

*“Bridging the financing gap for Green Transition”*



**European  
Investment  
Bank**

*The EU bank*

## Relevance of Thematic Impact Finance for Innovation Fund eligible projects

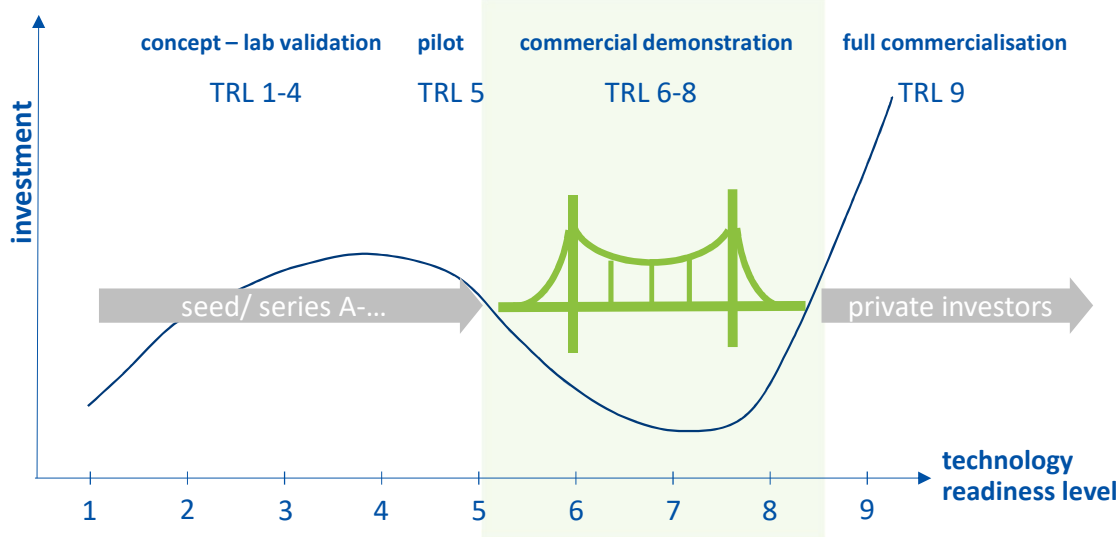
Francois Gaudet, Head of Thematic Impact Finance Operations

# What is THEMATIC IMPACT FINANCE ?



# The Challenges of the Commercialisation of Innovation

Impact Finance Mandates aim to bridge the so-called “Valley of Death”



De-risk

Without an established market and a track-record of the performance of a technology, private investors have a **high-risk perception** of commercial demonstration projects.



Demonstrate

Demonstration projects build **investor confidence** in a promoter’s ability to deliver, the performance of the technology and market demand for the product/service.



Capacitate

The EIB helps promoters to **bridge the financing gap** on their pre-commercial projects. It supports and accelerates the implementation of climate-friendly innovation.



