns the projects even after their construction.





### Ashalim1 Ashalim2 Environment



#### **Quick Overview**

	ASH1	ASH2
Award	2012	2019
COD	2017	2023
FIT (at award)	53 NIS Cent / kWh	8.7 NIS Cent / kWh
Tracker	Multi Row (STI)	Single Row (NXT)
Inverter	Central - 900 kW	Central - 4600 kW
Modules	Monofacial - 345 Wp	Bifacial - 525 Wp
Grid connection	HV	MV
Installed Power	35 MWp	42 MWp
Fenced area	570 dunams	596 dunams
Grid Services	<ul><li>Active Power</li><li>Reactive Power</li></ul>	<ul> <li>Active Power</li> <li>Reactive Power</li> <li>Load Frequency Control</li> <li>Q@Night</li> <li>Reserve Power</li> </ul>

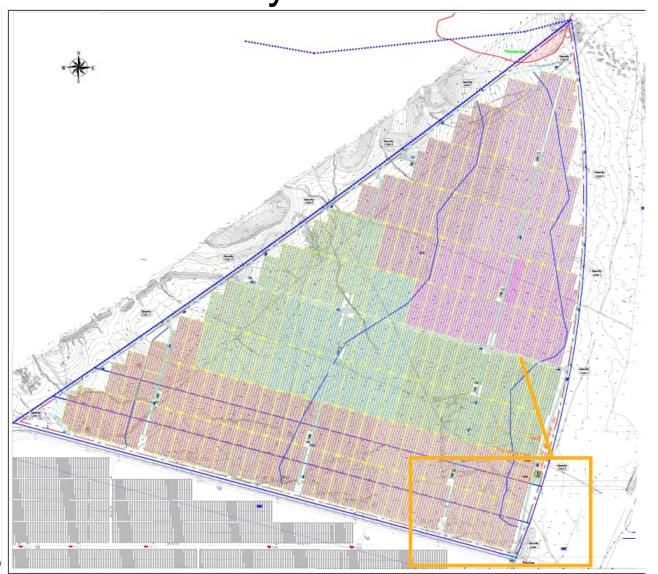


#### **Economics**

- Much simpler Tender technical process for ASH2 – price and installed power instead of detailed technical info – including specific equipment for ASH1
- Dramatic plunge of the Feed-In tariff, matching the decrease in PV modules prices between 2012 and 2019. Tendency was reversed in recent years
- Build time Reduced from 6 years to less than 4 years, despite Corona

	ASH1	ASH2
Award	Early 2012	Late 2019
COD	Late 2017	Mid 2023
FIT (at award)	53 NIS Cent / kWh	8.7 NIS Cent / kWh

#### Annexes – Layout





#### Technology

- Tracker: 1 motor per row vs. Multi-row
  - Multi-row could not have fitted the plot shape as efficiently
  - Simplifies the maintenance as it allow moving freely between rows
- Inverters: Whether Central or String, inverter power has greatly increased to reduce CAPEX
- Modules:
  - Increase in power
  - Bifacial is now the mainstream

	ASH1	ASH2
Tracker	Multi Row (STI)	Single Row (NXT)
Inverter	Central - 900 kW	Central - 4600 kW
Modules	Monofacial - 345 Wp	Bifacial - 525 Wp

#### Technology



#### "Physical"

- Ashalim1: Developer needs to build a substation. In Ashalim2, the existing substation for the area is used: Better utilization of resources
- Almost the same surface, but the increase in PV modules power and layout design allow for more production. Change of plant Azimuth

	ASH1	ASH2
Grid connection	HV	MV
Installed Power	35 MWp	42 MWp
Fenced area	570 dunams	596 dunams

#### Grid Services

Many more ancillary services as the System Operator learns the capabilities of PV plants.

Note: No agreement yet on the ancillary services compensation

# ASH1 Active Power Reactive Power Reactive Power Load Frequency Control Q@Night Reserve Power

