# DELIVERING COMPETITIVE PRODUCTS FROM ENERGY MARKETS TO CUSTOMERS

# **ENERGY MARKETS EUROPE**

#### Thermal Merchant Europe

**21 GW** capacity **€0.3bn** COI 2018

#### **Gas Midstream**

**3<sup>rd</sup>** in Europe **400 TWh** gas portfolio **€0.3bn** COI 2018

#### **Energy Management**

**9,000 TWh** Gas **1,600 TWh** Power

#### Supply B2B/B2C

**304 TWh** Gas **124 TWh** Power **22M** B2C contracts **€0.5bn**<sup>(2)</sup> COI 2018

#### Nuclear Merchant Generation

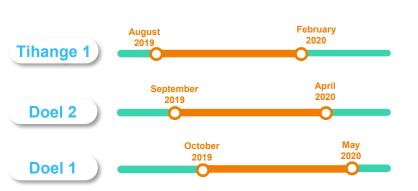
**6.4 GW** capacity<sup>(1)</sup> **€(1.1)bn** COI 2018

#### **ENERGY MARKETS EUROPE – NUCLEAR**

AFTER SIGNIFICANT DIFFICULTIES IN 2018, WE ARE STABILIZING OUR OPERATIONS

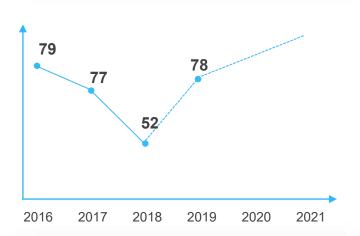


LTO<sup>(1)</sup> works will finish by 2020



Reinforced project management and execution capabilities

**Availability in Belgium (%)** 



Planning adjusted following recent experience

**Contingencies included in** financial planning

**Total nuclear production (TWh)** 



Stabilization of operations

(1) LTO: Long-Term Operations (life extension)

120 ENGIE

LTO outages

#### **ENERGY MARKETS EUROPE – NUCLEAR**

ANTICIPATING THE NEXT PHASES

2022-23

2025

Beyond 2025

Doel 3 and Tihange 2 phased out

Start D&D

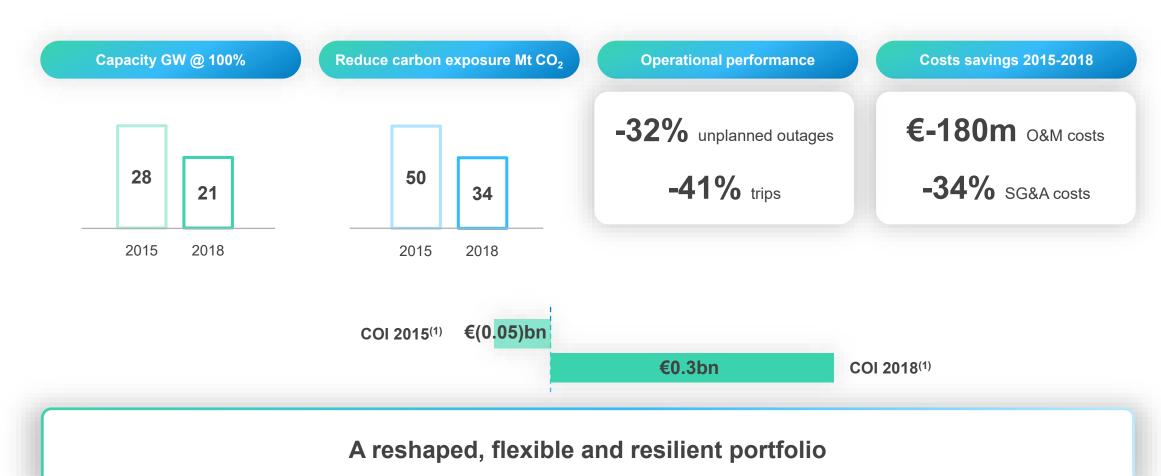
Doel 1, Doel 2 and Tihange 1 phased out

Doel 4 and Tihange 3 possibly extended

Future options for after 2025 will be defined by the Belgian authorities

#### **ENERGY MARKETS EUROPE – THERMAL MERCHANT**

THE TRANSFORMATION OF A MERCHANT FLEET FROM A NEGATIVE CONTRIBUTION TO PROFITABILITY



<sup>(1)</sup> Excluding (i) the liquidating damages of Wilhelmshaven and Rotterdam in 2015 and 2018 and (ii) the contributions of Rosen (Italy), UK and Polish assets which have been sold or closed in 2016-17