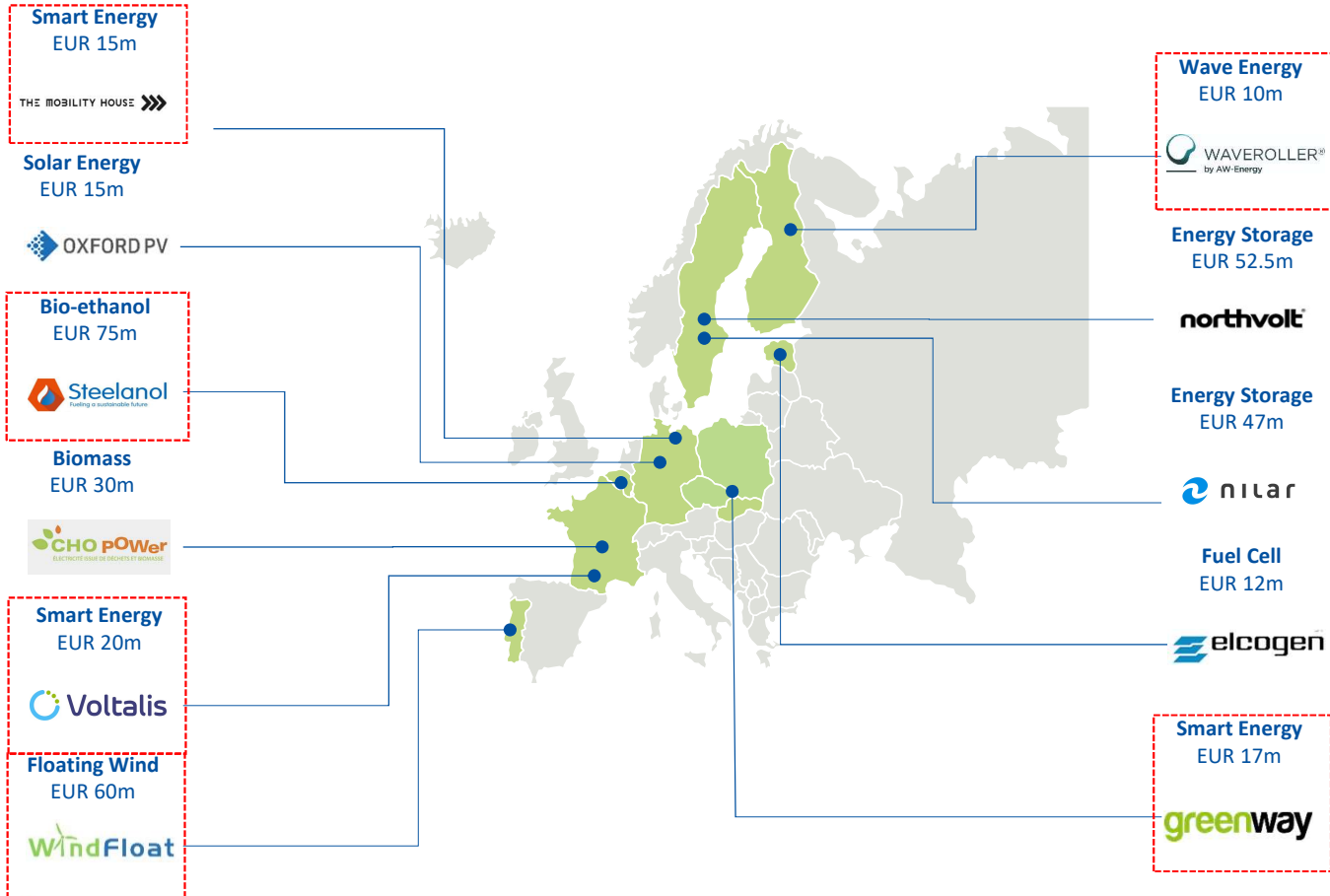
Capacitate

Development of new technologies requires **patient capital** which EIB can provide to allow the crossing of the valley of death until commercial demonstration is achieved

