



ENERGY  
INVESTMENT  
MANAGEMENT

# Masterclass Energy Business Portfolio Strategy

25 May 2021

# Agenda

- Introduction
- Energy Transition in EU27, Eastern Europe & Balkans - Csinszka
- Energy Business Portfolio Diversification - Leon
- Case studies - Leon
- Q & A
- Closing

# Energy Investment Management BV

*Investment Management & Advisory Boutique*

*with focus on*

*Energy Transition Assets and Cleantech Ventures*

## Advisory

Advisory services related to investments in energy industry assets and cleantech ventures: development, transactions and implementation

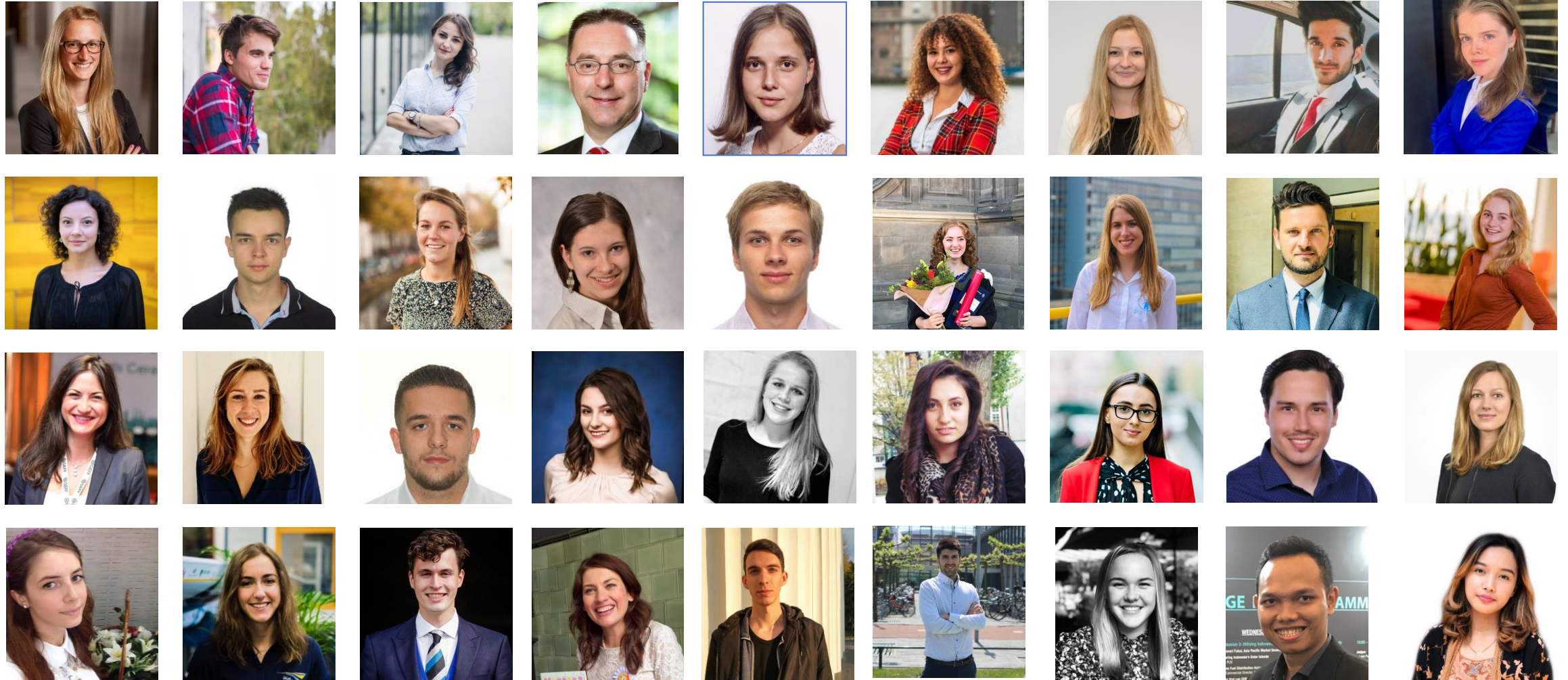
## Thought Leadership

We show and create leadership in investment management in energy transition assets and cleantech ventures with organizing and participating in: research projects, programs, networks and events

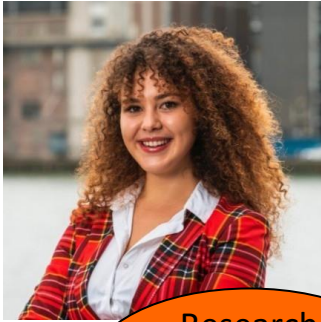
## Investments

We invest ourselves with our private investor network in energy transition assets and cleantech ventures. We structure investment portfolios, develop fund structures and participation concepts

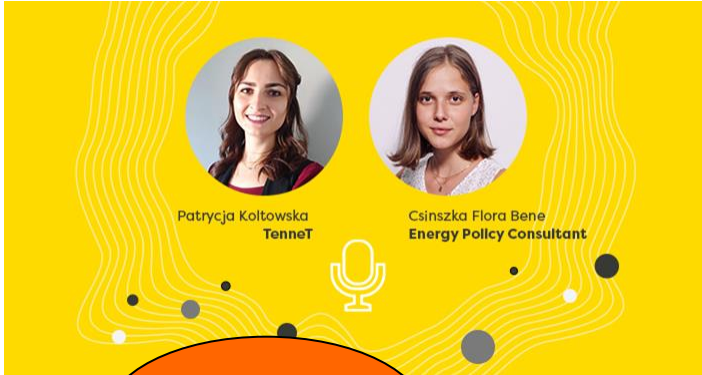
# European Energy Transition Network - East meets West



# Program



Research  
Erasmus  
University



Enlit Europe



Master-classes  
...

Research  
....

## East-European Energy Transition Entrepreneurial Opportunities Program

Research  
VU  
Amsterdam

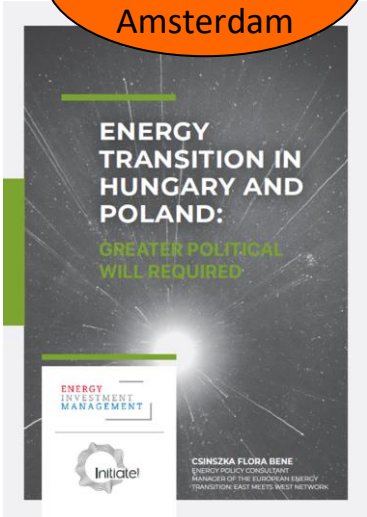
EU SEW

East  
European  
Knowledge  
Team

Cooperation  
Energy  
Community

...

