



EDF RENEWABLES

A GLOBAL LEADER IN
RENEWABLE ENERGY

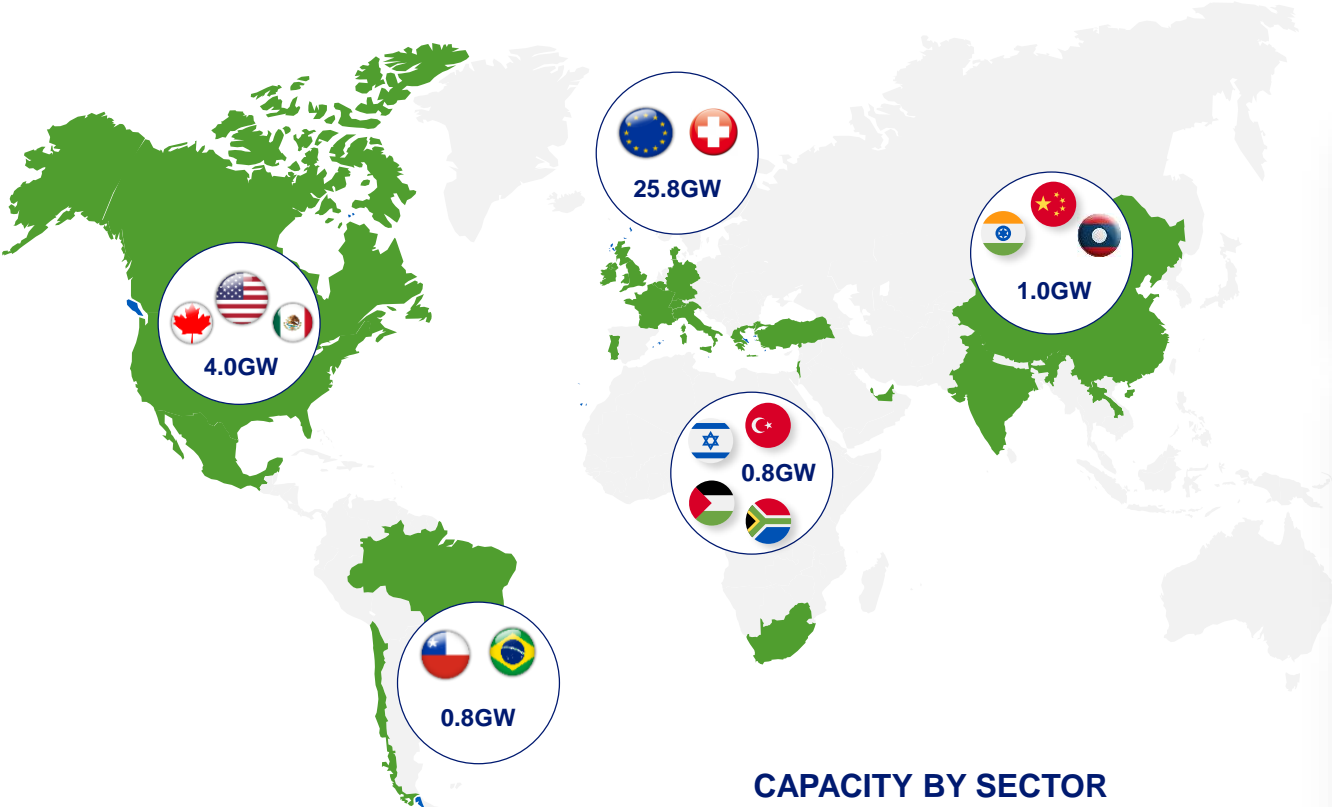
BRUNO BENSASSON

EDF Group Senior Executive VP, in charge of
Renewable Energies and CEO of EDF
Renewables

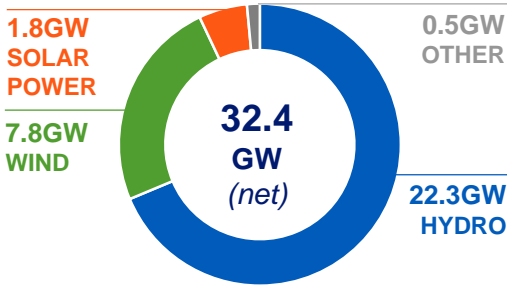


EDF A GLOBAL LEADER IN RENEWABLE ENERGY, #1 IN EUROPE

NET INSTALLED CAPACITY: 32.4GW ⁽¹⁾



CAPACITY BY SECTOR



A DIVERSIFIED MIX WITH 32GW IN OPERATION

- 22.3GW of hydropower
- 9.6GW of wind and solar power

HYDROPOWER

- **Leading European producer** from hydropower
- More than **400 production sites** worldwide

A GLOBAL LEADER IN WIND AND SOLAR ENERGY

- **0.6GW gross** commissioned in S1 2020
- **5.9GW** currently under construction (3.2GW in onshore wind power, 1.6GW in offshore wind power, and 1.1GW in solar power)

⁽¹⁾ Installed capacity shown as net, corresponding to the consolidated data based on EDF's participation in Group companies, including investments in affiliates and joint ventures

FOCUS ON 2020 HALF-YEAR RESULTS: CONTINUED GROWTH IN RENEWABLES

EDF RENEWABLES

In €m	H1 2019	H1 2020	Δ%	Δ% Org. ⁽¹⁾
EBITDA	405	418	+3.2	+14.1
<i>o/w generation EBITDA</i>	<i>472</i>	<i>471</i>	-0.3	+6.9

- **Covid-19 effects non material**
- **Electricity output:** 7.9TWh, up +0.6TWh or 7.4% in organic. Impacts of additional wind farms and solar plants capacities commissioned at end-2019 (USA, Canada, France, India) and good wind and solar conditions
- **DSSA** activity sustained growth in H1 2020 mainly in the United States



**EDF RENEWABLES RECORD LEVEL
OF PROJECTS UNDER CONSTRUCTION TO 5.9GW GROSS**
AT END-JUNE 2020 (3.1GW WIND, 1.6GW OFFSHORE WIND, 1.1GW SOLAR
AND 0.1GW STORAGE)

(1) Organic change at comparable scope, standards and exchange rates. The gap with non-organic growth reflects intra-group assets transfers.