# Energy Demonstration Projects Signatures

€361m of Financing signed to support innovative Energy Projects

**NER300**  
Highlighted projects are NER300 Supported

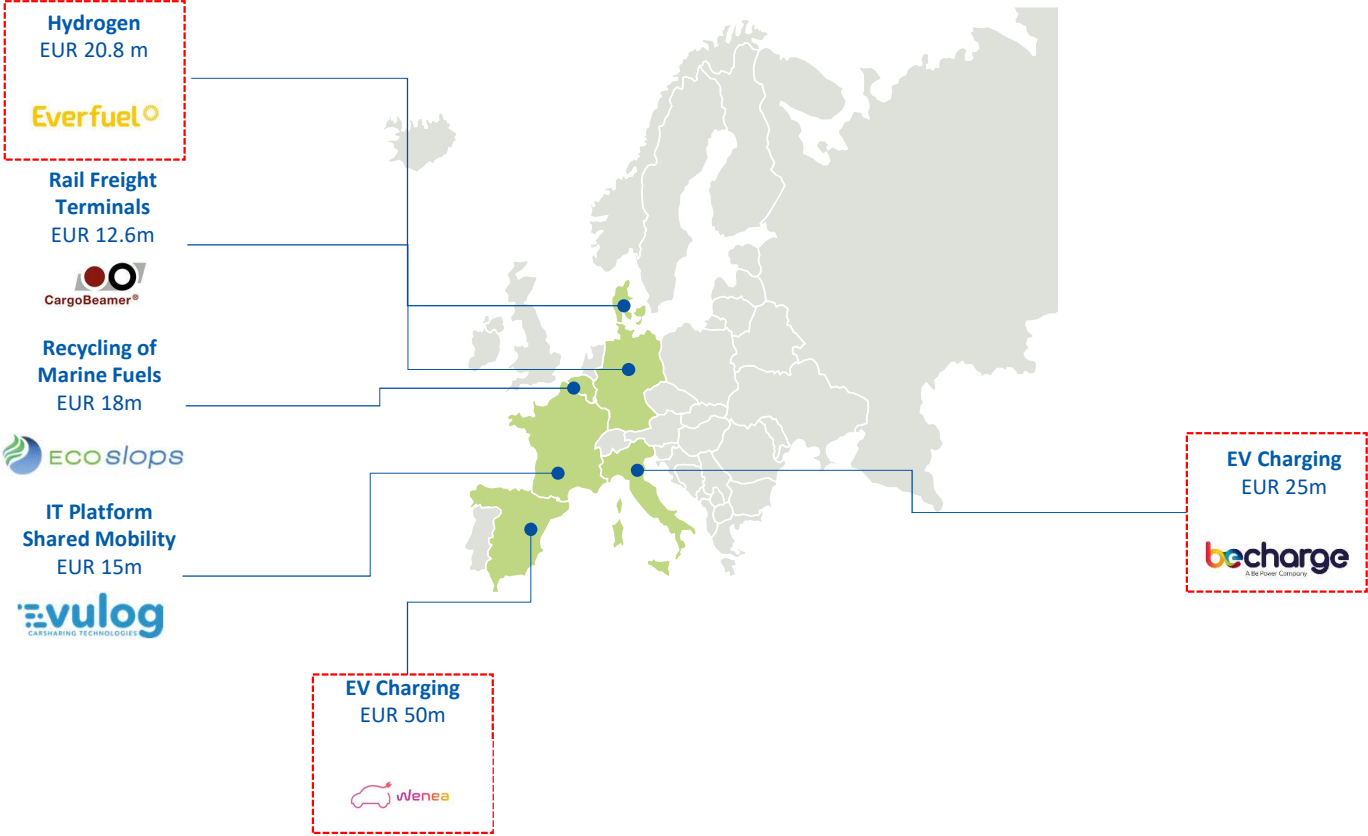


Energy Storage  
EUR 7,5m  
Israel  
**BRENMILLER ENERGY**

# Future Mobility Signatures

€141.4m of Financing signed to support Future Mobility Projects

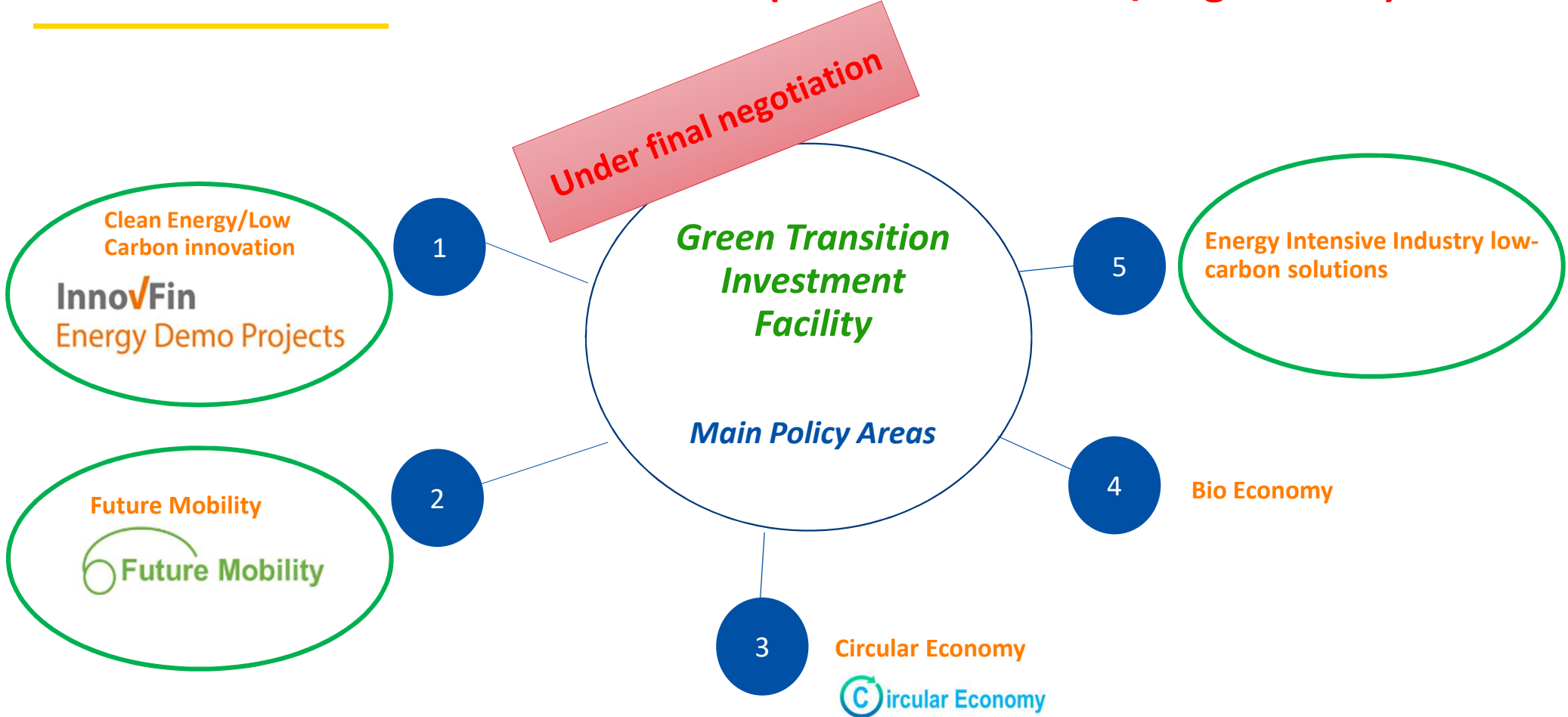
**NER300**  
 Highlighted projects are  
 NER300 Supported





## THEMATIC IMPACT FINANCE under the INVESTEU Green Transition Investment Facility

# Future of thematics under Invest-EU (under finalisation/negotiation)



# Perspective on Thematics under Green Transition Investment Facility

1

## Significant Market Traction

- ▶ Healthy pipeline with EUR275m volume expected in 2021.
- ▶ Momentum building on hydrogen related projects, CC(U)S, storage and grid solutions, EV charging, alternative fuels (wind, methanol, synthetic fuels).