Multi Media  
Eastern  
Europe



# Key-elements East-European Energy Transition Entrepreneurial Opportunities Program

Business Portfolio Strategy

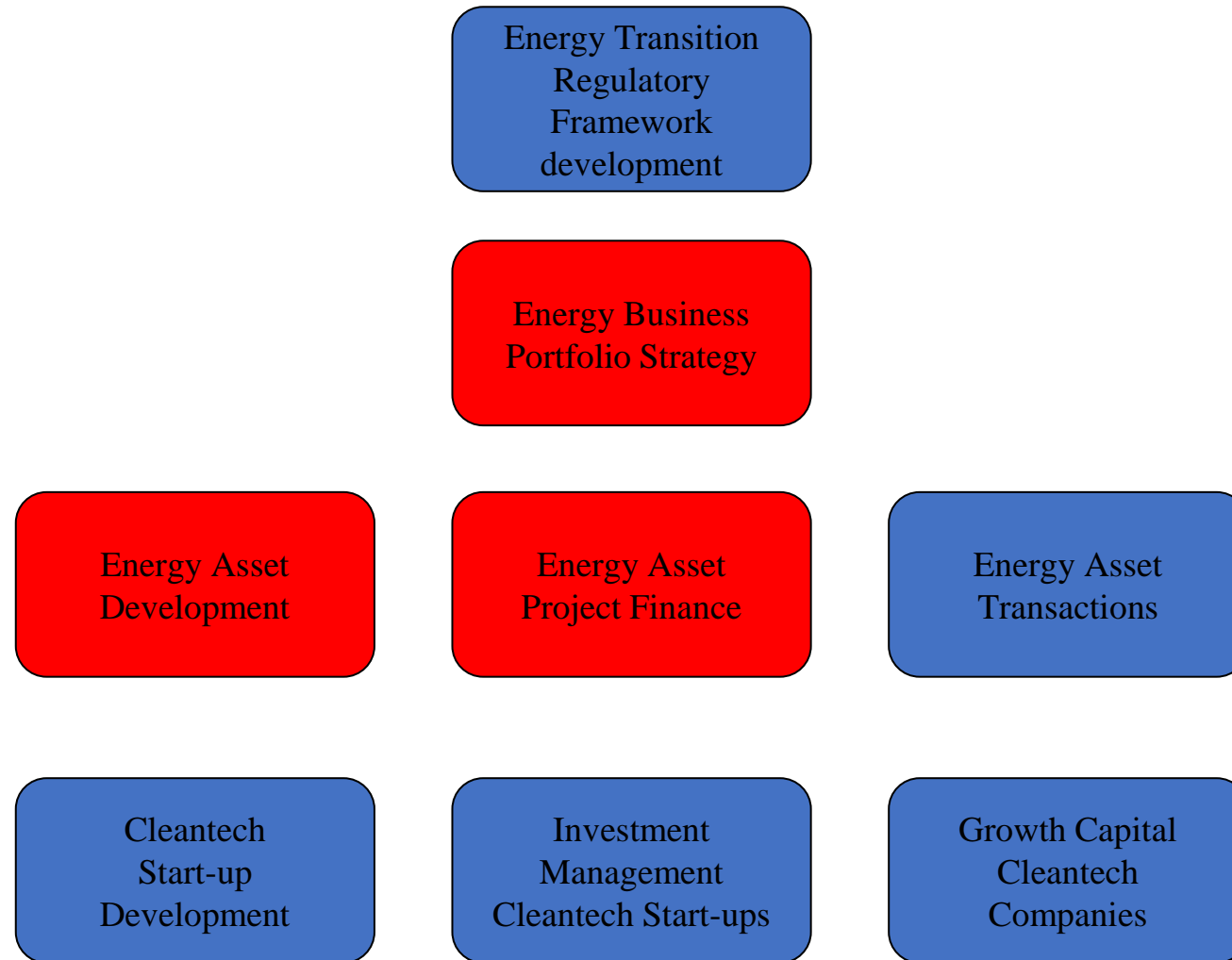
Business Development Accelerators

In-depth understanding regional circumstances



Denisa Kasa  
Program manager

# Masterclass Series Energy Investment Management



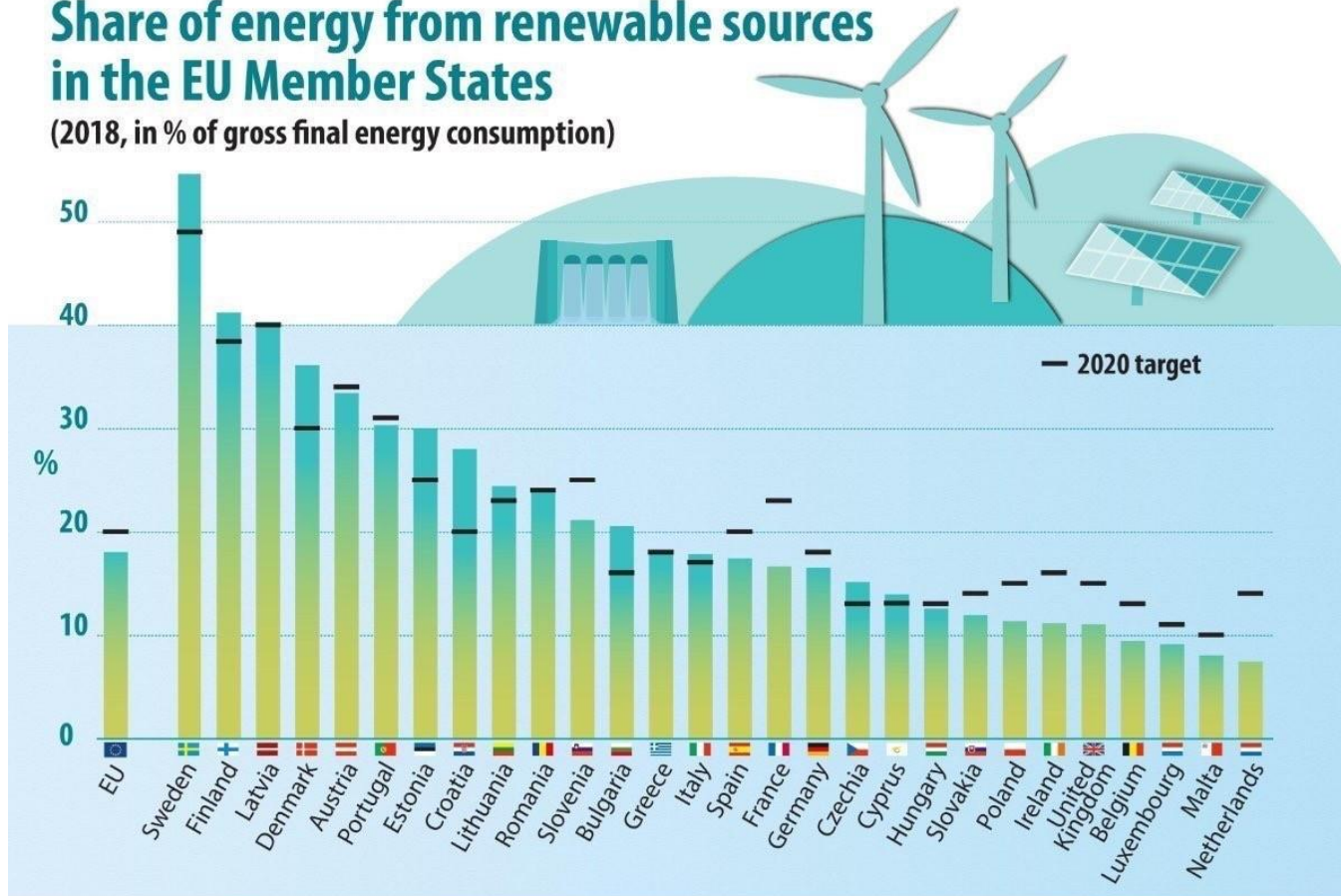
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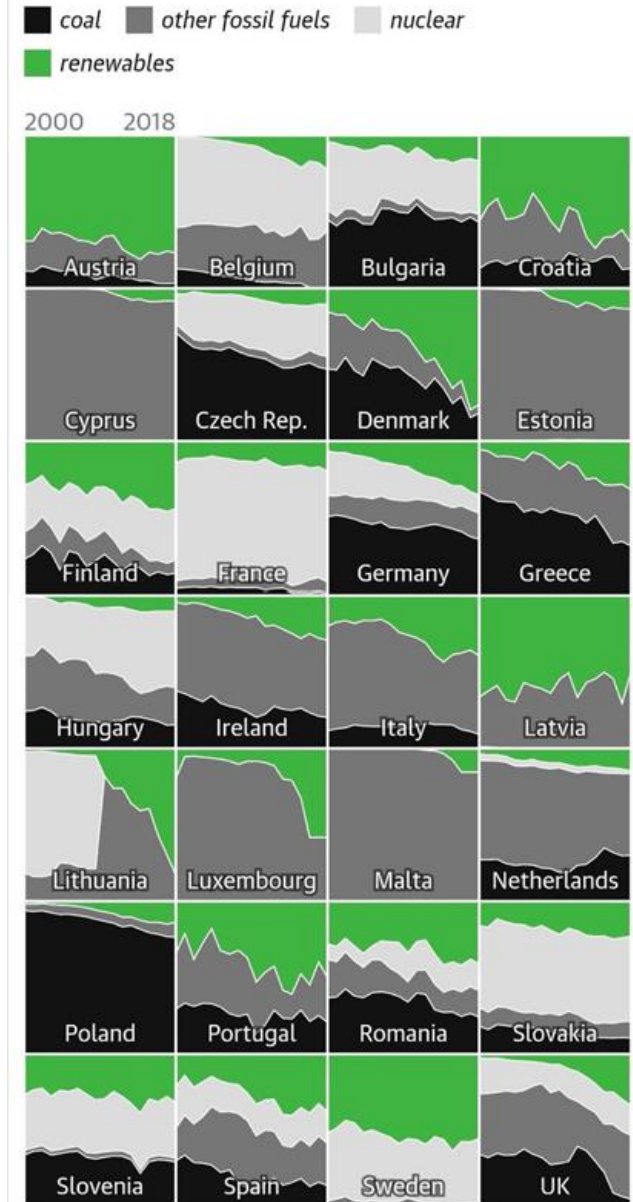


# European ambitions

**Share of energy from renewable sources in the EU Member States**  
(2018, in % of gross final energy consumption)



Power generation by source (2000-2018)



Source: Sandbag Climate Campaign

[ec.europa.eu/eurostat](https://ec.europa.eu/eurostat)

# European Green Deal

## Timmermans kicks off debate over landmark EU 'Climate Law'

By Frédéric Simon | EURACTIV.com

📅 28 jan. 2020 (updated: 📅 29 jan. 2020)



The main objective of the new law will be to "discipline everyone, especially on the political side, to deliver on this promise" of climate neutrality by 2050, Timmermans said. [European Union, 2020. Source: EC - Audiovisual Service]

Languages: [Deutsch](#)



The European Commission launched a public debate about the EU's upcoming Climate Law on Tuesday (28 January), with a view to enshrining the bloc's 2050 "climate neutrality" target into binding legislation before the UN climate conference in Glasgow later this year.