#### **ENERGY MARKETS EUROPE – THERMAL MERCHANT**

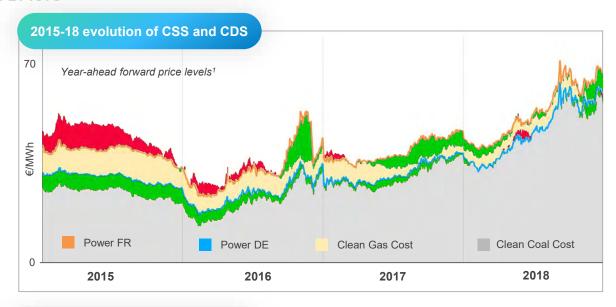
OPPORTUNITY TO CAPTURE VALUE ON A REGULAR BASIS

**TIGHT SUPPLY DEMAND** 

HIGHER CO<sub>2</sub> PRICES

**HIGHER VOLATILITY** 

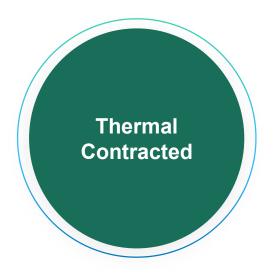
**MULTIPLE EVENTS** 





#### **CLOSING REMARKS**







**DELIVERING EARNINGS STABILITY AND VISIBILITY** 

**CAPTURING OPTIONALITY VALUE** 

### CAPITAL MARKETS DAY

**February 28, 2019** 



### Gwenaelle HUET

Chief Executive Officer, Business Unit France Renewables

DEVELOPER AND OPERATOR OF LARGE-SCALE RENEWABLES

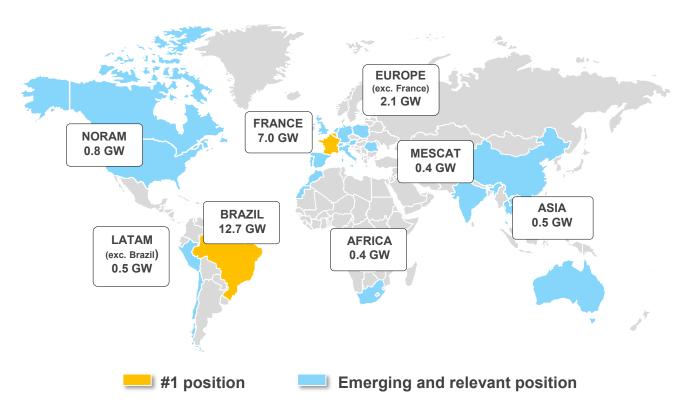


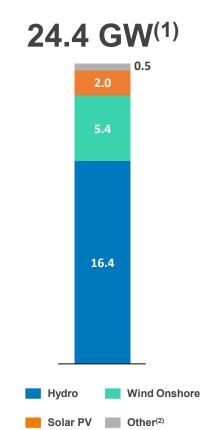




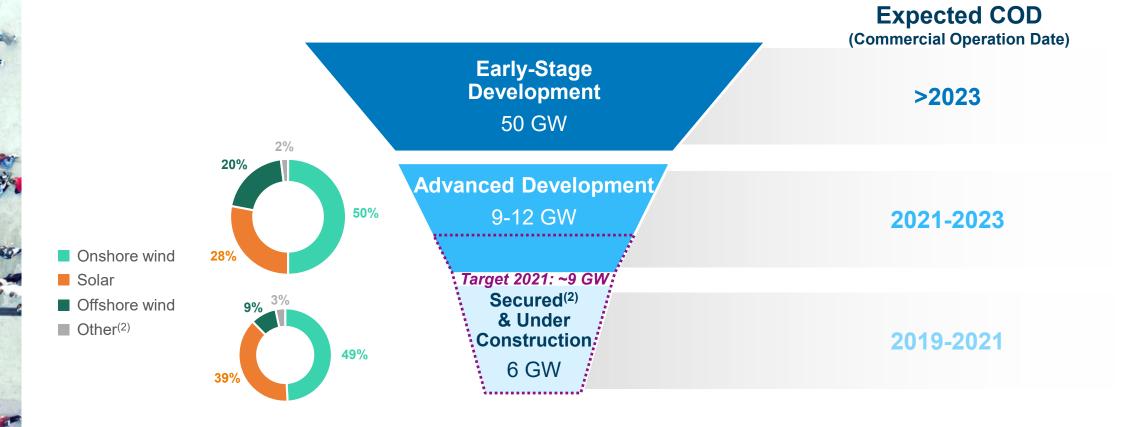
#### ENGIE MANAGES 24.4 GW<sup>(1)</sup> OF MATURE RENEWABLE (RES) **CAPACITIES, MAINLY IN EUROPE AND LATAM**

RES installed capacities @100% as end of 2018 [GW]





#### **ENGIE BUILT A DEVELOPMENT MACHINE** A PIPELINE OF 15-18 GW



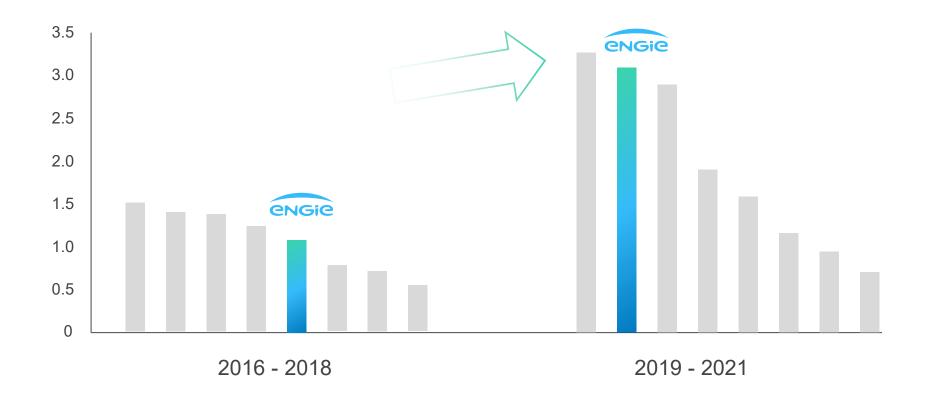
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(1) Secured = awarded

(2) Other: biomass and biogas, geothermal

#### **ENGIE BUILT A DEVELOPMENT MACHINE**

Average installed RES capacity [GW/yr] ENGIE vs. competitors (European and US RES developers)



## ENGIE HAS A STRATEGIC POSITION ACROSS THE WIND AND SOLAR VALUE CHAIN

Development

Project origination and development with local teams

Engineering & Construction

Strong engineering and business experience and expertise

Partial Sell-Down

Financial platforms to industrialize DBpSO model

Operation & Maintenance (O&M)

Operational excellence in O&M and strategic sourcing

Energy Management **Expertise** of internal teams, able to **shape complex products** and **manage risk** of mixed assets to design corporate power purchase agreements

Customer Relations

Based on **ENGIE's portfolio of more than 30,000 corporate clients** and **1,000 large cities** 

28/02/2019 © ENGIE 2019 131 ÉNGIE

# WHAT THE MARKET TELLS US

# CONTINUOUS INVESTMENT IN MATURE TECHNOLOGIES AND EMERGENCE OF NEW TECHNOLOGIES

Continuous investment across geographies

€250bn/yr worldwide<sup>(1)</sup>



50% in Europe, LATAM & US







{ } **x**:

*Microgrid Market*<sup>(2)</sup>: €15.2bn today, x2 by 2022, x3 by 2025

#### With more sophisticated technologies

Short Term 2021

Biomethane Geothermal

Fixed wind offshore

Middle Term 2023

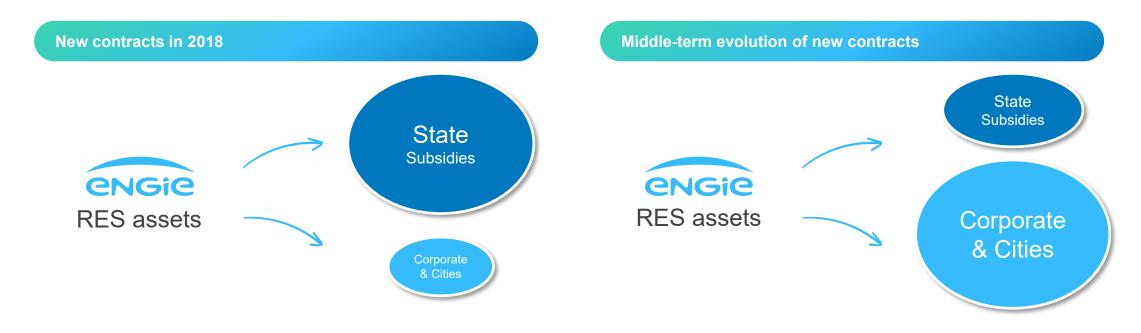
Microgrids Floating wind offshore

Grid scale storage

Long Term >2026

Green hydrogen

# FROM MAJORITY OF SUBSIDIES FROM STATES TO MAJORITY OF PPA(1) WITH COMPANIES AND CITIES



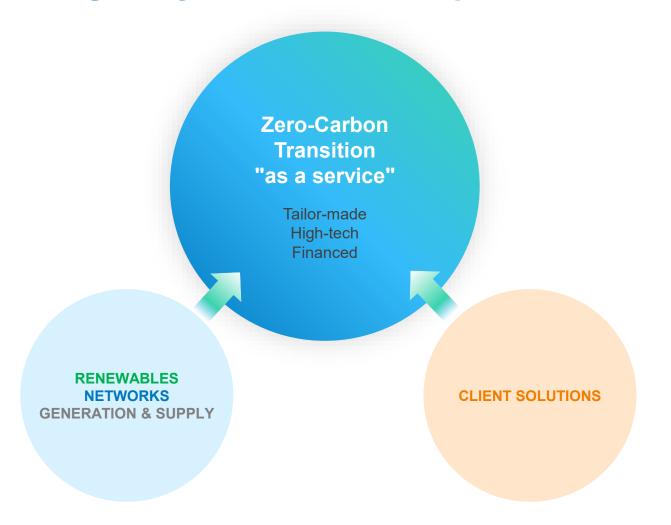
Long-term evolution: more sophisticated contracts with clients



28/02/2019 © ENGIE 2019 (1) PPA : Power Purchase Agreement

# OUR STRATEGIC INTENTIONS

#### WE SPECIALIZED IN HIGH ADDED VALUE OFFERS



#### **RENEWABLES**



50% new RES projects dedicated to specific clients by 2021

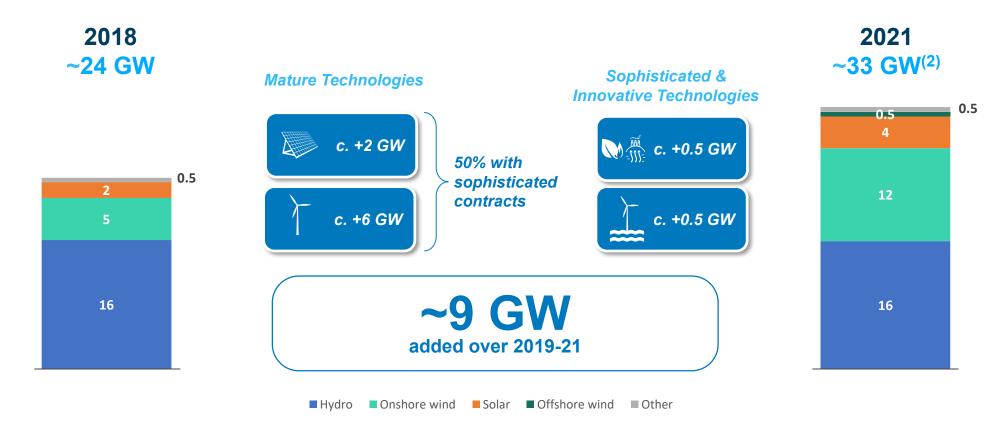
Commoditized renewables

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#### **ACCELERATE WITH THE GOAL OF ~ 9 GW ADDED IN 2021**

RES installed capacities<sup>(1)</sup>@100% [GW]

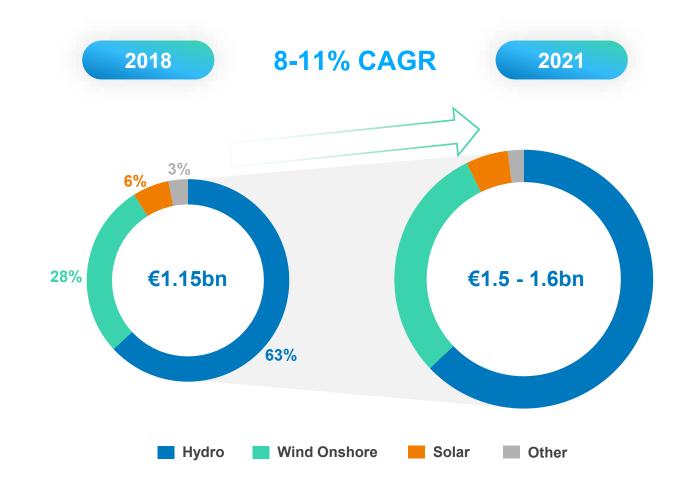


<sup>(1)</sup> RES capacities excl. client solutions RES and hydro pump storage capacities