2

## Limited InvestEU resources for a growing number of sectors

- ▶ InvestEU resources have been pared down
- ▶ Allocations under discussion do not provide for a funding business plan at current cruising speed
- ▶ New focus on circular economy and bio economy will bring competition on resources

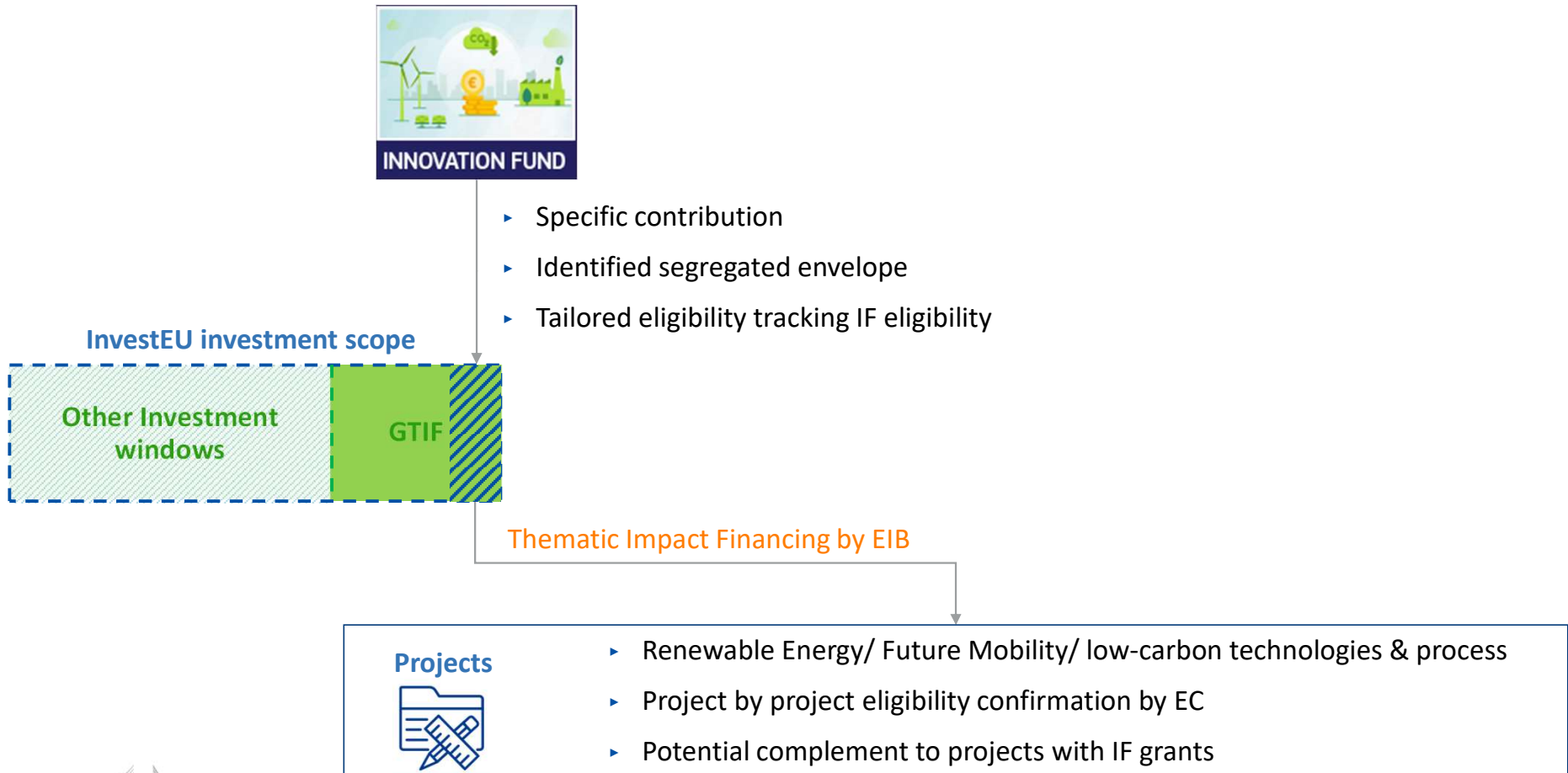
3

## ▶ Heavy Industry low-carbon solutions

- ▶ The financing challenges of the heavy are very similar to that of other sectors benefitting from thematic impact finance tools
- ▶ Targeted industries include steel, chemical, fertilizer and cement,
- ▶ Significantly larger tickets expected to accelerate transition



# Innovation Fund top up of Green Transition Investment Facility



# CASE STUDIES OF NER300 SUPPORTED PROJECTS

# WINDFLOAT

## First Iberian Floating Offshore Wind

- ▶ Design and installation of a 25 MW floating windfarm 20 km off coast of Portugal, 85-100 water depth.
- ▶ 3 floating substructures each one with a wind turbine of the 8.4 MW.
- ▶ Project viability is underpinned by a 20 year Feed in Tariff.
- ▶ Experienced promoter's consortium EDPR, Repsol & Engie.
- ▶ EIB loan under InnovFin EDP (NER300 supported), blended with grant funding from the EC (NER 300) and the Portuguese government.
- ▶ Major part of the project is built in Iberia, using the naval and steel industries of both Spain and Portugal.



Climate Action

- ▶ The Project contributes to the general objective of Climate Change, with a focus on marine energy.