### Supporter



### From Twitter

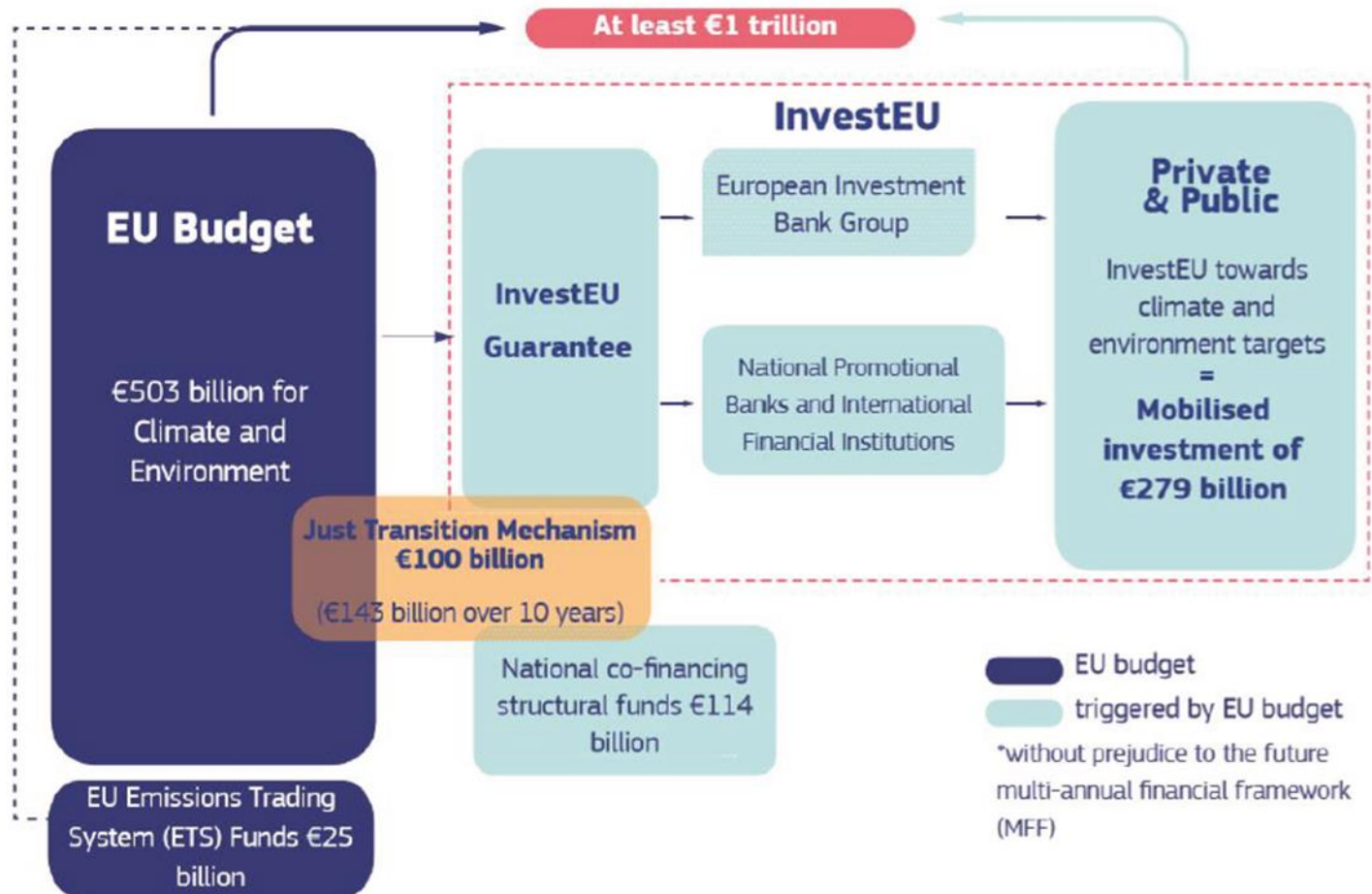
Tweets by @IOGP\_EU

 **IOGP EU**  
@IOGP\_EU  
"#CCUS is part of a broader discussion we need to look at it in an energy approach" says Haitze Siemer: @Energy4Europe at #zepconf



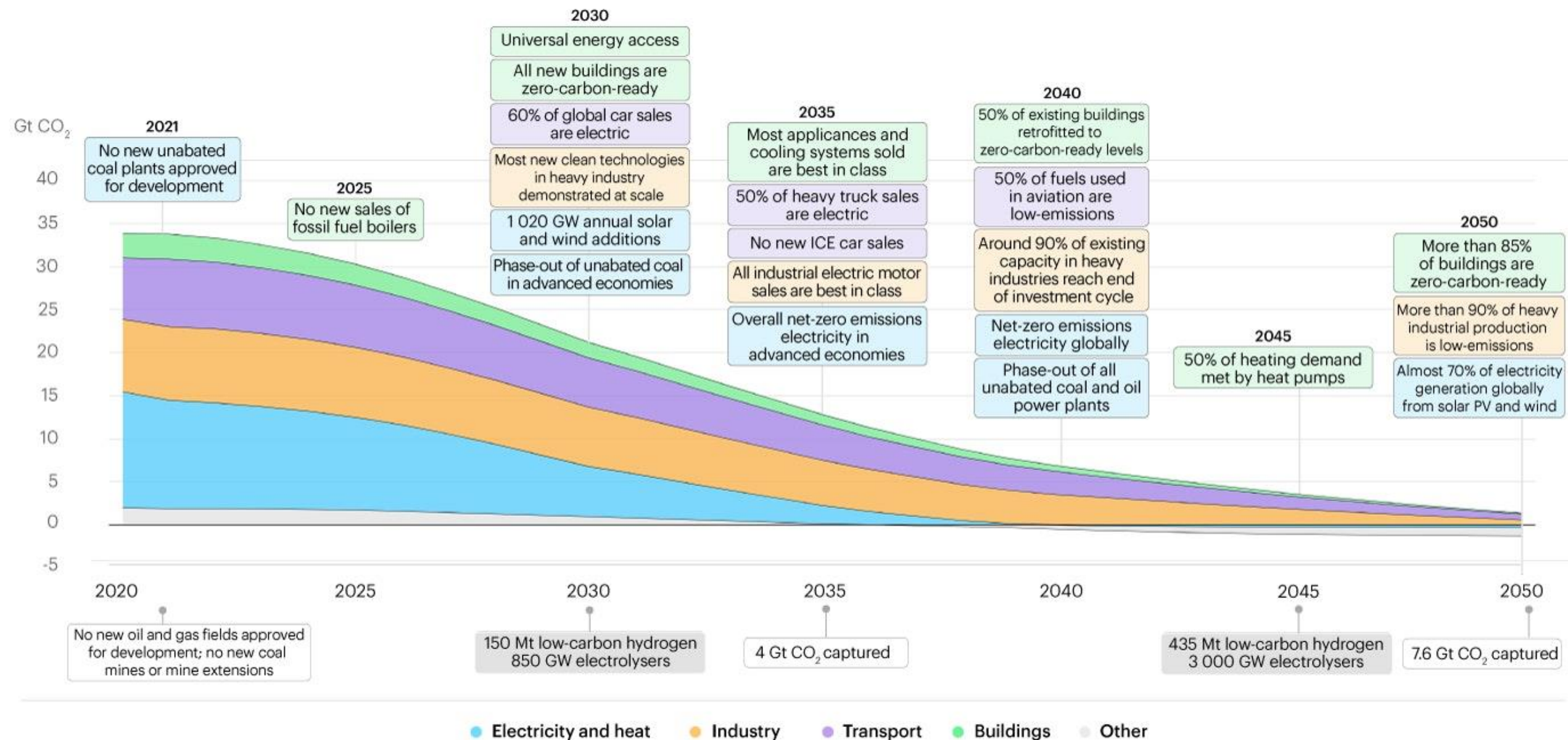
# European Green Deal Investment Plan

## WHERE WILL THE MONEY COME FROM?



\*The numbers shown here are net of any overlaps between climate, environmental and Just Transition Mechanism objectives.