GROUP RENEWABLES ⁽²⁾

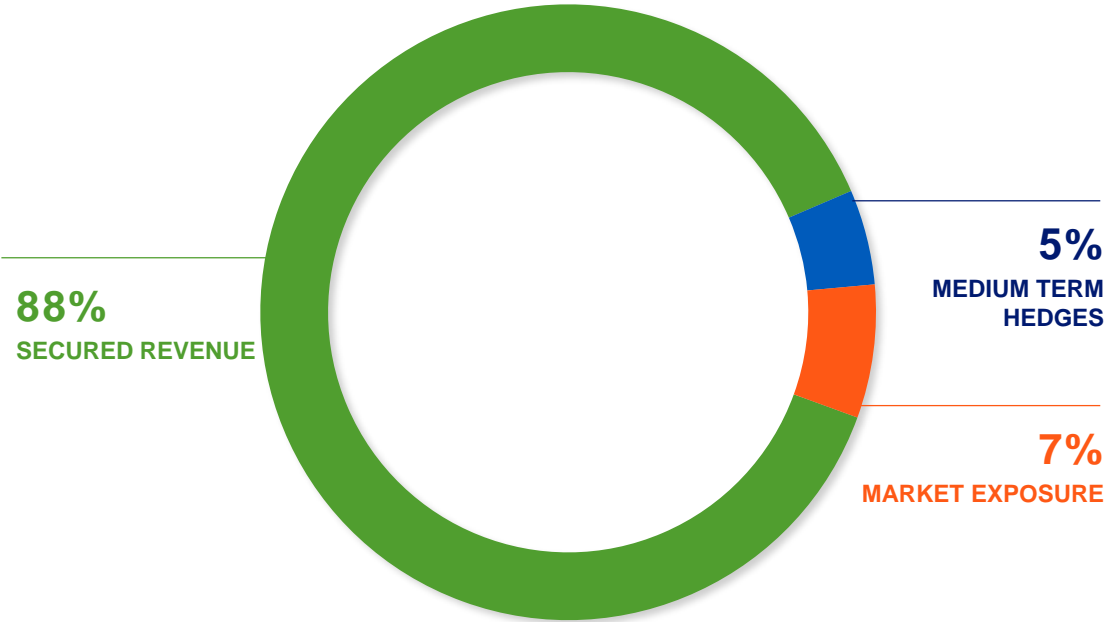
In €m	H1 2019	H1 2020	Δ%	Δ% Org. ⁽¹⁾
EBITDA ⁽²⁾	881	859	-3	-2
Net investments	(489)	(783)	+60	

- **EBITDA**
 - Negative effect of power spot prices (-€18/MWh)⁽²⁾ in Hydro France despite good hydro generation (+29.4% vs. H1 2019)
 - Full-year effect of wind and solar farms commissioned and better wind and solar conditions
- **Net investments**
 - Strong investments in the United States at EDF Renewables and lower subsidies in H1 2020

(2) For the optimised renewable electricity generation activities within a larger portfolio of generation assets, in particular relating to France's hydropower fleet, sales and EBITDA are estimated, by convention, as the valuation of the output generated at market prices (or the purchase obligation tariff), without taking into account hedging effects, and taking into account the valuation of the capacity, if applicable.