Demonstrate

- ▶ If successful, the project will “pave the way” for the floating offshore technology which will allow the use of maritime sites not feasible today.



De-risk

- ▶ Key Project for de-risking the technology, which will be replicated in other parts of Europe (France, UK).

# WINDFLOAT

*First Iberian Floating Offshore Wind*



# GREENWAY

*Roll-out of a network of electric vehicles charging stations in Central and Eastern Europe*

- ▶ EUR 17m quasi equity financing to GreenWay, Slovakia's leader in electric vehicle charging stations and services. This is the first EDP operation in Slovakia.
- ▶ National pilot network in Slovakia established since May 2016, with 60 fast charge stations and 1,500 registered users
- ▶ Besides ultra-fast charging stations, deployment at the end of 2017 of a pilot battery assist fast charging system to optimize the local energy management and potentially also provide additional energy services to the grid
- ▶ Project will support the development of the electric charging equipment and automotive industry, and related suppliers through the accelerated deployment of EV infrastructure and associated EVs



# NER300



Climate Action

- ▶ Supports the decarbonisation of transportation by promoting alternative fuels



Demonstrate

- ▶ Demonstrates the feasibility of commercial-scale deployment of ultra fast charging stations for EV and the pilot of an integrated battery energy storage system



Crowd-in

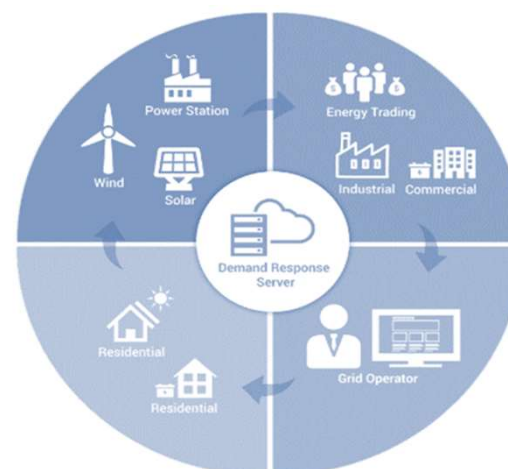
- ▶ Allows for the financing of a high risk project and an early stage venture

# VOLTALIS

## Innovative Demand Response Solution

- ▶ EUR 20m senior debt financing to a French SPV operated by Voltalis and co-owned by the Meridiam Transition Fund and Voltalis for the acquisition of 500MW of Demand Response (DR) capacity
- ▶ A patented technology reducing electric load of consumers in real time. The virtual energy management system employs two-way secured communication and real time algorithms that are based on machine learning
- ▶ The project comprises the manufacturing of smart devices and switches
- ▶ Voltalis will operate and maintain, and provide smart aggregation solutions at the interface between electricity consumers, wholesale markets and TSOs

EUR 20 M



NER300

FRANCE



Climate Action

- ▶ Supports the decarbonisation of power systems by decreasing demand when the system is tight, by adjusting the timing of power consumption to when supply of low-carbon sources is more abundant. DR ensures resource adequacy of power systems by reducing peak load and increasing demand flexibility



Demonstrate

- ▶ Demonstrates the capability and reliability DR on energy markets and of an emerging market in the field of distributed energy sources



Crowd-in

- ▶ Allows for the financing of a high risk project and an early stage venture

# VOLTALIS

*Innovative Demand Response Solution (French)*



# STEELANOL

## Decarbonization of the Steel Industry

- ▶ EUR 75m loan to C-Shift a Belgian company wholly owned by ArcelorMittal Belgium, part of ArcelorMittal Group
- ▶ The loan is supporting two demonstration projects worth EUR 215m in total:
  - ▶ Torero: a EUR 50m plant to convert waste wood into bio-coal, partially replacing the coal currently injected into the blast furnace
  - ▶ Steelanol : a EUR 165m plant that will capture waste gases from a blast furnace and biologically convert them into recycled-carbonethanol. The ethanol produced can be blended for use as a liquid fuel

EUR 75 M

NER 300



Climate Action

- ▶ The projects are set to reduce up to 350,000 tonnes of CO2 emissions per year in the first phase



Demonstrate

- ▶ Industrial-scale demonstration of innovative technologies that support the decarbonization of the steel industry



Accelerate

- ▶ Accelerates the transition needed in the steel industry to meet the EU's climate objectives



