

**New Ventures**  
RESEARCH & INNOVATION

# ENGIE NEW VENTURES





# ENGIE is at the forefront of the energy transition

## A global energy leader...

With a **purpose to accelerate the transition** toward a carbon-neutral economy.

With 58 B€ turnover in 2021, we take action throughout our entire value chain in our 4 core activities:

Renewable Energy

Thermal & Supply

Network

Energy solutions

## 2021 figures

**102,000** employees

**138 M€** spent on R&D

**57.9 B€** revenues

**4.3 B€** growth investment

**100 GW** installed power generation capacity

**3 GW** extra installed renewables capacity in 2021



**Building today the low-carbon energy system of tomorrow:  
Sustainable – Reliable - Affordable**

## ...with ambitious decarbonization targets

Achieve **NET Zero Carbon** by 2045 on all 3 scopes

Contribute **45Mt CO<sub>2</sub>eq** clients decarbonization by 2030

**4GW** of renewable hydrogen by 2030

Achieve **80 GW** renewable capacity by 2030

# Our 4 Global Business Units work towards achieving Net Zero Carbon objective by 2045

## Renewable Energy

*Producing low-carbon electricity*

- 1<sup>st</sup>** In wind and solar in France
- 1<sup>st</sup>** Independent power producer in Brazil
- 2<sup>nd</sup>** In the world for electricity purchases (PPA)

**34,2 GW**  
Installed renewables capacity

### KEY OBJECTIVES

**+4 GW**  
of additional renewables capacity per year by 2025, then **+6 GW** per year from 2026 to reach **80 GW** by 2030.

## Networks

*Delivering affordable energy for customers, with our gas and electricity networks*

- 1<sup>st</sup>** Gas infrastructure operator in Europe
- 1<sup>st</sup>** Operator of biomethane production sites in France via ENGIE Bioz

**250,000 km+**  
Of distribution network

**5,600 km+**  
Of electricity transmission networks

### KEY OBJECTIVES

**4 TWh/year**  
of biomethane in France by 2030

## Energy Solutions

*Develop local and decarbonized energy networks*

- 1<sup>st</sup>** Cooling network operator in the world
- 3<sup>rd</sup>** Heating network worldwide

**23 GW**  
of decentralized energy installed capacity

**65,000+**  
Energy assets operated within buildings worldwide

### KEY OBJECTIVES

**+ 8 GW**  
of additional capacity in low-carbon energy infrastructure by 2025

## Thermal & Supply

*Providing flexibility to support the development of renewable energies, supply our clients with energy*

- 2<sup>nd</sup>** Desalination operator globally

**60 GW**  
Installed production capacity

**22 M**  
BtoC contracts in 5 key countries

### KEY OBJECTIVES

Coal phase-out by 2027 worldwide

Portfolio growth in electricity

**4 GW** of renewable hydrogen production capacity for 2030

# ENGIE R&I teams rely on diversified expertise at service of ENGIE Group



**Engie Research & Innovation** combines research centers & Labs, incubation programs, and venture arms to detect and **accelerate deployment of new technologies** in an industrial, competitive, reliable and safe way.

Our teams **align interests and forge collaborations** between ENGIE's operating entities, external ecosystems and stakeholders around key topics **fueling the Group's future.**

## ENGIE R&I Expertise: A showcase of Lab Crigen

« With our 19 benches of testing facilities, ENGIE Lab CRIGEN will be able to carry out physical and virtual tests, in order to develop, optimize, de-risk and industrialize cutting-edge low carbon technologies. »

Adeline Duterque, Managing Director ENGIE Lab CRIGEN

## New Ventures

### RESEARCH & INNOVATION

Corporate venture arm of ENGIE taking minority investments in clean technology startups.

## Factory Asia Pacific

### RESEARCH & INNOVATION

Incubation arm in APAC building, scaling startups in energy efficiency, smart cities, green mobility, and renewable energy.

## Four R&D Labs

## Lab Crigen

### RESEARCH & INNOVATION

R&D center devoted to green gases, new energy uses in cities and buildings, industry and emerging technologies.

## Laborelec

### RESEARCH & INNOVATION

Research center in electrical power technology, in the fields of generation, transmission, distribution, storage and final use.

## Lab Cylergie

### RESEARCH & INNOVATION

Research center dedicated to energy efficiency services and energy smart management.