(2) incl. 0.3 GW divested during the period (biomass and hydro)

#### **DYNAMIC EVOLUTION OF RES FINANCIAL CONTRIBUTION**

COI [€bn]





#### HIGHLY SELECTIVE INVESTMENT CRITERIA

#### **Very Attractive**

#### **Less Attractive**

Companies & cities PPA

Innovative and sophisticated technologies

Only commoditized renewables

Development in countries not part of the Group's geographical priorities

#### **INCREASE SOPHISTICATED CONTRACTS**



2019-2021: Almost 50% of ENGIE's new RES projects will be dedicated to clients

After 2026: 2/3 of new capacities will be dedicated to clients

#### **INCREASE SOPHISTICATED TECHNOLOGIES**



#### **FIXED & FLOATING OFFSHORE WIND**

Fixed



Moray\* (950 MW)



Seamade\* (487 MW)



Treport & Noirmoutier (2 X 496 MW)

Floating



Wind Float Atlantic\* (25 MW)



Eoliennes Flottantes du Golfe du Lion (25 MW)



#### **GREEN GAS**



Biomethane (market share target of 15-20%)





Large- and small-scale territorial green H<sub>2</sub> projects



#### **MICROGRIDS**



(wind, solar, biofuel & storage)



Semakau island (microgrid-based hydrogen storage system)

28/02/2019 © ENGIE 2019 \* Under construction 143 **engic** 

#### SIMPLIFIED GEOGRAPHICAL PRIORITIES

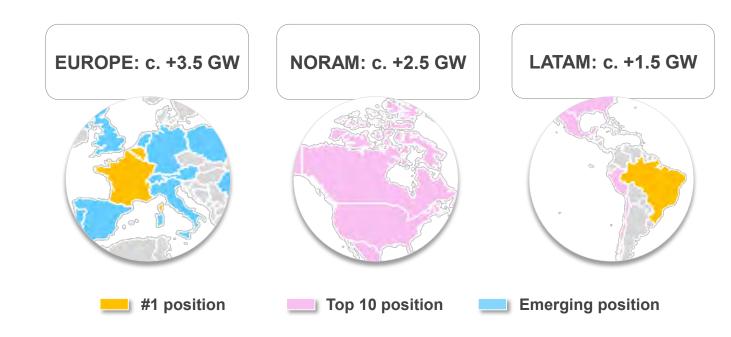
Tier 1: Reinforce existing and acquire new leadership positions where the Group has density and strong links with clients

• Western Europe, North America, Brazil, Chile, Peru, Mexico

Tier 2: Other selected countries where the Group will invest both on client solutions and RES development

• India, China, Japan, Australia, Morocco, South Africa and large urban areas in line with our geographical priorities

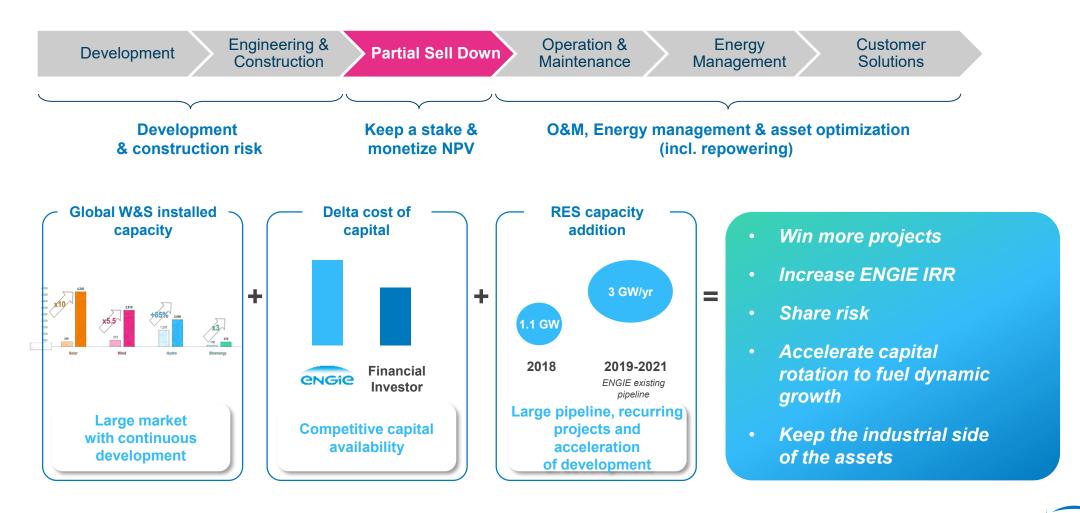
~9 GW added by 2021



Rest of the World: c. +1.5 GW

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#### LOWER CAPITAL INTENSITY INDUSTRIALIZATION OF DBpSO MODEL

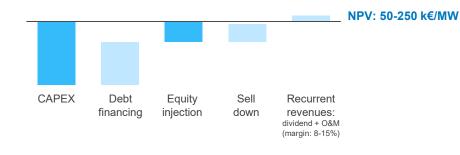


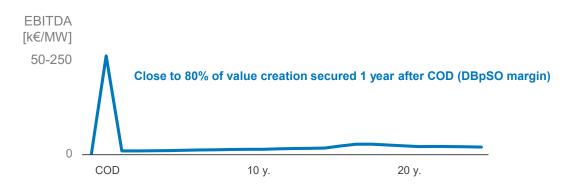
# LOWER CAPITAL INTENSITY INDUSTRIALIZATION OF DBpSO MODEL

Normative 10 MW wind onshore or solar project (competitive tender)

with 70%-80% gearing and 80% sell-down

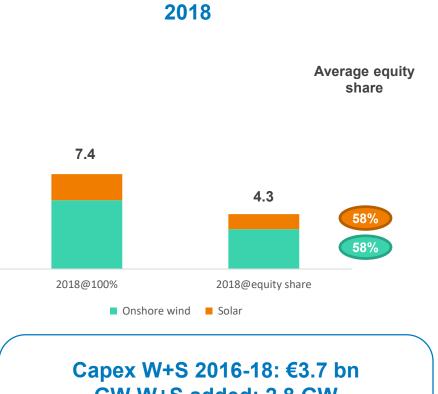
IRR Buy & Hold = CoE IRR DBpSO = CoE +4%