# STEELANOL

*Decarbonization of the Steel Industry*

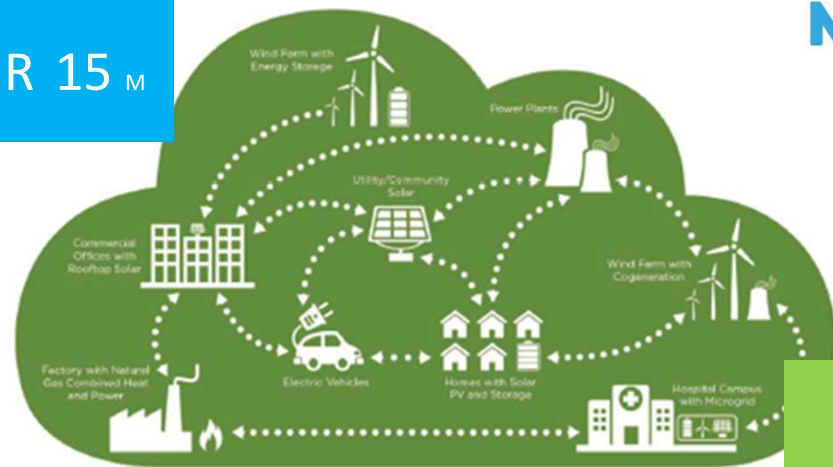


# THE MOBILITY HOUSE

## Building the Internet of Storage

- ▶ EUR 15m senior quasi-equity financing to finance the design, development and implementation of a proprietary, fully-fledged, combined electricity-mobility platform providing services to the power grid
- ▶ Investments are expected to take place in Germany, France and the Netherlands, where the Company plans to scale-up its technical and commercial operations to fully demonstrate the viability of its infrastructure and business model
- ▶ The Company has been building and developing Vehicle-Grid-Integration, complementing stationary storage to enable “Internet of Storage” solutions. Its portfolio of distributed assets consists of stationary storage and fleets of EV batteries

EUR 15 M



Climate Action



Demonstrate

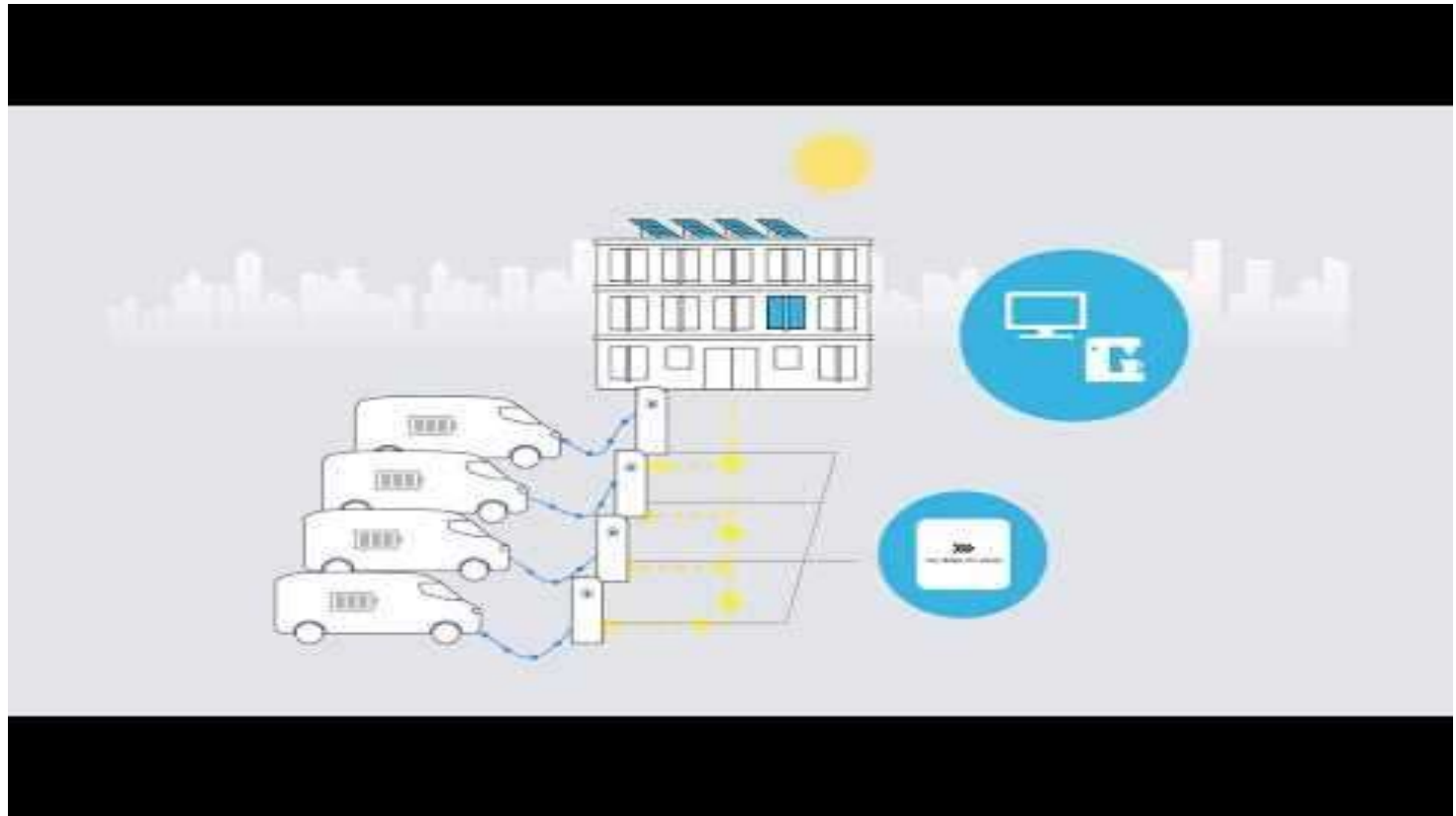


Crowd-in

- ▶ Deployment of innovative electric charging infrastructure at the crossroads between the automotive and the electricity industry, in conjunction with related stakeholders, enabling the accelerated market uptake of EVs assets
- ▶ Deployment of an innovative platform combining charging points, EVs batteries and stationary energy storage assets to provide services to the electricity networks. This holistic “internet of storage” concept will be a first-of-a-kind deployment in the EU
- ▶ Allows for the financing of a high risk project and an early stage venture