# IEA pathway to net zero 2050 - 2021 May



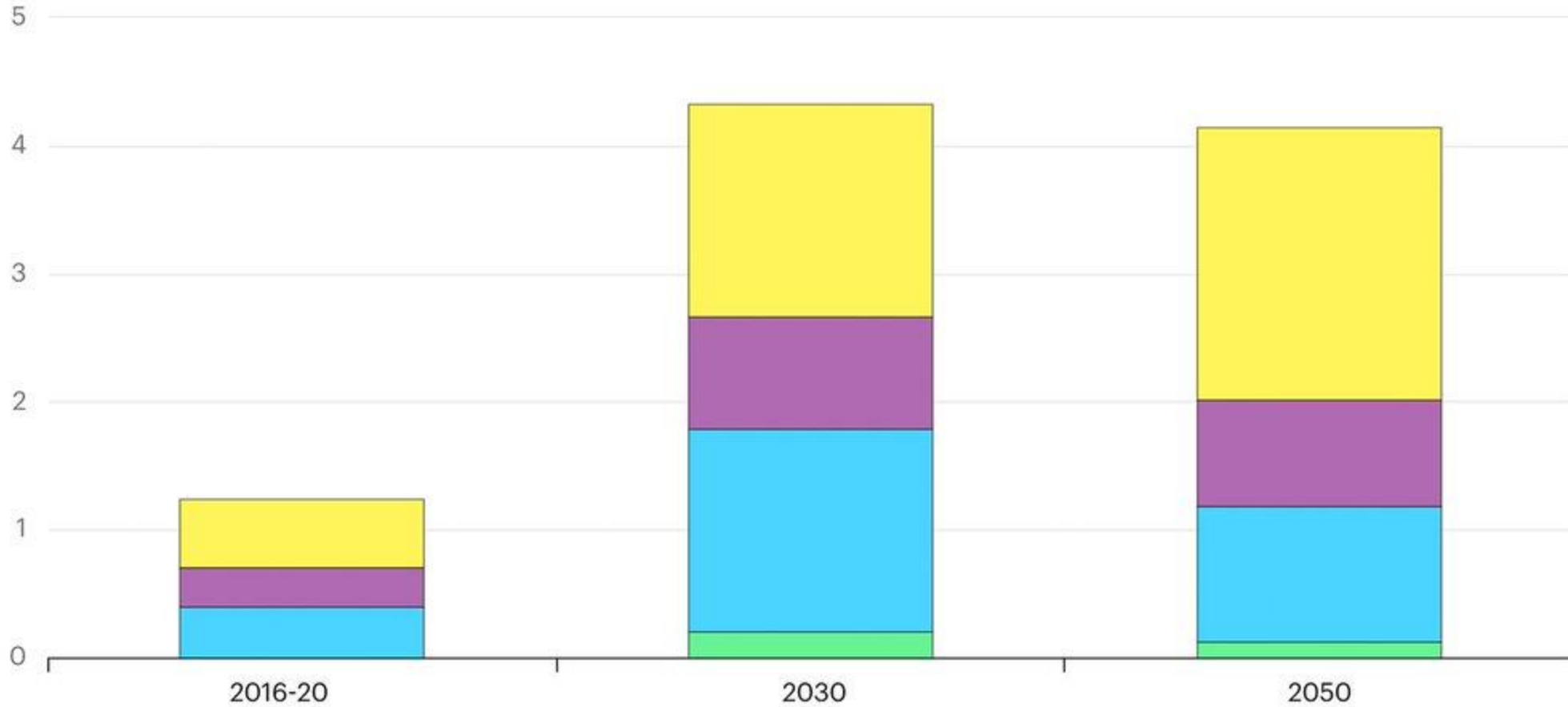
● Electricity and heat ● Industry ● Transport ● Buildings ● Other

## Clean energy investment in the net zero pathway, 2016-2050

Net Zero by 2050: A Roadmap for the Global Energy System

trillion USD (2019)

● Low-emissions fuels ● Electricity generation ● Energy infrastructure ● End-use



International  
Energy Agency

## Key technologies for net zero

- RES (solar, wind, hydro, geothermal)
- low-carbon gases and fuels
- energy efficiency
- new infrastructure: transmission, distribution, smart grids
- storage and digitalization
- end use: EVs, retrofitting, heat pumps, demand-side mgmt
- hydrogen as fuel and feedstock
- Carbon capture, storage and utilization (CCUS)

## Key aspects

- understanding the local situation
- cross-border cooperation
- developing the right regulatory and policy context
- economic situation is much more challenging in Eastern and Southern Europe: every EUR invested in these regions has bigger value than in Western EU
- Brussels has to be supportive
- Just Transition



## Ukraine's energy system to be integrated with the European system by 2023

## Timmermans: EU countries need to face the consequences of higher climate goals

EU Parliaments votes to place a carbon price on imports from less climate-ambitious countries

**ENERGY NEWS** By Newsroom February 6, 2021

Kadri Simson: the hydrogen potential of the CEE region

**Consultation launched on Gas Interconnection Points at EU external borders and within the Energy Community**

**Renewables could cover more than one-third of energy demand in Central and South Eastern Europe**

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# Key-elements East-European Energy Transition Entrepreneurial Opportunities Program

Business Portfolio Strategy

Business Development Accelerators

In-depth understanding regional circumstances

**Enlit**  
Europe



Denisa Kasa  
Program manager

# Energy transition in Germany

Germany is often praised as being the frontrunner in the transition to renewable energy

- “feed-in tariff” key driver of this trend because of the stable investment situation
- tariff has been reset every year to reflect the falling costs of wind and solar technologies
  - From 2016 onwards, large solar and wind installations with more than 750 KW capacity no longer qualify for a feed-in tariff but instead must bid in a government-managed auction

Challenges:

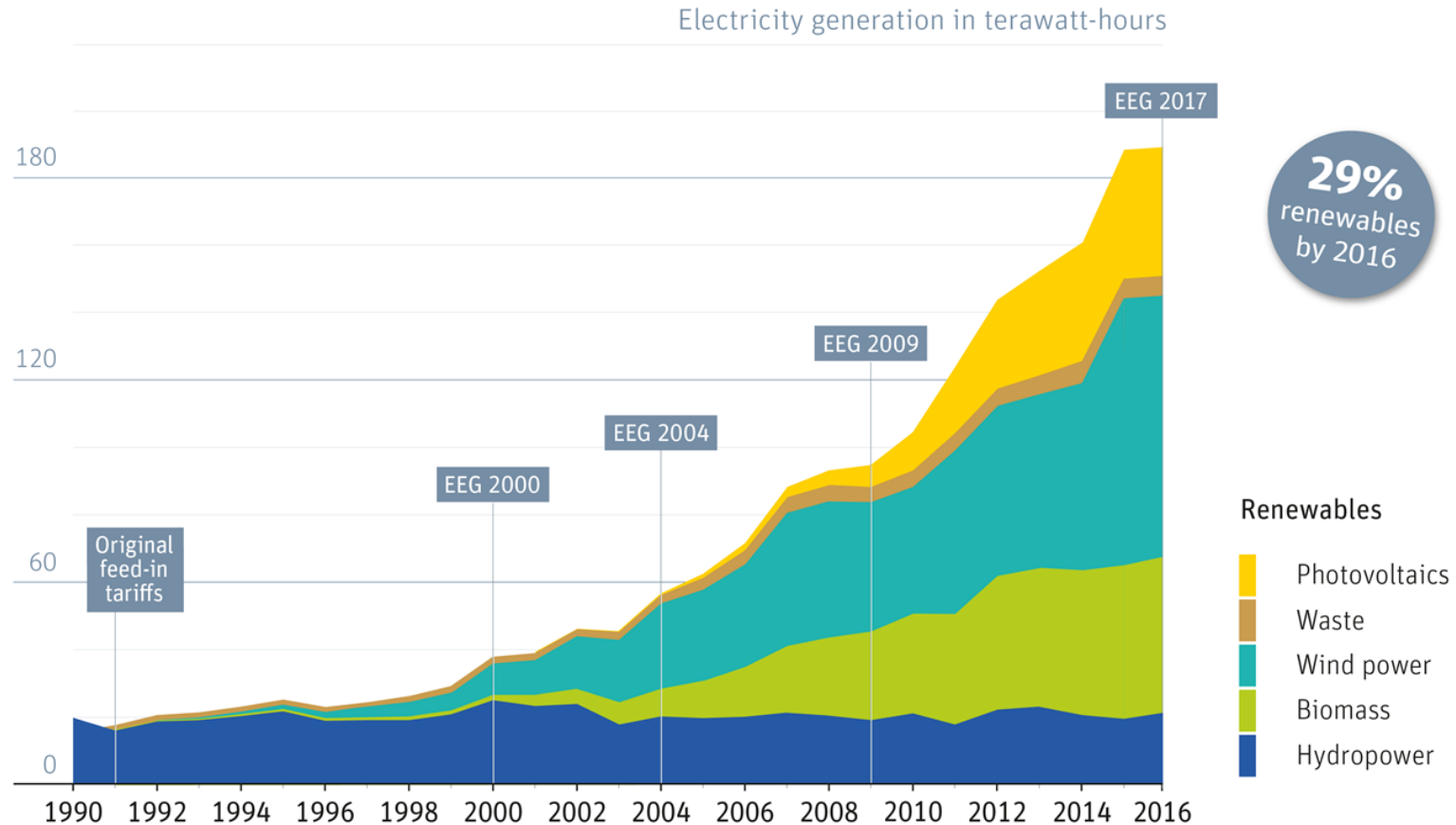
- to align the old system with the new one based on renewables