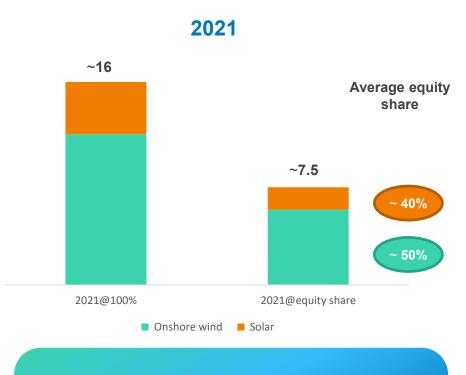


#### **LOWER CAPITAL INTENSITY** REDUCTION OF AVERAGE EQUITY SHARE

Installed W+S capacity [GW]



GW W+S added: 2.8 GW



Capex W+S 2019-21: ~€1.7 bn GW W+S added: ~8.0 GW

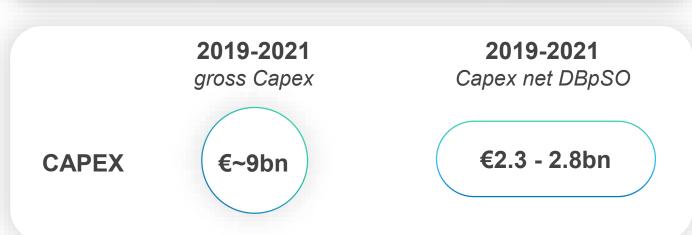
#### **INCREASE VALUE CREATION WITH LESS CAPEX**

Increase Value Creation

2018 2021

ROCEp 9.6% low single-digit improvement

Increase Capex
Optimization





# TOWARDS INTEGRATED ZERO-CARBON SOLUTIONS DELIVERED "AS A SERVICE"

Target (USA)



#### SIGNIFICANT CONTRACTS ALREADY SIGNED





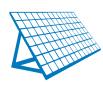








160 MW 15 y. 49 MW 15 y. 30 MW 15 y. 208 MW 25 y. 30 MW 12 y.





50 MW 15 y.



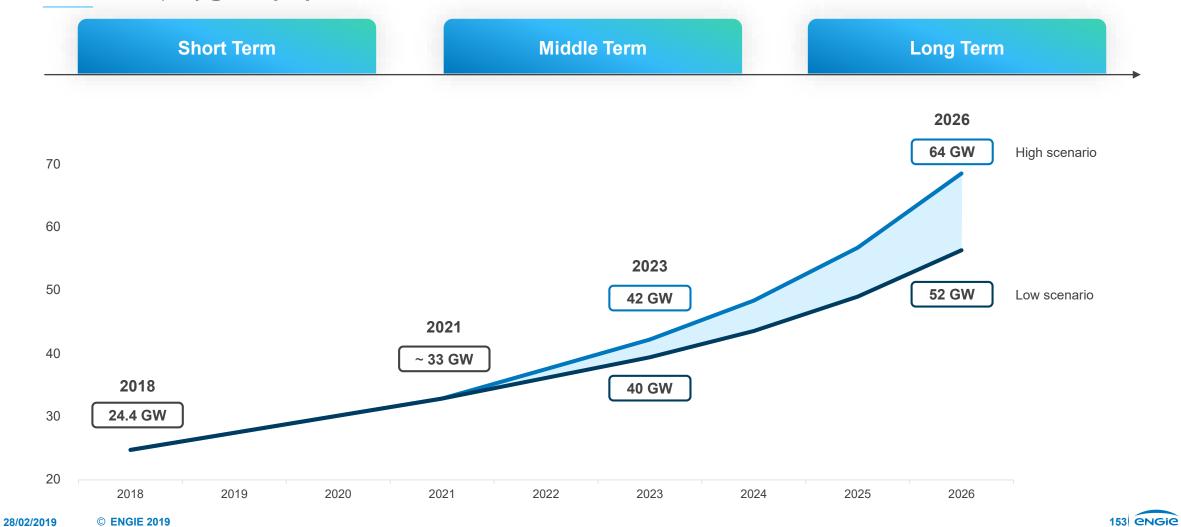
100 MW 15 y.

Our goal is to become a global leader in Corporate PPA



#### **OUR DEVELOPMENT TIMELINE**

Installed RES capacity @ 100% [GW]



# **CONCLUSION**

#### **Faster Growth**

Goal of ~9 GW added over 2019-21

Tier 1 position in terms of development

COI CAGR 2018-21: 8-11%

COI 2021: €1.5 - 1.6bn

## **Higher Value**

#### **Corporate PPA Leader**

- 2019-21: Almost 50% of new RES projects linked to client solutions
- Become a leader in Corporate PPA with 2/3 of new capacities dedicated to clients after 2026

#### Become a leader in selected sophisticated technologies

- Offshore wind
- Green gases

**Growth Capex 2019-21: €2.3 - 2.8bn** ROCEp: increase in 2021 vs 2018

## **Better Impact**

**Integrated zero-carbon solutions** delivered "as a service"

**Better access to energy** through microgrids and

cost-efficient renewables

# CAPITAL MARKETS DAY

**February 28, 2019** 





Executive Vice President, France BtoB and Hydrogen

**CLIENT SOLUTIONS PROVIDER** 





# **LEADERSHIP POSITIONS ACROSS 4 CONTINENTS**



**FRANCE BELGIUM ITALY NETHERLANDS** 

GCC **SWITZERLAND SINGAPORE CHILE** MOROCCO **SOUTH AFRICA** 



#1 worldwide in cooling worldwide in heating #4 worldwide in **#2** technical installation worldwide in **EV #2** charging stations