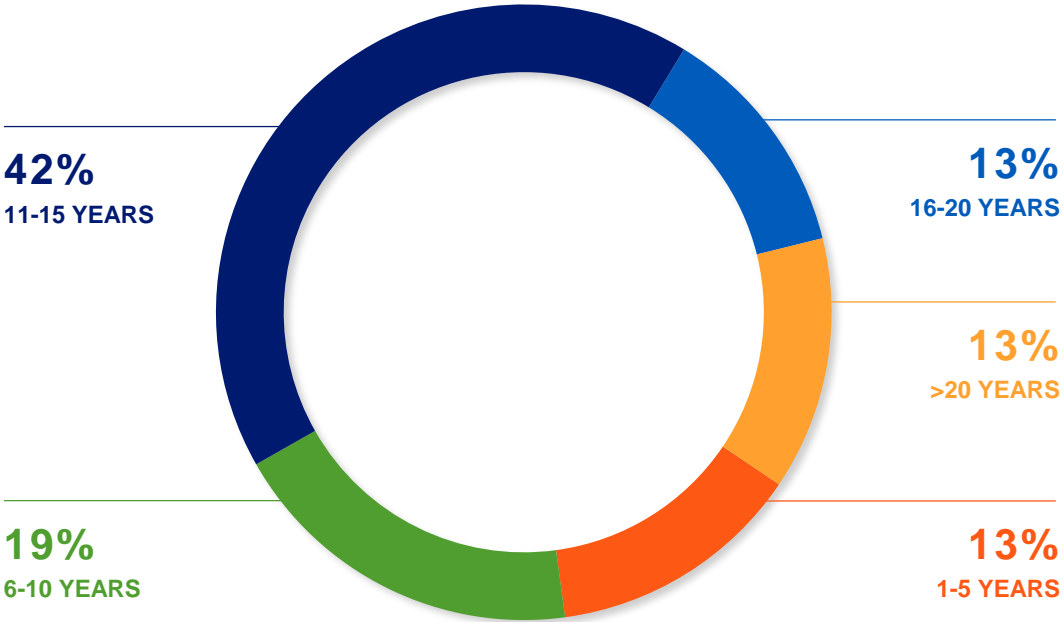
REVENUE SECURED BY LONG-TERM CONTRACTS

CONTRACTUALISATION OF 2020 CONSOLIDATED REVENUES
FROM RENEWABLE GENERATION (in %) ⁽¹⁾



93% OF 2020 REVENUES SECURED

AVERAGE RESIDUAL DURATION OF LONG TERM CONTRACTS
(in years) ⁽²⁾



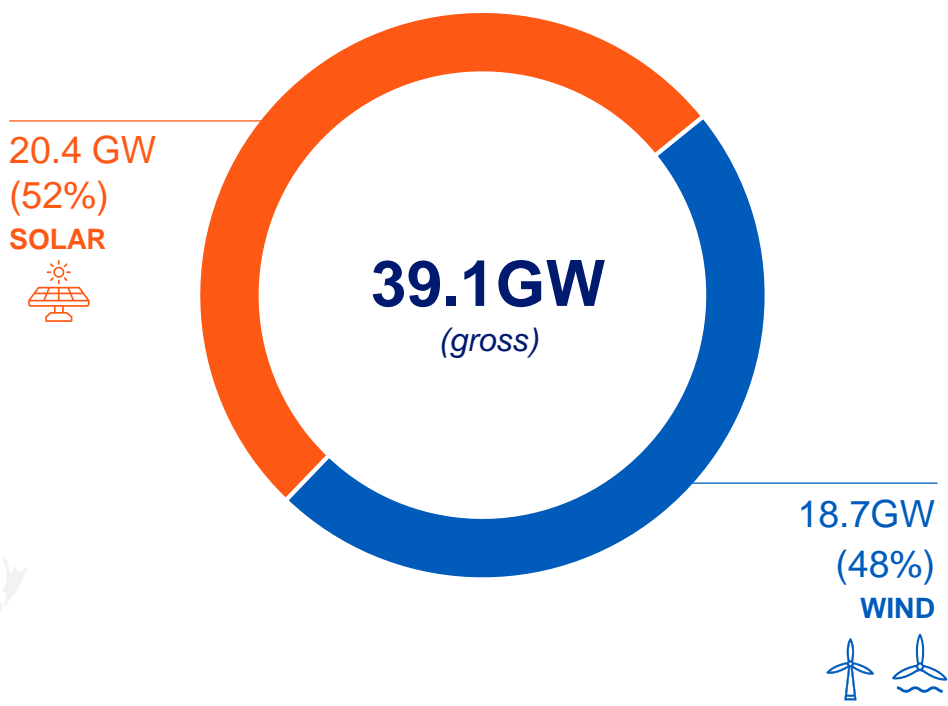
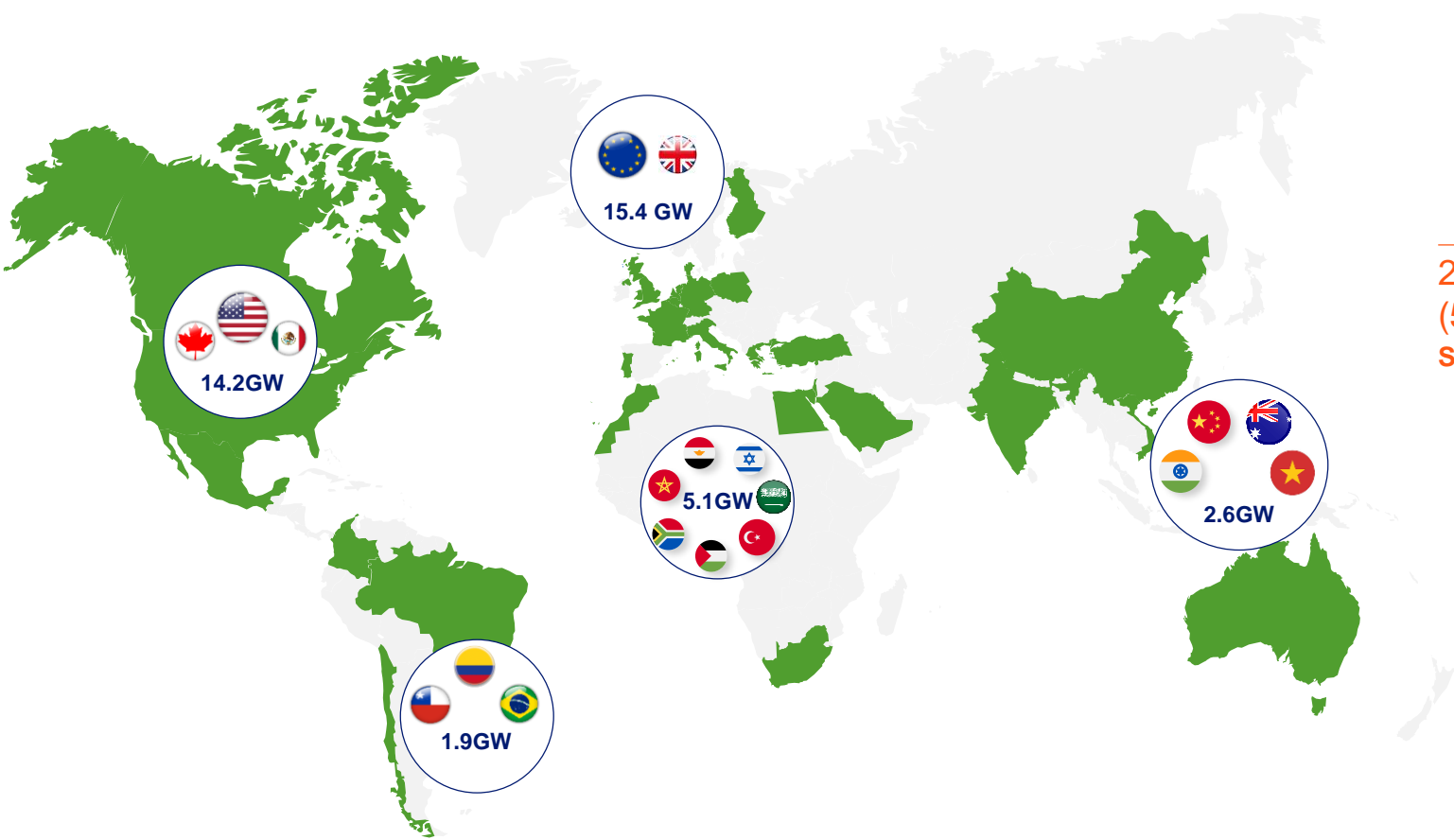
THE AVERAGE REMAINING TERM OF THE CONTRACTS IS ~13 YEARS

(1) Based on the estimate of 2020 revenues from fully consolidated assets
(2) Weighting according to estimated 2020 revenues of fully consolidated assets