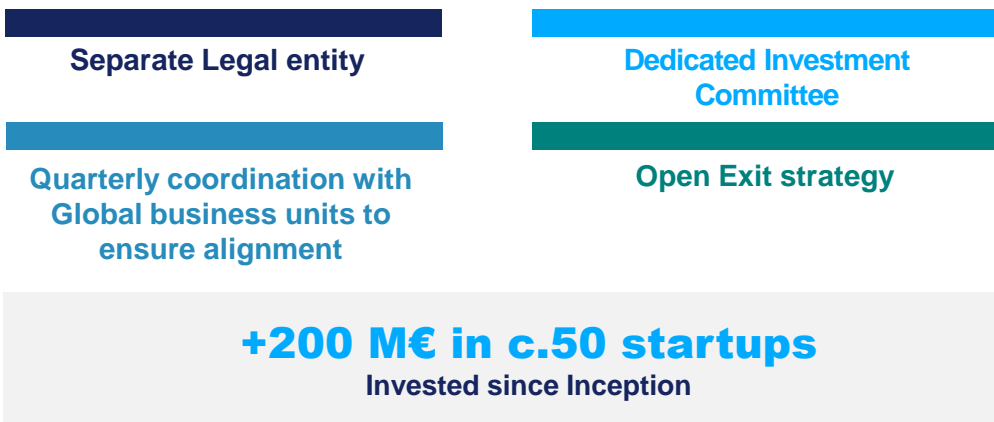
## Lab Singapore

### RESEARCH & INNOVATION

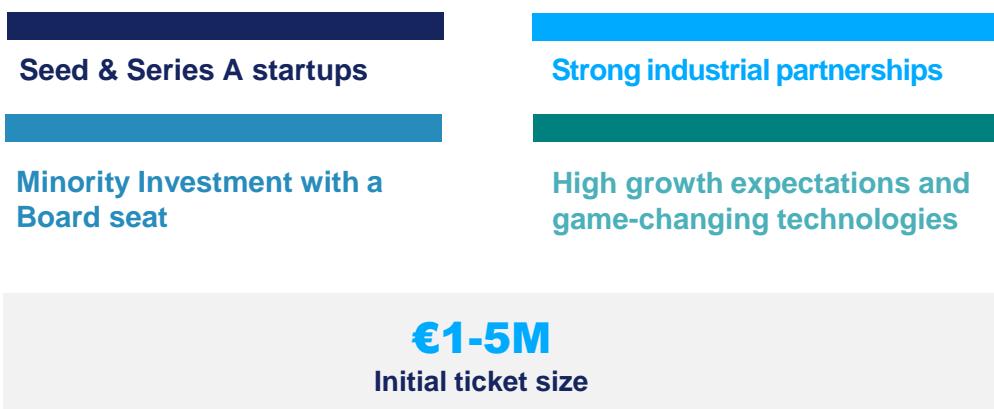
R&D center focused on industrial energy efficiency, cooling systems & data center decarbonation, gas, and smart energy.

# ENGIE Ventures is structured to capture and support external innovation

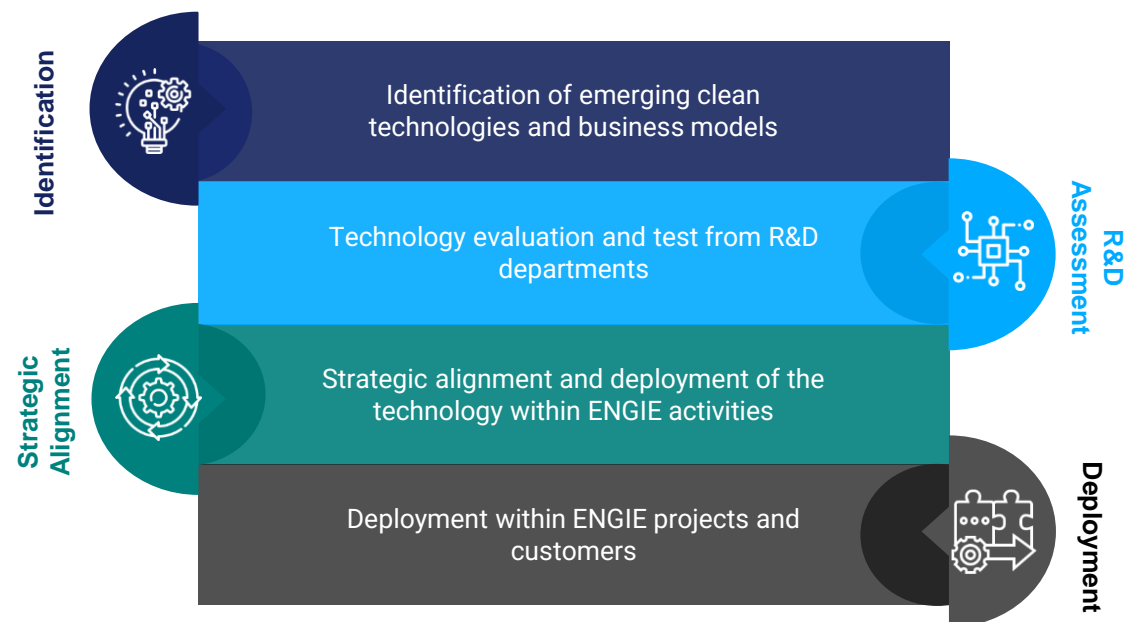
## Fund structure - Corporate Venture Capital



## Main Investment Criteria



## Journey supporting deployment



### Our investment terms

- **Shared resources**, together with a meaningful syndicate of co-investors.
- Objective of **balance return on investments**.