# THE MOBILITY HOUSE

*Building the Internet of Storage (German)*



# BE CHARGE

## Electric Vehicle charging Stations

- ▶ EUR 25m quasi equity financing the expansion of public Electric Vehicle Chargers (EVC) stations across Italy.
- ▶ The project targets to deploy a network of 11,000 new EVC by 2030 all across the Italian territory.
- ▶ EU Policy fit:
  - ▶ Decarbonization of transport through transition to innovative and sustainable transport technologies,
  - ▶ Promotion of the deployment of electric vehicles infrastructure,
  - ▶ Support for the e-mobility market expansion

EUR 25 M

NER 300



ITALY



Climate Action

- ▶ Deployment of electric vehicles infrastructure, making EVC stations widely and easily available and supplying energy from renewable source



Accelerate

- ▶ Acceleration of the deployment of electric vehicle chargers via the roll-out of a nationwide network.



Demonstrate

- ▶ Demonstration of the possibility of making public electric chargers easily available to cover EV drivers needs and clear their concerns

# AW ENERGY

## Wave Energy Devices

- ▶ AW-Energy is a Finnish start-up company founded in 2002 with a research center in Finland and an operation site in Portugal.
- ▶ The Company designed and developed a wave energy device called WaveRoller.
- ▶ The company had successfully tested three small-scale (100kW) prototypes in normal marine environment in Portugal in 2012-2013.
- ▶ The Company has developed a full-scale prototype, which it intends to demonstrate in a real operational environment and then commercialize it to major power companies.
- ▶ The EIB EUR 10 m loan under InnovFin EDP intends to:
  - ▶ Part-finance the remaining development of the FOAK device.
  - ▶ Part-finance the first commercialization of the technology.



Climate Action

- ▶ The Project contributes to the general objective of Climate Change, with a focus on ocean energy.



Demonstrate

- ▶ Important project for demonstrating the feasibility of the wave energy technology at commercial scale.