A PORTFOLIO OF WIND AND SOLAR PROJECTS OF MORE THAN 39GW ⁽¹⁾

A PROJECT PORTFOLIO THAT IS **DIVERSIFIED GEOGRAPHICALLY...**

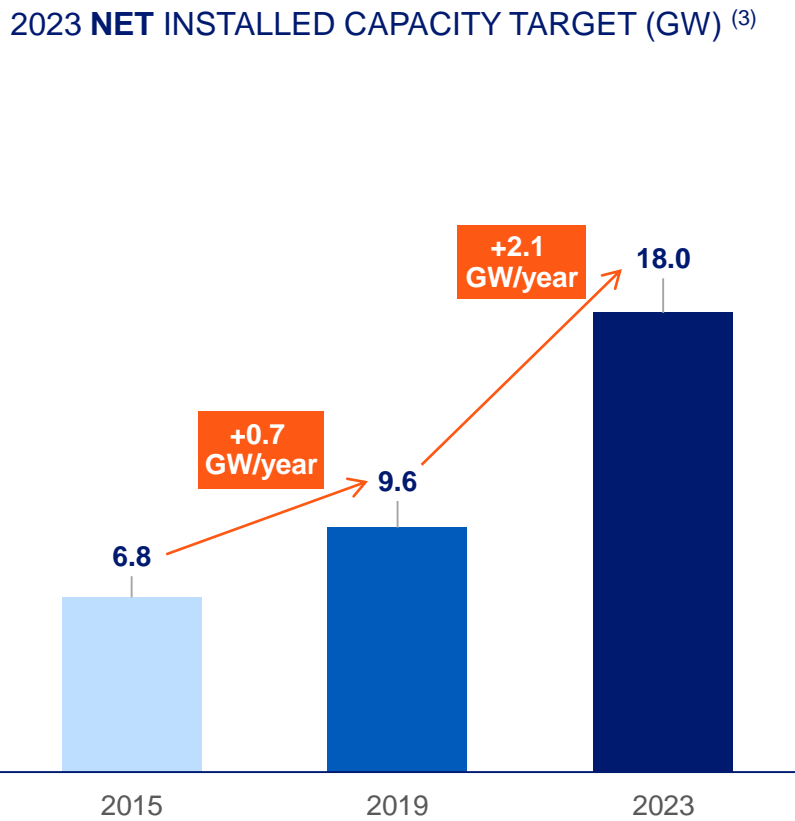
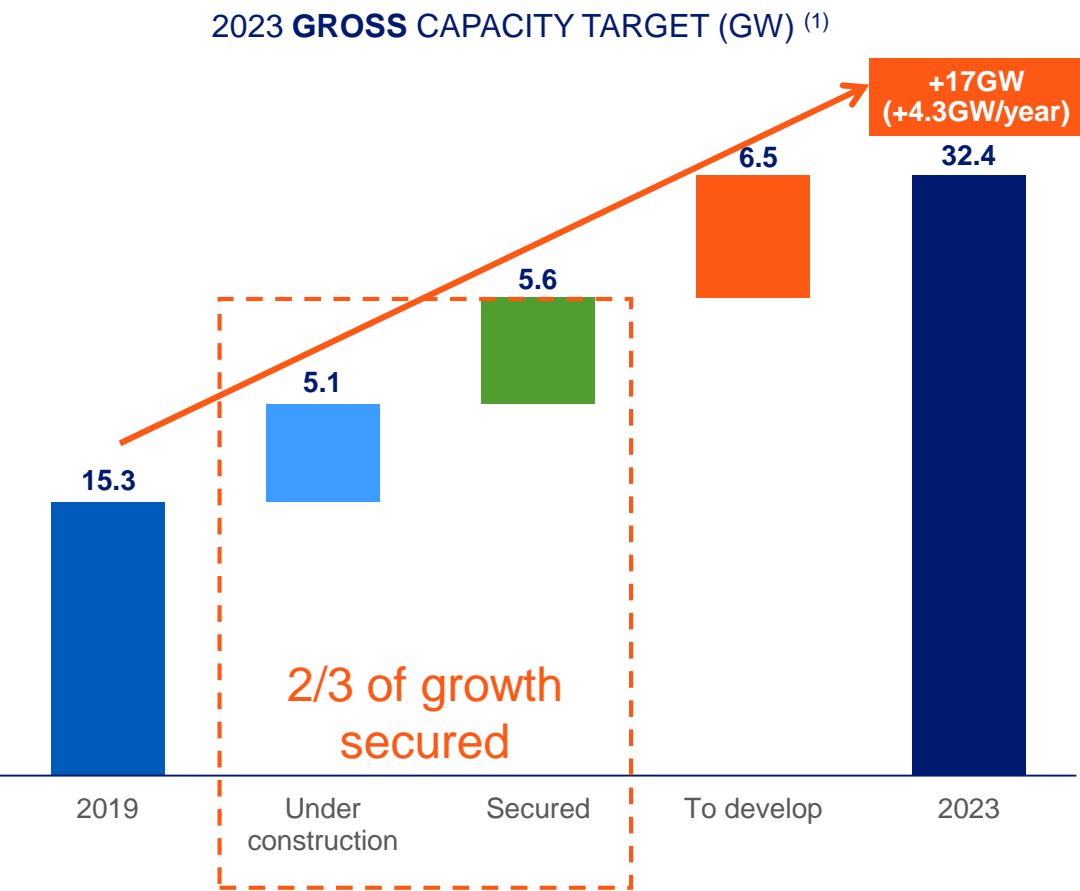
... AND **BALANCED BETWEEN WIND AND SOLAR**



(1) Pipeline excluding capacities under construction, including secured capacities. Gross data corresponding to 100% of the capacity of the projects concerned.

STRONG GROWTH EXPECTED THANKS TO MORE THAN 10GW OF PROJECTS ALREADY SECURED

NB: This financial communication contains forward-looking data based on targets. Although management believes that this data is reasonable, investors are cautioned that such data is subject to numerous risks and uncertainties that could cause actual results and developments to differ materially from those expressed herein.