### Added Value for startups

- Access to **customers** and markets
- Access to **Group expertise**.
- Access to **equity capital**
- Increased **credibility towards customers, partners and investors**

# Our current portfolio is composed of 24 active investments

## Current portfolio investments



Fund of Funds



## Examples of Exits





# Our strategic priorities to lead the energy transition



## RENEWABLE ENERGY

- *Optimizing renewable generation*
- *Bring flexibility and dispatchability*



## THERMAL & SUPPLY

- *Decarbonization of generation assets (Carbon capture)*
- *H2 low carbon generation*
  - *Green fuels*
- *Water desalinization solutions*
- *Local Energy Communities*



## NETWORKS

- *Bio & e-methane technologies*
- *Gas usages*



## ENERGY SOLUTIONS

- *District heating and cooling solutions*
  - *Customer Decarbonation*

# Our experienced team around the world is at the service of innovation



**Johann Boukhors**  
(Fund Managing Director)



**Laurent Rambaud**  
(Investment Director)



**Vincent Pichon**  
(Investment Director)



**Carlos Chalbaud**  
(Investment Director)



**Alfonso Sessa**  
(Financial Manager)



**Davide Romeo Nanni**  
(Investment Analyst)



**Adama Cisse**  
(Executive Assistant)

## EUROPE

**10+**

Team members

**24**

Active startups



## NORTH AMERICA



**Scott Pinizzotto**  
(Sr. Investment Director)



**Sheeraz Haji**  
(Sr. Advisor)

## ISRAEL



**Anne Baer**  
(Sr. Advisor)

Enquiries should be addressed to: [newventures@engie.com](mailto:newventures@engie.com)

For the latest updates from Engie Ventures, follow us on:





**ENGIE's purpose is to act to accelerate the transition towards a carbon-neutral economy, through reduced energy consumption and more environmentally-friendly solutions.**

**Thank you!**



# Appendix

# Our strategic priorities to lead the energy transition

## Renewable Energy



- EMS to optimize flexibility and dispatchability of assets
- Technologies to optimize large scale solar bids and O&M
- Optimize offshore and onshore wind energy
- Agri-PV

## Network



- Liquefaction technologies for bio & e-methane technologies
- Biomethane technologies
- Competitive e-methane production
- Gas usages (hybrid heat pump, etc.)
- Methane pyrolysis

## Thermal



- CCUS technologies (Greening thermal fleet with CCS)
- Green fuels
- Hybridization of thermal generation – large scale storage solutions
- Water desalination technologies

## Energy solutions



- DHC decarbonation solutions
- Data centres, industries and tertiary buildings decarbonation
- Low-carbon mobility (HRS, EV infrastructure)
- On-site utility generation
- Energy efficiency as a business model
- Competitive distributed PV and O&M

## Low-Carbon H2



- Low Carbon H2 production (centralized & distributed)
- H2 transport & storage (large scale)

## Energy Mgmt & Sales



- Access to Carbon Credits
- Low carbon gases
- Supply power 24/7

## Supply



- Local energy communities
- Customer decarbonation (self consumption and flexibility)



# ENGIE Ventures Current Portfolio



**Location:** Sommerville, USA  
**Founded Year:** 2015  
**Web site:** <https://raptormaps.com/>



## Raptor Maps

Developer of a lifecycle management platform designed to increase performance, reduce costs and standardize solar photovoltaic assets across a portfolio. The company's platform assists teams to convert drone and asset data into accurate, high-value system analytics.

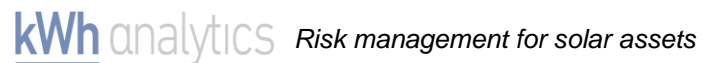


**Location:** Fos-sur-Mer, France  
**Founded Year:** 2022  
**Web site:** <https://gravithy.eu/>



## GravitHy

GravitHy is a sustainable iron and steel company, with its first plant located in Fos-sur-Mer. GravitHy will address the growing demand for green iron and steel. It will support in easing emissions from the steel industry by generating and using green and low-carbon hydrogen to produce DRI

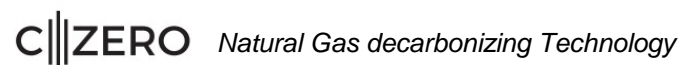


**Location:** San Francisco, USA  
**Founded Year:** 2012  
**Web site:** <https://www.kwhanalytics.com/>



## kWh analytics

The company's platform helps solar investors to deploy more capital intelligently by providing data integration, analytics and performance benchmarking for their solar investments, enabling them to minimize risk and increase equity returns.