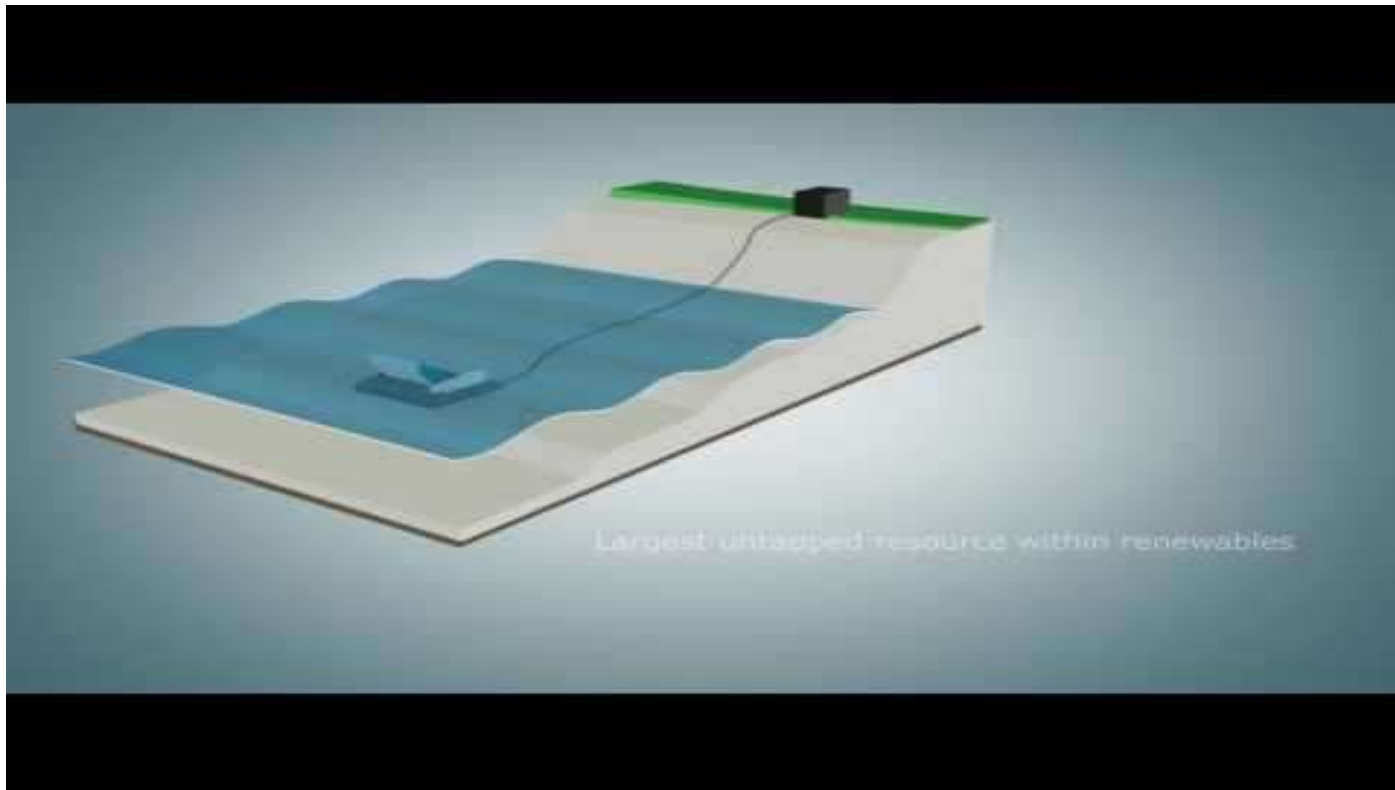


De-risk

- ▶ De-risking a new technology in the ocean space which is lacking of commercial investments.

# AW ENERGY

## *Wave Energy Devices (English)*

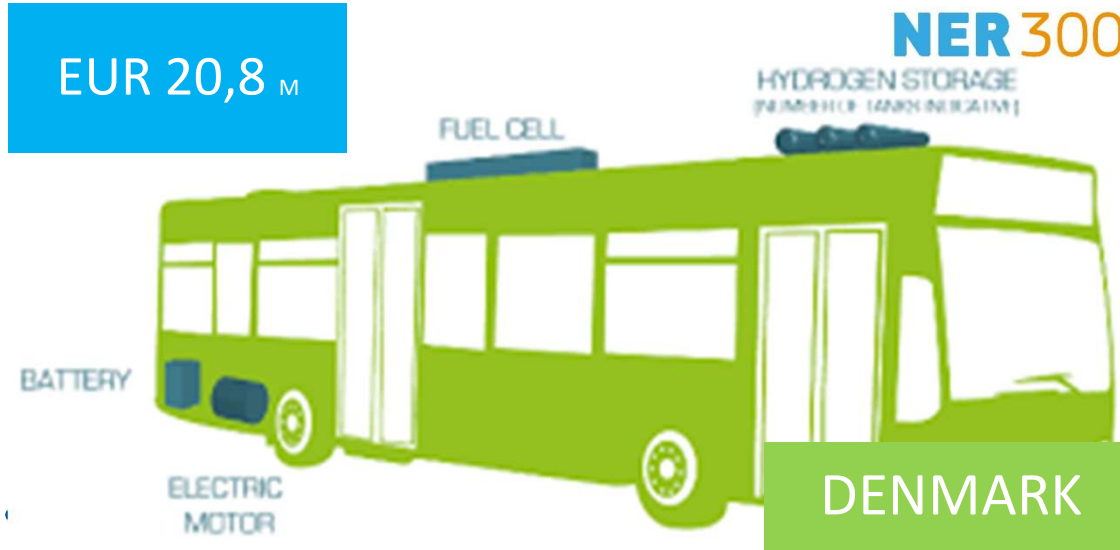


# EVERFUEL

## Hydrogen production facility and commercialisation

- ▶ EUR 20.8m quasi equity financing of hydrogen production and distribution infrastructure in Denmark, to supply green hydrogen to a fleet of fuel-cell electric buses.
- ▶ Support of private initiative to bring down the manufacturing cost of fuel-cell electric buses by up to 40%.
- ▶ EU Policy fit:
  - ▶ Decarbonisation of transport through transition to innovative and sustainable transport technologies
  - ▶ Rollout of hydrogen fuel-cell electric vehicles
  - ▶ Unlock the potential of competitive alternative technology to battery-powered buses
  - ▶ Stimulates carbon efficiency

EUR 20,8 M



Climate Action

- ▶ Deployment of zero-emission Fuel Cell Electric Vehicles (FCEV) powered by green hydrogen



Demonstrate

- ▶ Acceleration of the deployment of hydrogen-powered vehicles use by making fuel-cell transport modes a competitive alternative to battery- based and combustion engine based transport



Accelerate

- ▶ Demonstration of the advantages of hydrogen as a transportation fuel as part of a larger private initiative (H2 Bus Europe project)

# EVEREST

## Electric Vehicles Charging Station

- ▶ EUR 50m quasi equity financing the expansion of public Electric Vehicle Chargers (EVC) stations across Spain.
- ▶ The project targets to deploy a network of 476 fast charging points by end of 2023.
- ▶ EU Policy fit:
  - ▶ Promotion of the deployment of electric vehicles infrastructure
  - ▶ Support for the e-mobility market expansion
  - ▶ Decarbonisation of transport by promoting EVC network



Climate Action

- ▶ Deployment of electric vehicles infrastructure, making EVC stations widely and easily available and supplying energy from renewable sources



Demonstrate

- ▶ Acceleration of the deployment of electric vehicle chargers via the roll-out of a nationwide network



Accelerate

- ▶ Demonstration of the possibility of making public electric chargers easily available to cover EV drivers needs and clear their concerns