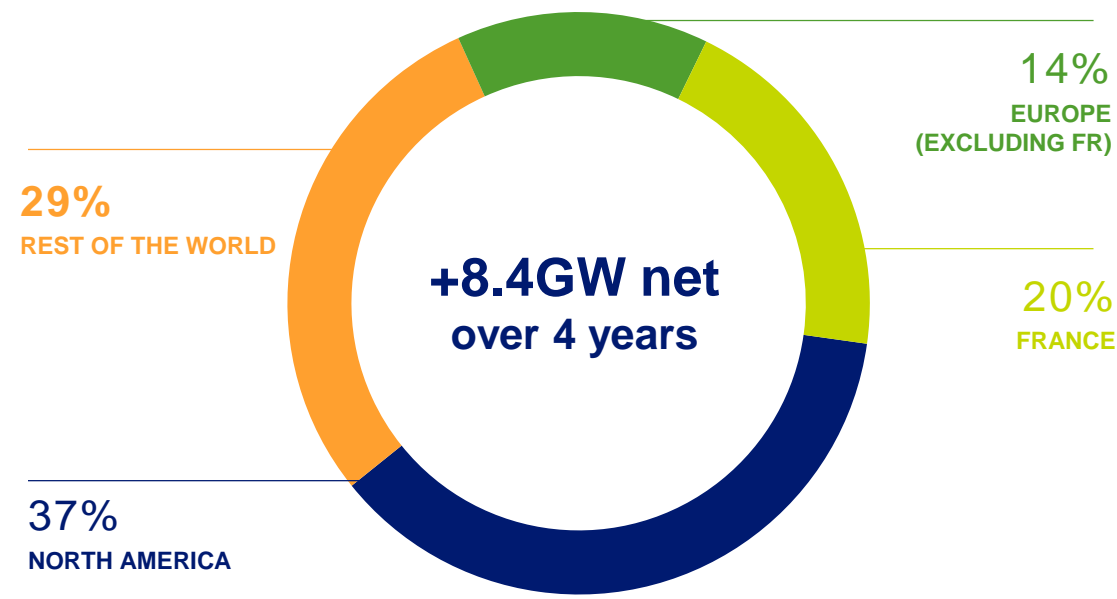


(1) Solar and wind. Gross data corresponding to 100% of the capacity of the projects concerned.
(2) Situation at end of 2019
(3) Solar and wind. Installed capacity shown as net, corresponding to the consolidated data based on EDF's participation in Group companies, including investments in affiliates and joint ventures

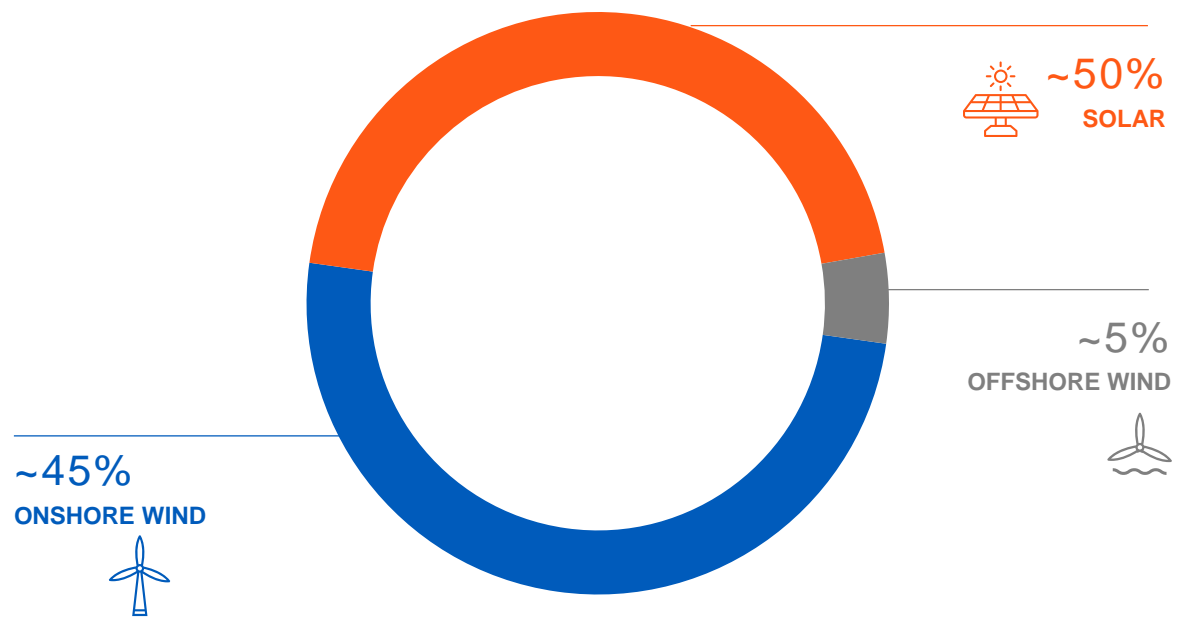
BALANCED ACCELERATION ACROSS GEOGRAPHIES AND TECHNOLOGIES

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2020-2023 **NET** ADDITIONAL CAPACITY BY GEOGRAPHIC REGION (GW) ⁽¹⁾



2020-2023 **NET** ADDITIONAL CAPACITY BY TECHNOLOGY



(1) Solar and wind. Installed capacity shown as net, corresponding to the consolidated data based on EDF's participation in Group companies, including investments in affiliates and joint ventures

THE FRENCH SOLAR PLAN

A STRONG ACCELERATION OF SOLAR PV DEVELOPMENTS



TARGET

BE THE LEADER IN FRANCE

ACHIEVE **30%**
MARKET SHARE BY 2035

► **~ 1GW/Y** TO DEVELOP ON AVERAGE
BETWEEN 2020 AND 2028 ⁽¹⁾



SOLAR PLAN PREPARATION WELL
UNDER WAY



c.2,300ha
LAND SECURED

X8 VS 2017



c.550MWc
AUTHORISED

X5 VS 2017



34 projects
AWARDED BY THE FRENCH
REGULATOR IN 2019-H1 2020
FOR 260 MWC

X6 2019 VS 2017



Acquisition
REALISED IN 2019

PROJECT
PORTFOLIO
c.1GW

(1) The EDF group's business development model is based on partnerships. Not all of these projects will necessarily be fully consolidated.