# THE WIDEST OFFER OF SOLUTIONS TO MAKE OUR CLIENTS' **ZERO-CARBON TRANSITION POSSIBLE**



# UNIQUE COMBINATION OF CAPABILITIES AND CUSTOMER INTIMACY



**ELECTRICAL ENGINEERING** 



**HEATING** & COOLING



**MECHANICS** & ROBOTICS



**RESOURCE MANAGEMENT** 



**DISTRIBUTED ENERGY** 



**FACILITY MANAGEMENT** 



**ENGINEERING** 



**DATA SCIENCE** & SMART CITIES



Design & Engineering

**Investments** 

Installation

**Operation & Maintenance**  **Energy Supply** 



28/02/2019 © **ENGIE 2019** 

# **STRONG IN ALL CUSTOMER SEGMENTS**



2018 REVENUE<sup>(1)</sup>

**€6.0**bn



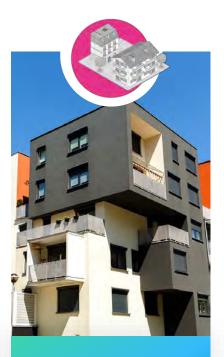
Private Services
Buildings

**€4.3**bn



Industries

**€6.0**bn



**Collective Housing** 

**€2.2**bn

(1) Estimates excluding supply

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# **GOOD MARKET DRIVERS AND BUSINESS CONTRIBUTION**

#### **Market Drivers**

**TECHNOLOGY SHARE** IN BUILDING VALUE

**CARBON FOOTPRINT & SUSTAINABILITY AWARENESS** 

**COMPLEXITY OUTSOURCING** 

#### Reliable & Profitable

>8 Remaining portfolio duration years

Contract **>80**% renewals

Revenue covered by backlog<sup>(1)</sup> months

> Order intake > yearly revenue<sup>(1)</sup>

~110%

**CASH GENERATIVE BUSINESS** 

HIGH **SINGLE-DIGIT** ROCE

28/02/2019 **© ENGIE 2019** (1) France, Benelux, NECST, Noram

# CITIES, PUBLIC BUILDINGS AND INFRASTRUCTURES



## 3 MAIN CHALLENGES

+ URBANIZATION

+ FINANCIAL SQUEEZE

+ CITIZENS'
SUSTAINABILITY
AWARENESS

#### **NEEDS**

Public lighting

Health & Education

Security

Mobility solutions

District networks

3D modeling

Zero-carbon solutions

## **OPPORTUNITIES**

- Design and optimization of urban spaces and infrastructures
- Integrated offer
- Energy performance contracts

**Digital Differentiators** 





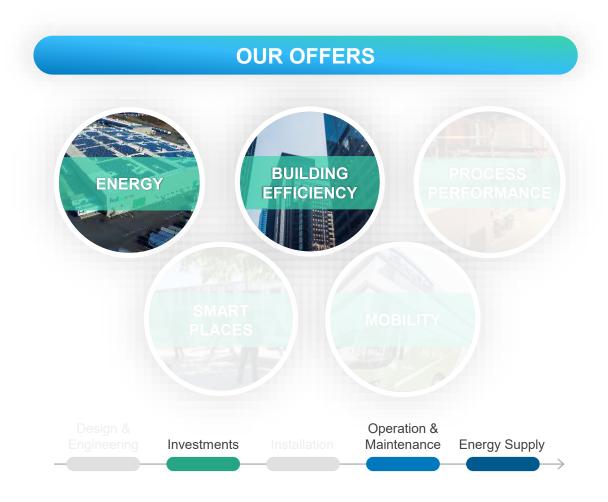




# **LONGWOOD MEDICAL CENTER DISTRICT - BOSTON 34-YEAR ENERGY CONTRACT**







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# **PRIVATE SERVICES BUILDINGS**



## **3 MAIN CHALLENGES**

**+** NEW BEHAVIORS

+ CONNECTIVITY & COMFORT

+ COMPLEXITY OUTSOURCING

#### **NEEDS**

Real-time asset management & Predictive maintenance

Renovation

Competitive green energy

Performance commitment

3D design

## **OPPORTUNITIES**

- Design and optimization of buildings and spaces for new usages
- Design, financing and installation of equipment (energy, connectivity, security, air...)
- Energy audit and energy performance consulting

**Digital Differentiators** 





# **INDUSTRIES**



## **3 MAIN CHALLENGES**

+ GREENING OF PROCESSES & PRODUCTS

+ CARBON FOOTPRINT

+ OUTSOURCING OF NON-CORE PROCESSES

#### **NEEDS**

Sustainable solutions

Reliability & Traceability

Predictive maintenance

Decentralized energy production

Performance contracts

## **OPPORTUNITIES**

- Overall approach of industrial processes performance
- Accompany zero-carbon agenda
- Offer "as a service" solutions instead of physical equipment

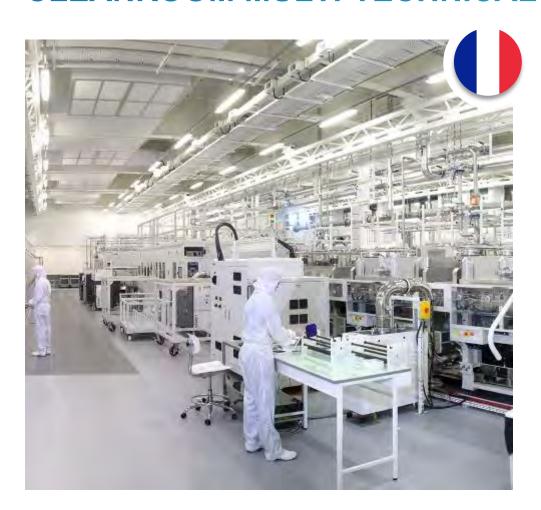
**Digital Differentiators** 





# SOITEC - GRENOBLE CLEANROOM MULTI-TECHNICAL PROCESS PERFORMANCE







# **COLLECTIVE HOUSING**



# 3 MAIN CHALLENGES

**+** COST REDUCTION

**+** SOCIAL TRENDS

**+** AGING POPULATION

#### **NEEDS**

Energy performance

Financing solutions

On-site renewable energy production

Consumption management

## **OPPORTUNITIES**

- Energy audit and support on energy performance
- Develop new usage of energy and services to improve quality of life
- Integrated offers with financing
- Building regeneration solutions