# Energy transition in Germany

## Feed-in tariffs grow renewables

Renewable electricity generation in Germany, 1990–2016

Source: BMU



# Energy transition in Germany



**EON Loosens Ties to Old Energy as Uniper Starts Trading**

**RWE Plans Private Placements of Innogy as It Readies IPO**

# Energy transition in Spain

*Ten years ago, Europe looked to Spain with its rapidly expanding renewables sector. Such glory days are in the past*

**SPAIN**

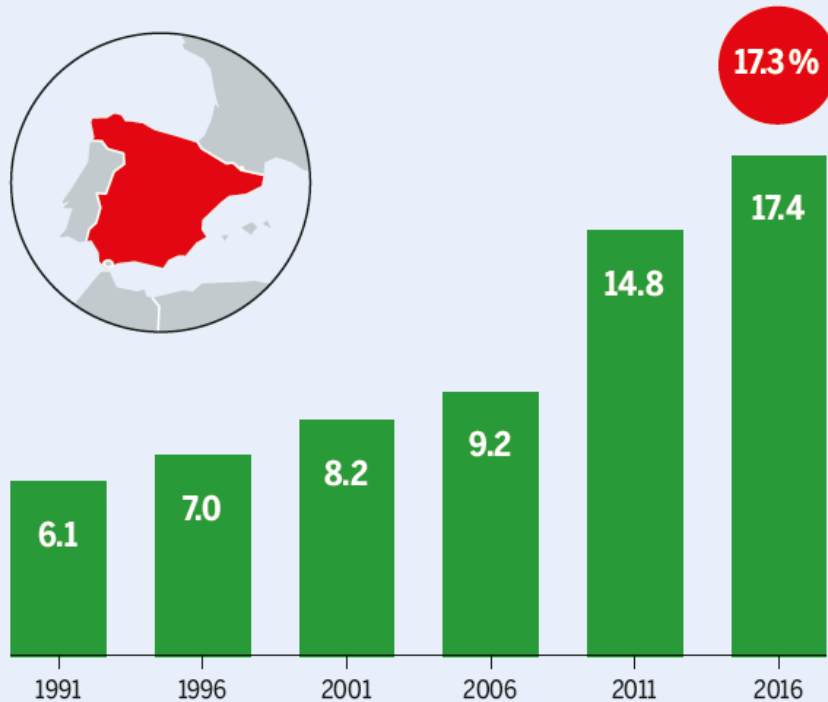
## **RICH IN SUN, POOR IN POLITICS**

Sun-drenched and zephyr-kissed, Spain occupies a corner of Europe that is ideal for solar and wind power. After an initial surge of investment in renewables, the flaws of the government's energy policy became evident, and the authorities slammed the brakes on investment. There are signs that they may now be relenting.

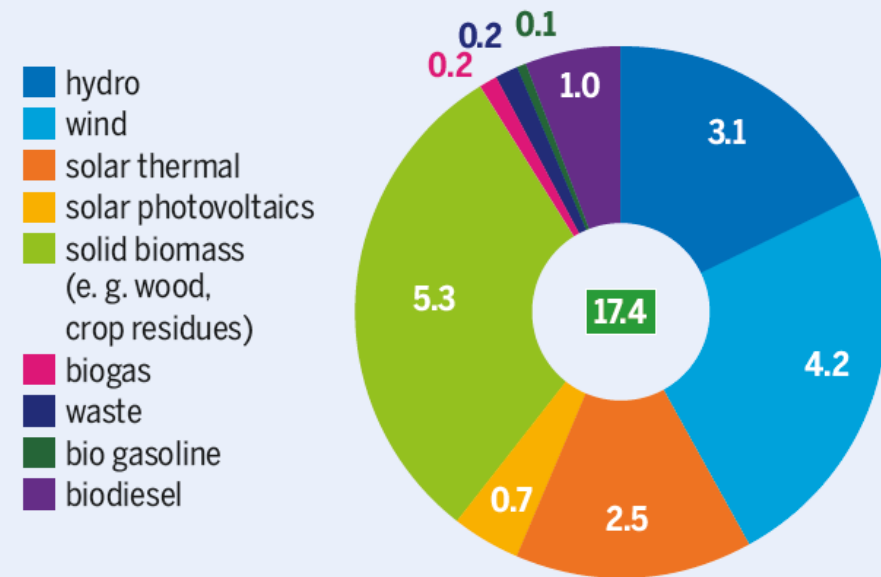
# Energy transition in Spain

## SPAIN – YESTERDAY'S STAR

Renewable energy consumption, million tonnes of oil equivalent, and share in gross final consumption of energy, percent



Renewable energy consumption by source, 2016, million tonnes of oil equivalent



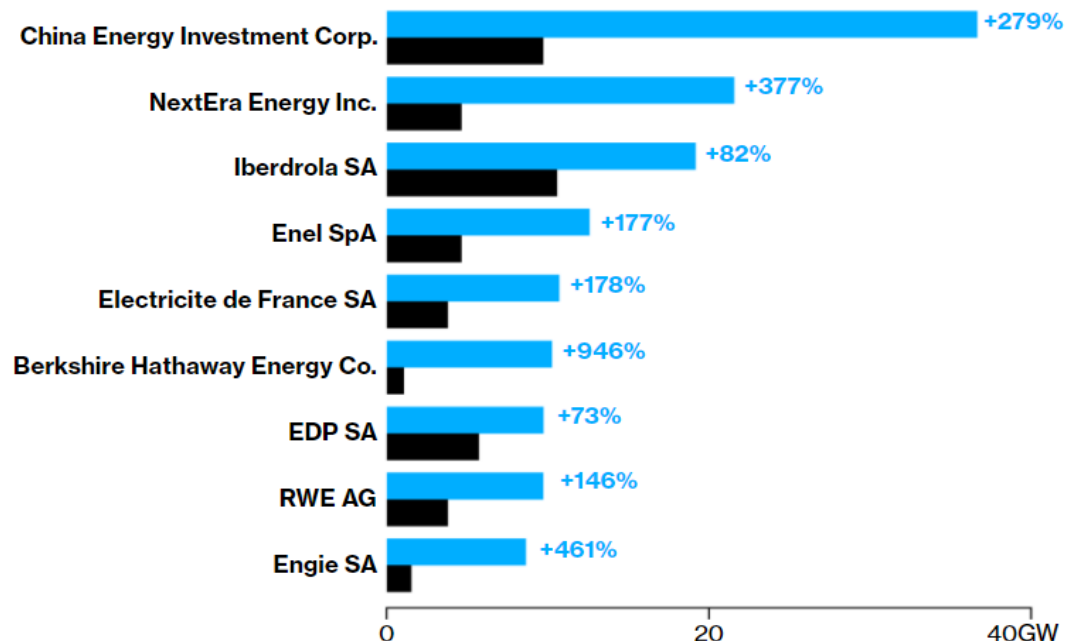
© ENERGYATLAS 2018 / EUROSTAT

# Case: Enel

## Green Supermajors

Installed capacity of the largest companies has grown 207% since 2010

■ 2010 ■ 2020



Note: BloombergNEF captures only publicly available capacities  
Source: BloombergNEF