NEW MARKET ACCESS AND SOLUTIONS ADAPTED TO CUSTOMER NEEDS

NEW ACCESS TO MARKETS...

— Development of “corporate” PPAs for more than 1.5GW in the United States, Brazil, China, UK, France

- EDF Renewables North America and **Shell Energy North America** have signed a PPA for **15 years for a 132MWp photovoltaic plant in California**
- EDF Renewables UK and **Tesco** have signed a **15-year PPA for 60MW of rooftop solar power and onshore wind**
- Agregio signed PPAs with **Maïsadour and Metro**

... AND SOLUTIONS ADAPTED TO CUSTOMER NEEDS

- Installation of **rooftop photovoltaic panels for industrial and commercial customers** (France, UK, Egypt, China, etc.)
- Deployment of **off-grid solar kits** for rural electrification, developments in Africa (>100k customers)
- **Egypt**: strategic acquisition of a stake in **Karm Solar**, a key independent player in the generation of renewable energy, supplying solar energy to farmers and commercial customers, with a portfolio of solar PV projects of 170MWp
- **EMS**⁽¹⁾ achievements via **EDF Store & Forecast**: Guadeloupe, Martinique, Corsica, Saint-Nicolas des Glénans, New Caledonia

(1) Energy Management System

TECHNOLOGICAL INNOVATION: A KEY COMPETITIVE ADVANTAGE



PHOTOVOLTAIC SOLAR POWER

- **Increase the capacity of installations thanks to two-sided photovoltaic modules**
- **Unlock new potentials in solar PV in geographically constrained areas thanks to floating photovoltaic solar installations...**
 - ✓ Development of a floating photovoltaic solar power plant on the Lazer dam (France, Hautes-Alpes)
- **... and Agri-PV**
 - ✓ 1st co-developed pilot project with EDF R&D and INRA



OFFSHORE WIND

- **Exploiting new potential in offshore wind power with floating wind power:** Provence Grand Large (France, a floating project of 3 x 8.4MW located off the coast of Fos-Sur-Mer)



STORAGE

- **Hybridisation of renewable assets and thermal storage:** Noor Midelt I project in Morocco (800MW hybrid project combining photovoltaic solar, concentrated solar (CSP), storage using molten salts)
- **Development of flexibility on the grid using Li-ion batteries coupled to generation assets:** Petit Canal, Guadeloupe (wind) and Chuckwalla, United States (PV power plant)
- **Development of batteries** (acquisition of Pivot Power in the UK) **and charging systems for electric vehicles** (acquisition of PowerFlex in the United States)

A SUSTAINABLE BUSINESS MODEL BASED ON KEY COMPETITIVE ADVANTAGES



DEVELOPMENT

- **Key competitive advantages for the development of a strong project portfolio**
 - A large and diverse international presence
 - Key local partnerships in order to share investments and country risk
 - Expertise in site security, engineering, procurement, arrangement of structured finance and responses to calls for tenders
- **Synergies** within EDF for **customised solutions for customers** (PPAs for industrials, off-grid or decentralised offers)



ENGINEERING & CONSTRUCTION

- **Strong engineering expertise**
- **Significant expertise in the construction of industrial-scale projects and operational excellence in construction** to meet budgets and deadlines
- **Continued technical innovation** to seize opportunities in new markets (floating PV, floating offshore wind, etc.)



O&M AND ASSET MANAGEMENT

- **Integrated skills in O&M** supporting **operational excellence, optimised production, technological expertise**



ASSET ROTATION

- Maximised value creation via **a selective asset rotation approach** (with assets sold mainly post-construction)

VALUE CREATION:

+150-200 bps

DIFFERENCE ⁽¹⁾
BETWEEN THE
FORECAST RETURN
RATE AND THE WACC

(1) Average performance estimated as part of a profitability analysis of EDF Renewables projects (scope: 79% of installed capacity, 103 power plants, 6.2GW net, 14 countries). The calculation of TRI take into consideration the various hypothesis, in particular on market prices evolution, excluding volumes and periods covered by the PPAs



THANK YOU



OFFSHORE WIND DEVELOPMENTS IN FRANCE: 4 PROJECTS FOR A TOTAL CAPACITY OF 2GW, INCLUDING 480MW UNDER CONSTRUCTION

MAJOR ACHIEVEMENTS IN 2019 AND 2020:

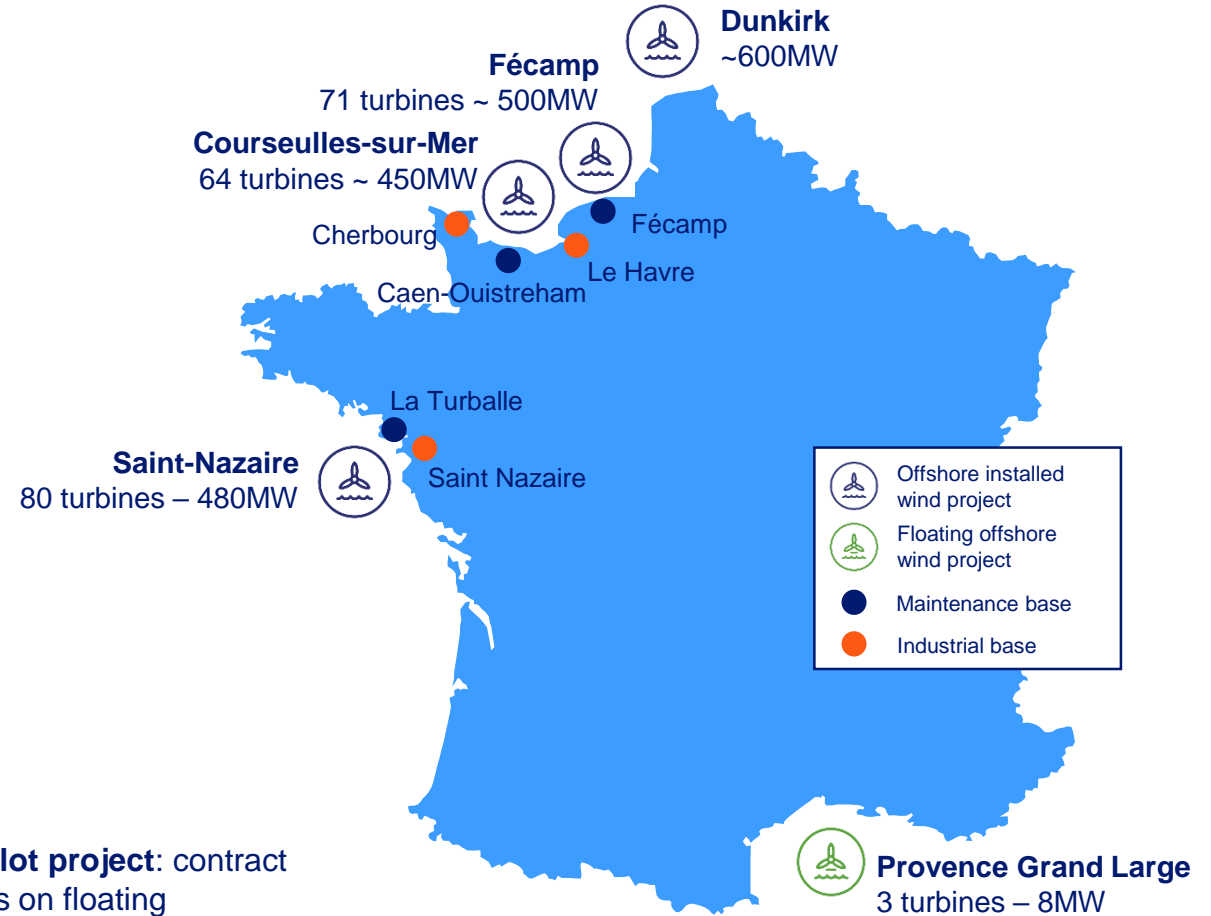


- **Saint Nazaire offshore wind farm:**
 - Start of construction in 2019
 - Commissioning scheduled for 2022
 - Total investments of ~ €2bn
 - Partnership with Enbridge
- **Fécamp offshore wind farm**
 - Start of the construction in 2020
 - Commissioning scheduled for 2023
 - Total investment of ~ €2bn
 - Partnership with Enbridge avec wpd Offshore
- **Dunkirk offshore wind farm:**
 - EDF Renouvelables wins the tender in 2019
 - Partnership with Enbridge and Innogy
 - Public debate scheduled for Autumn 2020
 - Commissioning scheduled for 2027

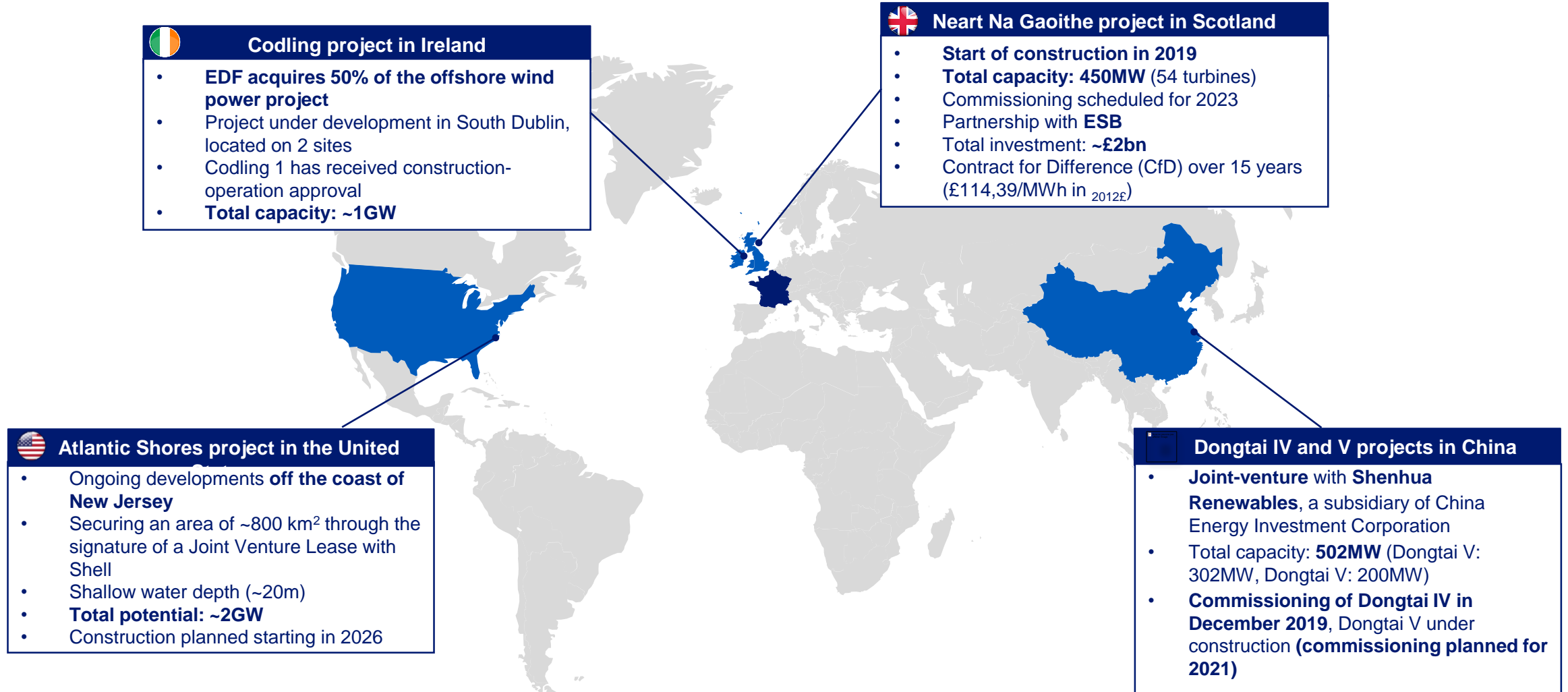
COMING

- **Courseulles-sur-Mer offshore wind farm**
 - Start of the construction in winter 2020-2021
 - Commissioning scheduled for 2024
 - Total investment of ~€2bn
 - Partnership with Enbridge and wpd Offshore