**Digital Differentiators** 







# WE SPECIALIZE IN INTEGRATED, HIGH VALUE SOLUTIONS



#### **CLIENT SOLUTIONS**



- Asset-based solutions a rising proportion of CS COI
- Commoditized service offer

# **ASSET-BASED PROJECT EXAMPLE**

THE BENEFIT OF FINANCING AND EQUITY SYNDICATION

#### Case example

#### **CLIENT NEEDS**

- Requires enhanced supply of steam, power, air
- Subject to challenging sustainability goals
- Requires external financing
- Wants total integrated solution

#### **ENGIE Client Solutions**

30% EQUITY STAKE(2)

#### PROJECT CO.

- Large 20-year asset
- Debt/equity @ 70/30

# "AS A SERVICE" SOLUTION

#### **Total investment cost of €100M**

Project Co. Typical P&L<sup>(1)</sup>

(equity consolidated within ENGIE)

In €M	
Steam/power/air margin	12,4
ENGIE O&M & other operational costs	(3.4)
Depreciation	(5.0)
Financing cost @ 4%	(2.3)
Tax	(0.5)
Net result	1.2

**ENGIE Typical P&L**<sup>(1)</sup>

(excl. one-off development fee & DBpSO margin)

In €M	
O&M margin invoiced to Project Co.	0.2
Share of Project Co. net income	0.4
EBITDA	0.6
Tax	(0.1)
1 673	` ,

**Overall project economics** 

**Capital employed ENGIE (average)** 

€5.5M

**ROCE** 

~9 to 12%

(1) Average yearly contribution first 10 years(2) At inception (but sell-down could also be after building the asset)



# PROVEN CONCEPT AND STRONG PIPELINE



- Smart City North Tyneside, North East Lincolnshire, Chester
- 2 Mobility Dijon Tramway, PPP
- 3 Lighting Avignon Public Lighting, PPP
- 4 DHC 240 DHC Networks in Europe
- 5 Mobility 5.000 Charging Stations EV
- 6 **Mobility** 140 NGV Stations in France
- 7 **Lighting** 1M Lighting points managed, mainly in France
- 8 DHC Queen Elizabeth Olympic Park DHC

- 1 Lighting Flashnet Acquisition
- 2 DHC Settimo Torinese
- 3 Microgrids EPS Acquisition
- 4 **Lighting** Aubagne Contract
- 5 Smart City La Baule
- 6 DHC Amiens SEMOP
- 7 **DHC** Northgate Filinvest
- 8 **DHC** Tabreed Investment

- Mobility Intelligent Transportation System
- 10 Campus Ohio State University
- 11 Campus Longwood Energy
- 12 Campus Springfield
- 13 Mobility London Railway Stations Maintenance
- 4 Campus Kingston University
- 15 On-site Generation DSM, Novartis, Syngenta
- Mobility Transantiago electric buses system

- 7 Integrated Services CAM Acquisition
- 18 On-site Generation Unisun Investment
- 19 Integrated Services Opterra Acquisition
- On Integrated Complete FCAM Acquisition
- 20 Integrated Services ECAM Acquisition
- 21 Mobility TER Dakar
- 22 Microgrids Palau
- 3 Microgrids Comoros
  - On-site Generation Power Corner

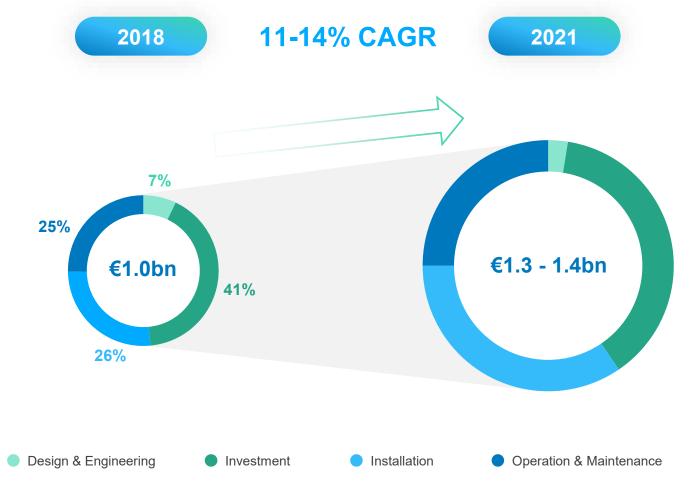
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# REVENUE GROWTH IN EUROPE, WITH ACCELERATION IN NEW GEOGRAPHIC AREAS



# **CLIENTS SOLUTIONS COI TO INCREASE**



**HIGH ADDED VALUE SOLUTIONS** 

**LEADING TO HIGHER MARGINS** 



# THREE KEY BOOSTERS OF HIGHER VALUE

## **FINANCING SYNDICATION**

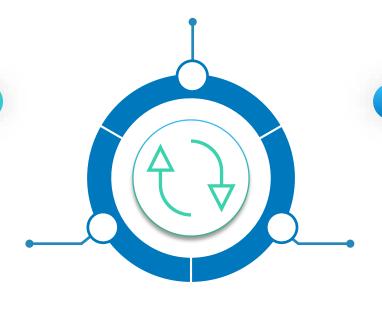
Leverage financing for "as a service" developments

- Leverage cheaper financing
- · Maximize our impact and assets portfolio

## **STRATEGY DESIGN**

**Preferred and strategic relationships** with C-suite, Fortune 500 and C40 cities

- Customer profiling
- C-suite engagement
- Solution architect & coordinator



## **DIGITAL ACCELERATION**

#### A best-in-class software library

- Ability to upgrade our offers and design new ones
- Leverage transversal tools (platforms, etc.)