## Enel

Renewables capacity  
44GW

Market cap  
\$103B

Employees  
67K

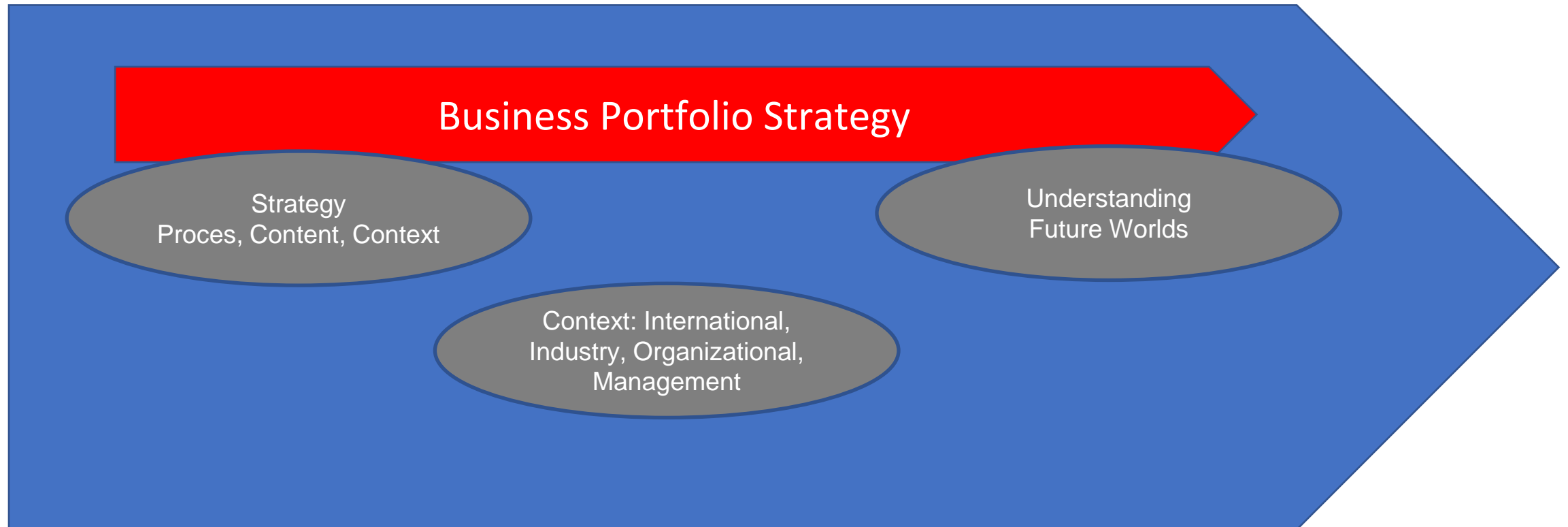
**Locations:** Based in Italy, operating in more than 30 countries including Morocco, South Africa, Chile, India and Canada

**Investment pipeline:** \$190 billion to 2030

Enel is Europe's biggest utility. Its green power unit was founded in 2008, making it one of the veterans of the clean energy market. The company plans to spend 160 billion euros (\$190 billion) over the next 10 years to more than double its renewable portfolio. With its broad geographic reach, Enel is positioned to help a growing number of countries make the transition to cleaner grids.

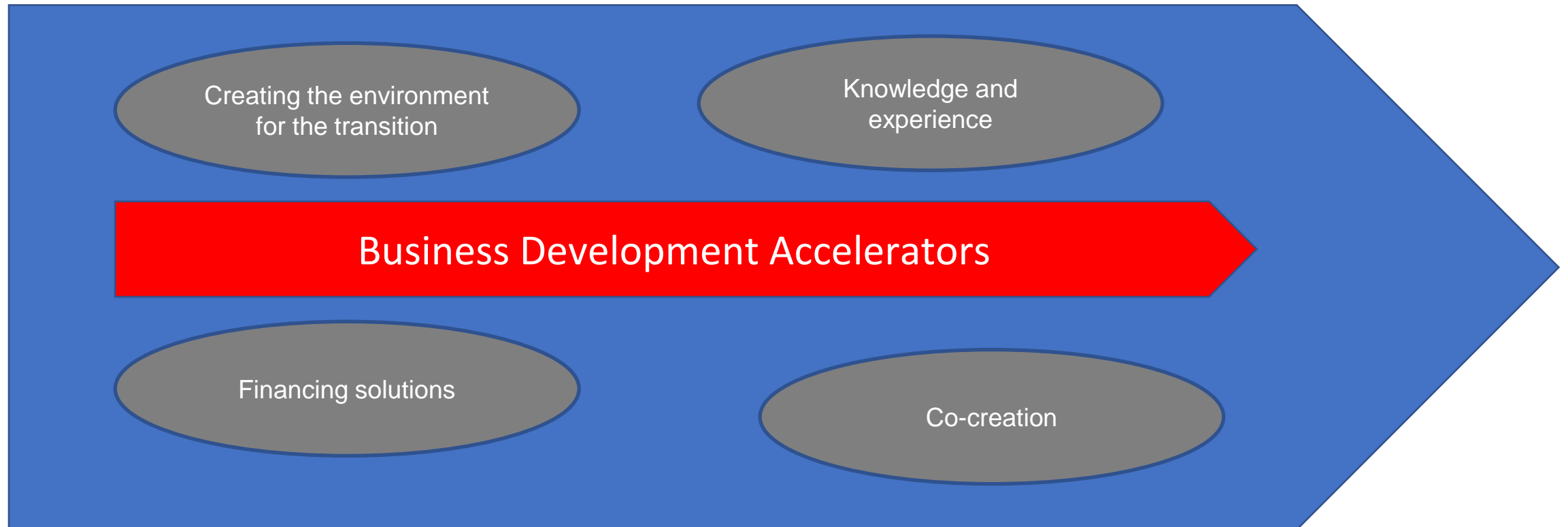
**Big goal: Boost renewable capacity to 120 gigawatts by 2030**