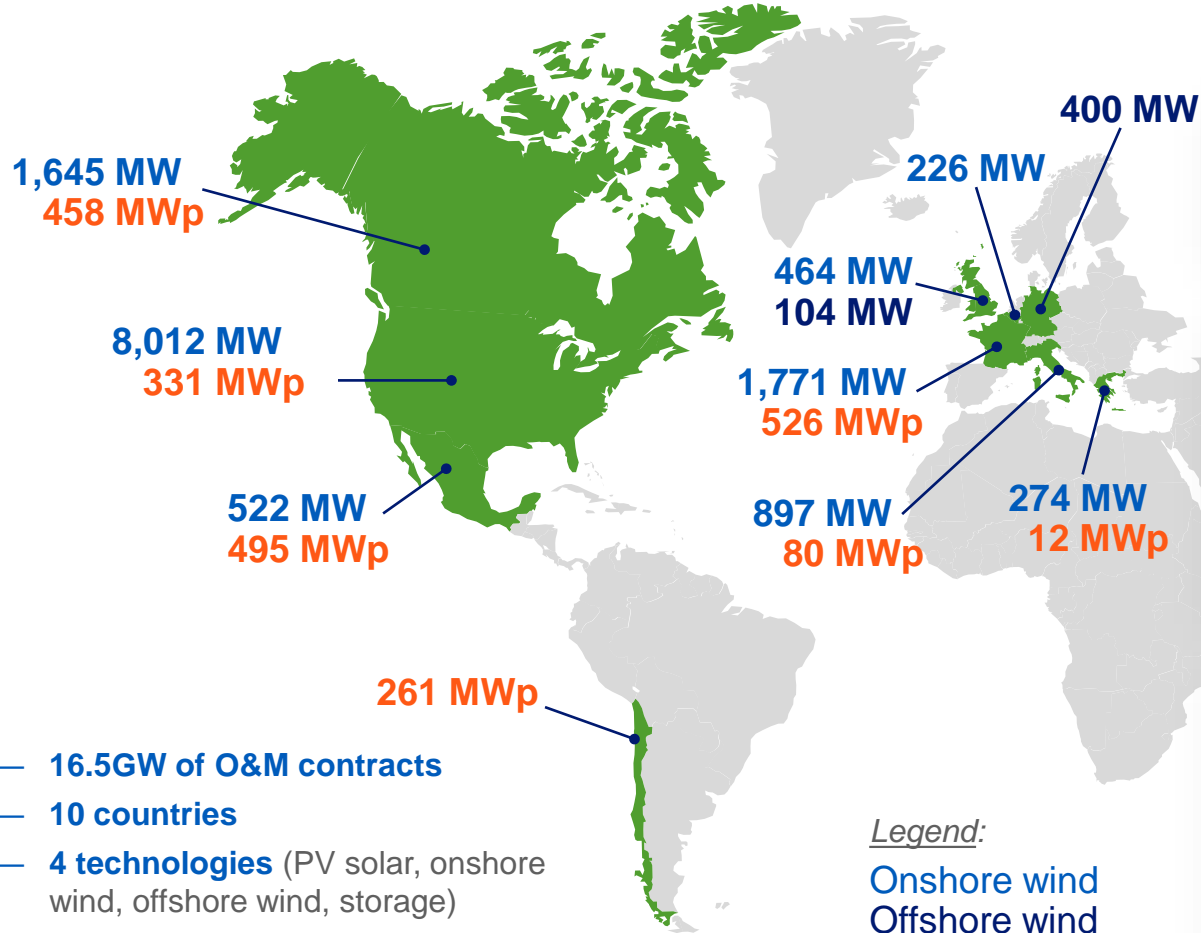
Development in progress of **Provence Grand Large**, a floating wind pilot project: contract awarded to EDF Renouvelables for the installation of three 8MW turbines on floating foundations off the coast of Fos-sur-mer



NEARLY 4GW OF INTERNATIONAL OFFSHORE WIND DEVELOPMENTS, 450MW UNDER CONSTRUCTION IN SCOTLAND



~ 17 GW OF O&M: STRONG EXPERTISE, DIFFERENTIATING FACTOR



Legend:
 Onshore wind
 Offshore wind
 Solar

- 16.5GW of O&M contracts
- 10 countries
- 4 technologies (PV solar, onshore wind, offshore wind, storage)
- Remote control and optimisation in real time via a state-of-the-art operations control centre and technical teams in the field

OPTIMISED ASSET PERFORMANCE

- Digitalisation and supervision in real time, continuous innovation and predictive maintenance

ENHANCED TECHNICAL EXPERTISE

- Continuous feedback on technical issues via O&M monitoring **strengthening knowledge and understanding of industrial technologies**
- A **strong credibility** vis-à-vis turbine manufacturers and third-party investors

REINFORCED COMPETITIVENESS DURING THE DEVELOPMENT PHASES

- **Better price positioning for responses to calls for tenders**
- A **contract optimisation** thanks to the competition between turbine suppliers for initial or renewal O&M contracts
- **Optimisation of the project from the initial phases** (development, construction, etc.)

AL DHAFRA PROJECT: WORLD'S LARGEST SOLAR PROJECT AWARDED TO EDF-JINKO CONSORTIUM

KEY PROJECT FACTS:

- 35 kilometers south of Abu Dhabi City, United Arab Emirates
- 2GW capacity ~ equivalent electricity to power over 160,000 local households
- Bifacial module technology
- 1.35 USDcent/kWh on a Levelized Electricity Cost basis
- Public-Private Partnership (PPP) scheme. EDF Renewables and Jinko Power will hold 20% each. The 60% remaining share will be owned by TAQA and Masdar.
- 30-year Power Purchase Agreement (PPA)
- COD in 2022
- Over 4,000 jobs during the construction phase