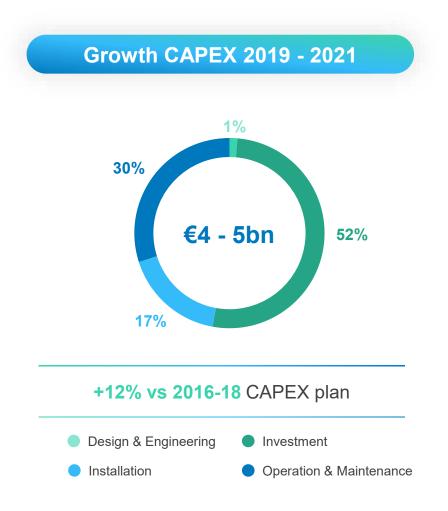


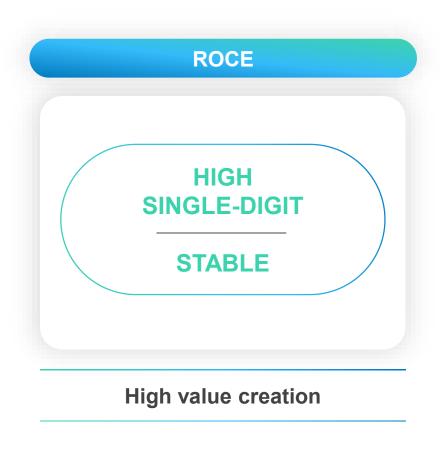






# >30% OF GROUP CAPEX ALLOCATED TO CLIENT SOLUTIONS





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# HIGHLY SELECTIVE INVESTMENT CRITERIA

#### **Very Attractive**

**Customer intimacy** enabling us to develop tailor-made solutions (complex & innovative)

Focus on activities leveraging **ENGIE financing** capabilities and ultimately DBpSO model

> Long-term contracts, providing predictability & recurrence

Improve **density** in geographies and customer segment

#### **Less Attractive**

Simple offer with low-margin business

Short-term contracts

Non-secure offtake

Entering new geographies greenfield



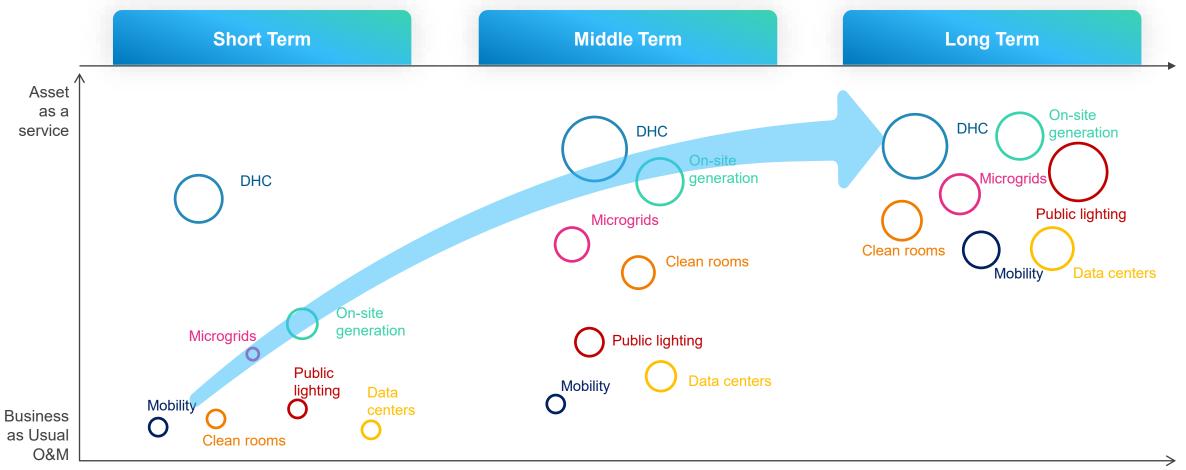
# FROM RENOVATING AN ASSET... TO GREENING AN INDUSTRIAL PROCESS



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# "AS A SERVICE": A STRONG ROADMAP



Time Horizon

# **CONCLUSION**

#### **Faster Growth**

Develop "as a service" solutions and DBpSO

COI CAGR 2018-2021: **11 - 14%** 

COI 2021: **€1.3 - 1.4bn** 

## Higher Value

3 Boosters:

STRATEGY DESIGN
DIGITAL ACCELERATION
FINANCING SYNDICATION

Growth CAPEX 2019-2021: **€4 - 5bn** 

Increased ROCEp in 2021 vs. 2018

## **Better Impact**

**Cost-efficient zero-carbon transition**for our clients

## **DISCLAIMER**

#### **Forward-Looking statements**

This communication contains forward-looking information and statements. These statements include financial projections, synergies, cost-savings and estimates, statements regarding plans, objectives, savings, expectations and benefits from the transactions and expectations with respect to future operations, products and services, and statements regarding future performance. Although the management of ENGIE believes that the expectations reflected in such forward-looking statements are reasonable, investors and holders of ENGIE securities are cautioned that forward-looking information and statements are not guarantees of future performances and are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of ENGIE, that could cause actual results, developments, synergies, savings and benefits to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include those discussed or identified in the public filings made by ENGIE with the autorité des marchés financiers (AMF), including those listed under "facteurs de risque" (risk factors) section in the document de référence filed by ENGIE (ex GDF SUEZ) with the AMF on 28 march 2018 (under no: D.18-0207). Investors and holders of ENGIE securities should consider that the occurrence of some or all of these risks may have a material adverse effect on ENGIE.

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# FOR MORE INFORMATION ABOUT ENGIE

**Ticker: ENGI** 

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