# East-European Energy Transition Entrepreneurial Opportunities

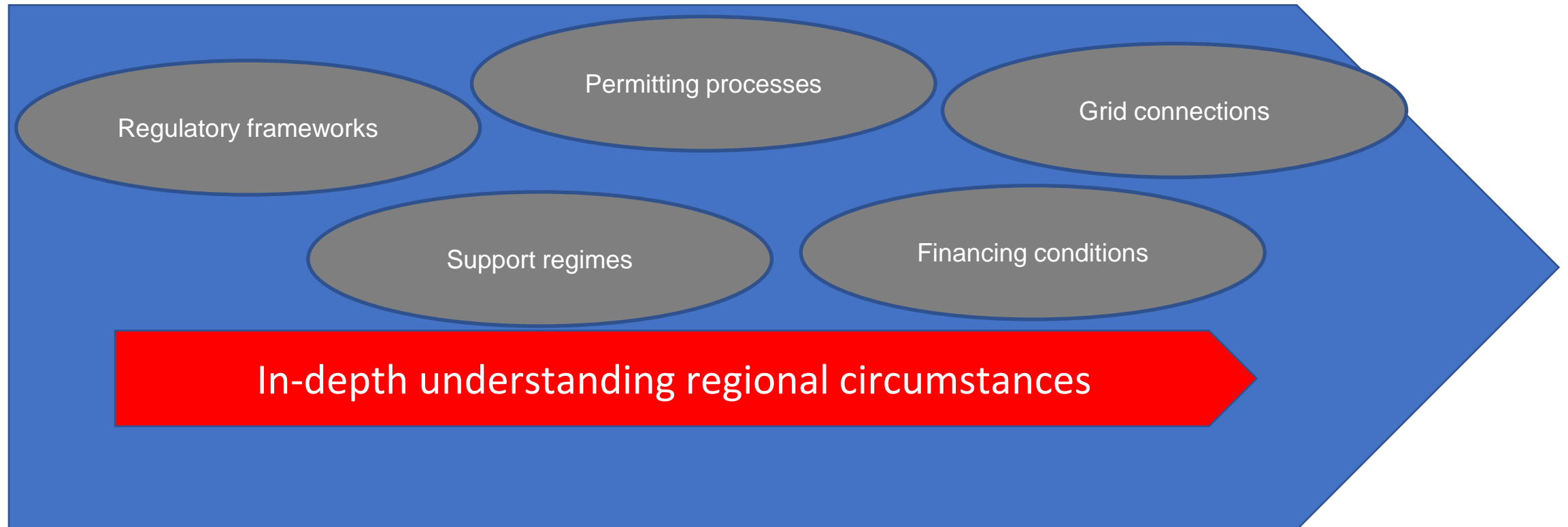




# East-European Energy Transition Entrepreneurial Opportunities



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# Energy Asset Classes



Hydro Power Plant



Solar (PV) Power Plant



Biomass Power Plant



Windfarm

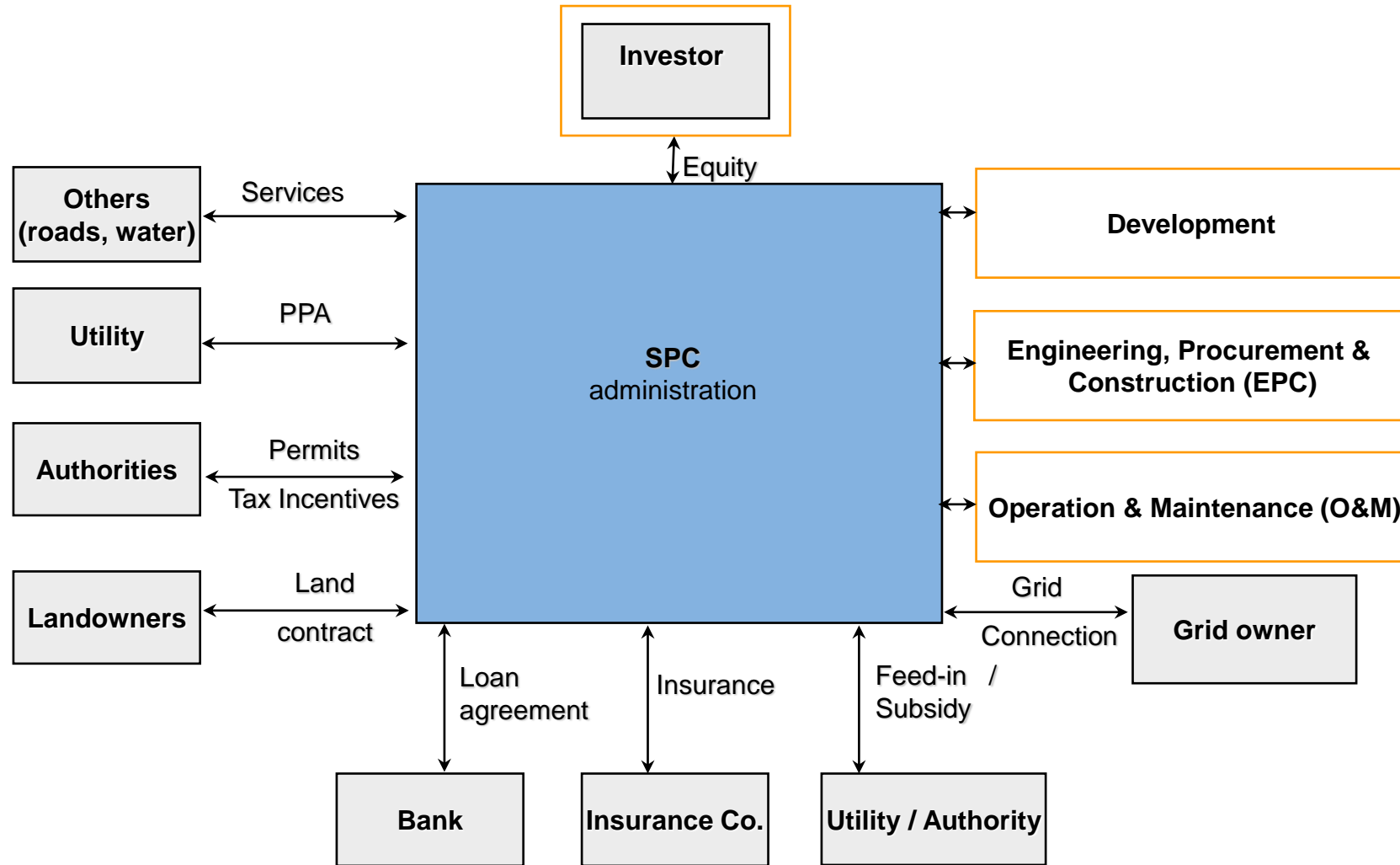


Waste to Energy Plant

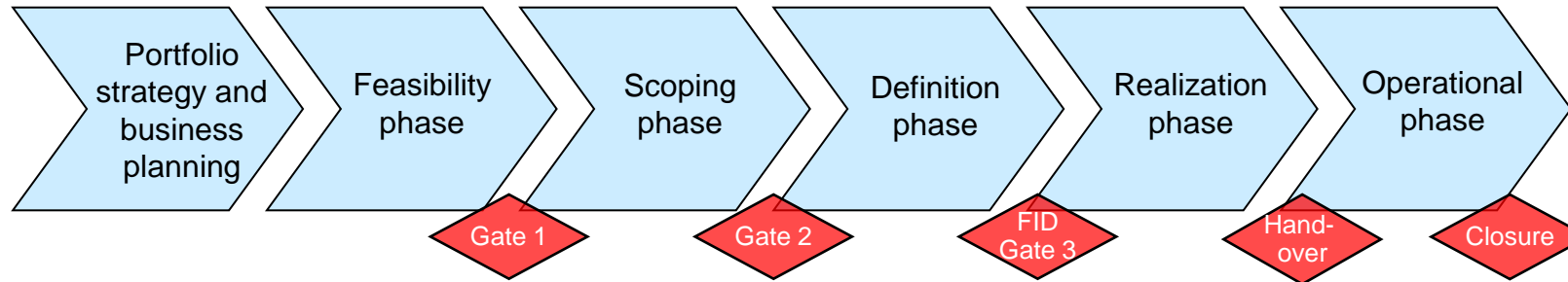


Combined Heat and Power Plant

# Structuring of an energy asset in a SPC



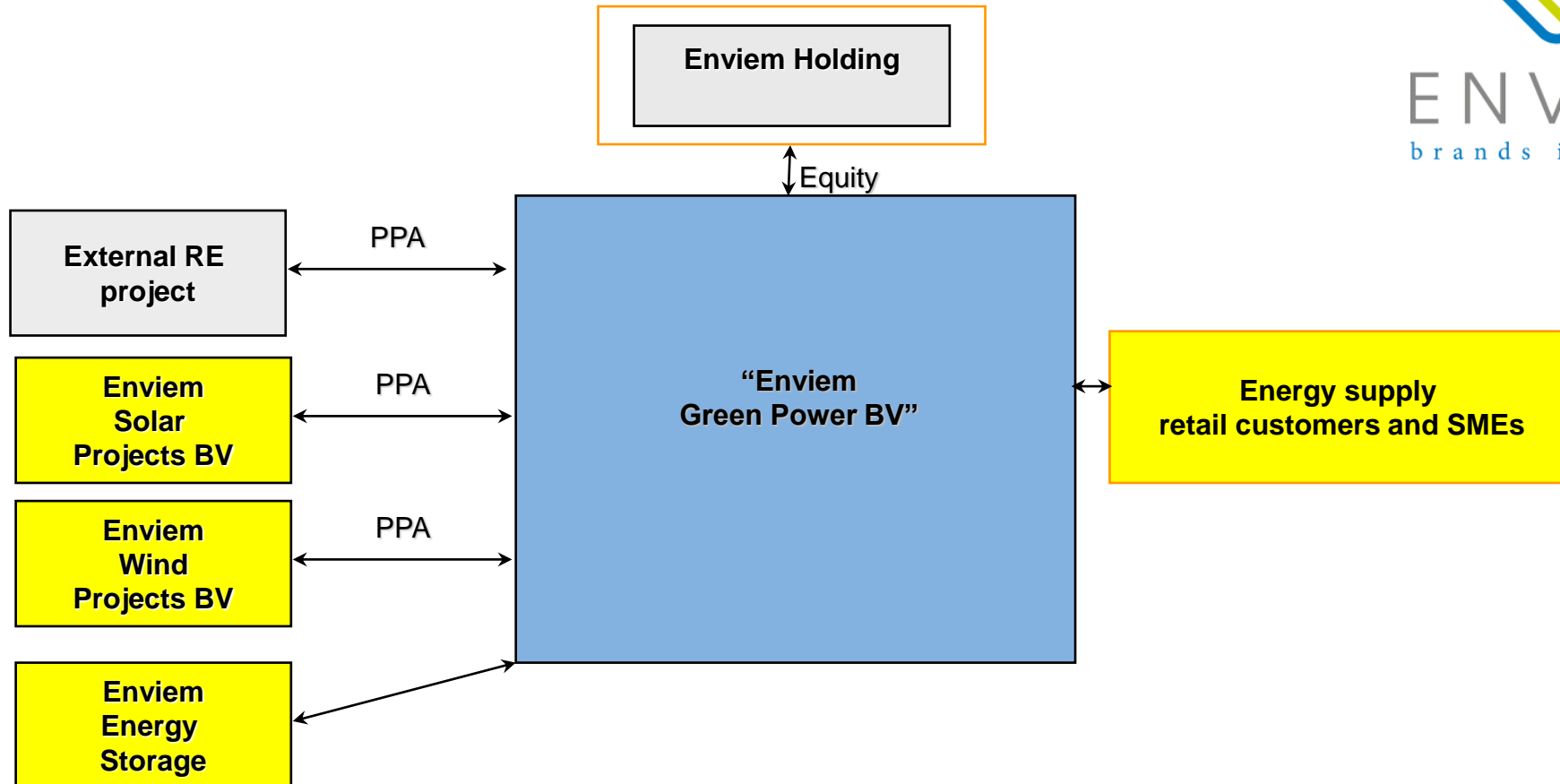
# Project lifecycle – overview



Six phases can be distinguished in the project lifecycle:

- |  |   |
|--|---|
| Portfolio strategy and Business Planning | : Select relevant activities for organization based on the long term strategy and scope |
| Feasibility                              | : Assess leads on their feasibility (identify show-stoppers)                            |
| Scoping                                  | : Select and optimize business opportunities  |
| Definition                               | : Define, negotiate and finalize contracts  |
| Realization                              | : Realization of the project (including commissioning)                                  |
| Operational                              | : Operational management of asset   |

# Enviem Green Power



<https://www.enviem.nl/en>

# Enviem Green Power

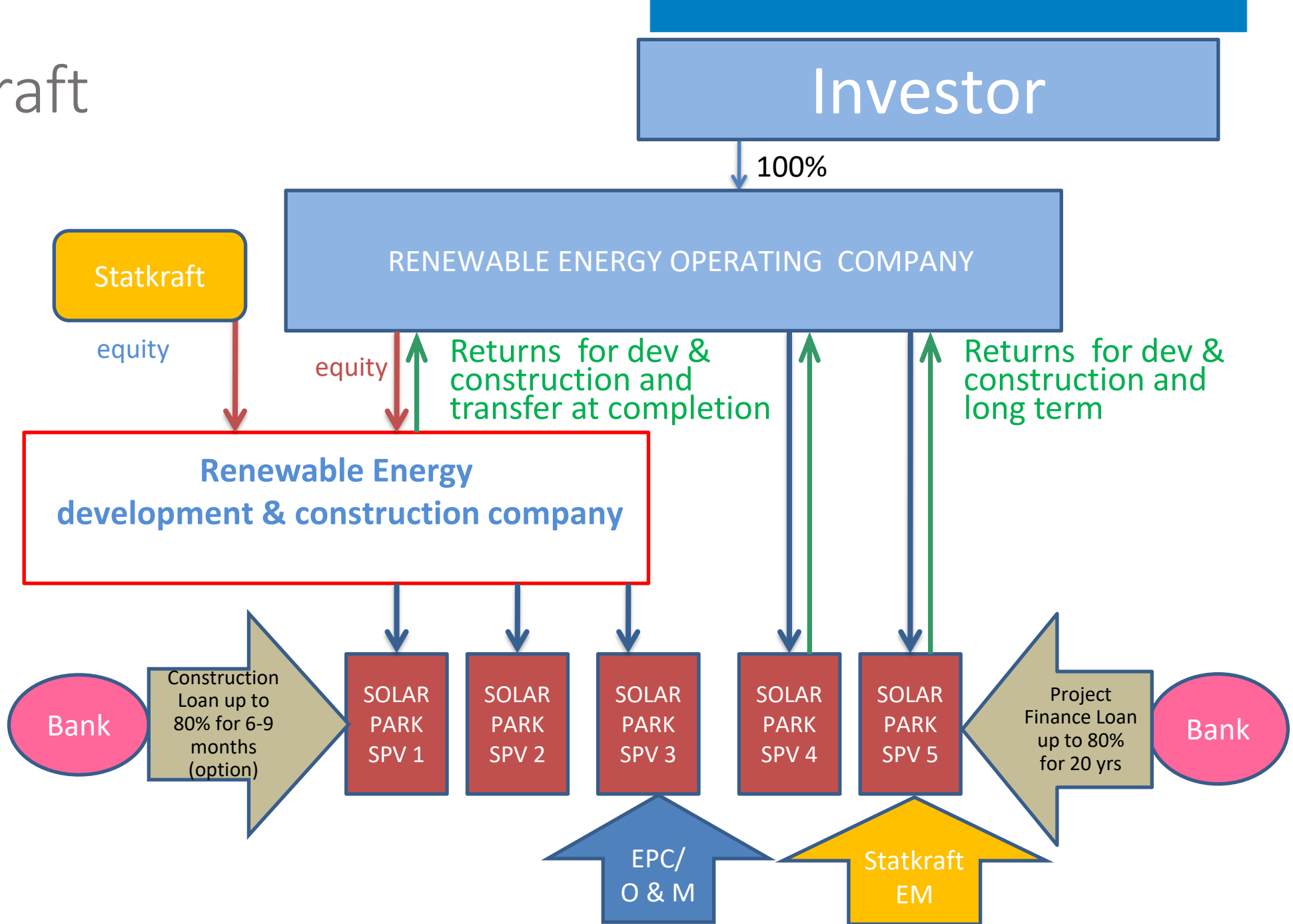


ENVIEM  
brands in motion





# Statkraft



# Case: Statkraft

## Purchase of Solarcentury shares completed

27 NOV, 2020

Today, Statkraft completed the acquisition of Solarcentury, a global solar developer headquartered in London.

#News #Solar power



With the completion of the transaction, Statkraft becomes the owner of 100 per cent of the shares in Solar Century Holdings Ltd and its subsidiaries. After an interim period, in which Solarcentury will continue to operate as a distinct business unit, the plan is to merge the two teams under the Statkraft brand within 2021.

Announcing the acquisition on 2 November, Christian Rynning-Tønnesen, CEO of Statkraft stated:

"This acquisition is in line with our strategy to ramp up as a wind and solar developer and become one of the leading renewable energy companies globally. Just like hydropower and solar power complement each other, Statkraft and Solarcentury are an excellent fit in terms of purpose and people. Joining forces will accelerate our growth and continue to drive the energy transition forward."

Established in 1998, Solarcentury is a leading global solar power company that develops, constructs, owns and operates utility-scale solar and smart technology. Solarcentury is known internationally for developing and building some of the largest utility-scale solar projects in the UK, the Netherlands, Spain, Kenya and Mexico, including pioneering projects such as the world's first solar bridge at Blackfriars Station in Central London.

Solarcentury's mission is to make a meaningful difference in the global fight against climate chaos by making solar power the dominant energy source worldwide. During Solarcentury's 22-year history the business has helped solar power become mainstream, and the company's projects have generated 6 TWh of clean electricity, saving over 1.7 million tonnes of CO2 emissions.

<https://www.statkraft.nl/en/solar-development/>

# Case: Vopak



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## Vopak and HyET Solar Collaborate on IMW Thin-film Storage Tank Application

HyET Solar Netherlands BV has received an order from Royal Vopak to apply thin-film PV modules (Powerfoil) on one and potentially two of their large oil storage tanks in Rotterdam, subject to regulatory and permit approval. Powerfoil is the only suitable Solar PV candidate for this application because of its unique product characteristics such as low weight, flexibility and ATEX certification. The project will result in 1 MWp of cost-effective power generation capacity.

Amnhem, April 3rd 2020



"We will make electricity so cheap that only the rich will burn candles"  
- Thomas A. Edison

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## ELESTOR enters cooperation with Vopak for scaling HBr Flow Battery Technology

May 6th, 2021 | 0 Comments



Left to right: Vopak: Marcel van de Kar (Global Director New Energies), Feikje Wittermans (Business Development Manager), Patrick van der Voort (Division President Europe & Africa). Elestor: Guido Dalesi (CEO), Wiebrand Kout (CTO), Hylke van Bennekom (COO)

### Recent Posts

- > Wire based electrospun composite short side chain perfluorosulfonic acid/polyvinylidene fluoride membranes for hydrogen-bromine flow batteries
- > Performance mapping of cation exchange membranes for hydrogen-bromine flow batteries for energy storage
- > Low-cost wire-electrospun sulfonated poly(ether ether ketone)/poly(vinylidene fluoride) blend membranes for hydrogen-bromine flow batteries
- > In situ long-term membrane performance evaluation of hydrogen-bromine flow batteries
- > Effect of Bromine Complexing Agents on Membrane

# Case: Zonnegilde – Solar on industrial rooftops



**ZONNEGILDE**  
*Duurzame energie op maat*



(<https://www.zonnegilde.nl/>)

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