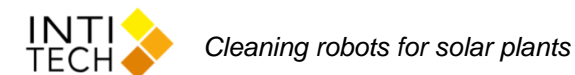


**Location:** Santa Barbara, USA  
**Founded Year:** 2020  
**Web site:** <https://www.czero.energy/>



## C-ZERO

C-zero is developing an industrial scale and competitive, methane pyrolysis technology that splits methane into hydrogen (turquoise hydrogen) and solid carbon by moving it through a mixture of molten salts.



**Location:** Santiago, Chile  
**Founded Year:** 2016  
**Web site:** <https://www.inti-tech.com/>



## Inti Tech

The company's technology maximizes the generation of solar panels in high radiation areas by dry smart cleaning in real plants through robots, enabling clients to generate energy easily and efficiently.



**Location:** Karlsruhe, DE  
**Founded Year:** 2014  
**Web site:** <https://ineratec.de/en/home>



## Ineratec

INERATEC is a leading provider of innovative chemical reactor technologies for Power-to-X and Gas-to-Liquid solutions. Its technology allows the production of several products (e-fuels, syngas, e-chemicals) synthesized from low-carbon H2 and CO2.



*Energy storage and heating management*

**Location:** Grenoble, FR  
**Founded Year:** 2020  
**Web site:** [https:// www.lancey.fr/](https://www.lancey.fr/)



### Lancey Energy Storage

Lancey's core product, The Lancey Capella, is a universal energy management solution composed of an electric radiator embedding a battery. The system, Plug & Play, uses electricity from the grid and from any local renewables.



*Industrial facilities energy optimization*

**Location:** North Carolina, USA  
**Founded Year:** 2011  
**Web site:** <https://ndustrial.io/>



### Ndustrial

Ndustrial solution is comprised of Contxt, a scalable data management platform that serves as code data engine and insight, a data integration and insights application.



*Cloud meter data management*

**Location:** Houten, NL  
**Founded Year:** 2012  
**Web site:** <http://www.energyworx.com>



### Energyworx

The company's platform leverages technology to ingest and manage huge volumes of smart meter data, IoT data, and data from any kind of data source and upon ingestion. The technology is enabling clients to accelerate the world's transition to clean energy.



*Modular gas analyser*

**Location:** Grenoble, France  
**Founded Year:** 2014  
**Web site:** <https://apixanalytics.com/>



### Apix

APIX Analytics develops highly miniaturized multigas analyzers for traditional analytical chains: sampling, injection of gases, separation of complex gas mixtures. Apix's products enhance specificity, detection, identification and quantification of each mixture compound.



*Field work management software*

**Location:** Santiago, Chile  
**Founded Year:** 2017  
**Web site:** <https://tutenlabs.com/>



### TutenLabs

The company's software digitize, optimize and standardize services, providing visibility and transparency, standardizes the work and gives traceability, enabling businesses to accelerate the reaction and response speed of the entire operational chain.



*IoT solutions*

**Location:** Labège, FR  
**Founded Year:** 2009  
**Web site:** <https://www.sigfox.com/en>



### Sigfox

The company's software-based communications technology offers a platform where all the network and computing complexity is managed in the cloud, enabling clients to avail the lowest energy-consumption device-to-cloud connectivity.





*Renewable energy PPA marketplace*

**Location:** Seattle, USA

**Founded Year:** 2016

**Web site:** <https://www.leveltenenergy.com/>



## Levelten

Level 10 developed a renewable energy transaction platform designed to connect power buyers to the universe of power purchase agreements from utility-scale wind, solar and storage projects



*Household Biogas digester system*

**Location:** Beit Yanai, Israel

**Founded Year:** 2012

**Web site:** <https://www.homebiogas.com/>



## Homebiogas

Homebiogas Ltd is the world leader in developing groundbreaking and simple to use biogas systems, enabling people around the globe to turn their organic waste into self-made clean energy.



**SAMP**

*Digital twin for industrial asset management*

**Location:** France

**Founded Year:** 2020

**Web site:** <https://samp.ai/>



## SAMP

SAMP offers an asset management platform to industrial customers. The software uses 3D scans to build precise, easy to update and flexible digital twins of industrial facilities. The solution makes any intervention on site more cost effective and time efficient.



**REDAPTIVE**

*Efficiency-as-a-service for building*

**Location:** San Francisco, USA

**Founded Year:** 2014

**Web site:** <https://redaptive.com/>



## Redaptive

Redaptive manages the building upgrade, covers all costs, and bills the customer for the actual metered saving after the project completion. Redaptive's offering leverages data to unlock cash flows, and the company focuses on enterprise customers with large portfolios of sites.



*Organic solar films*

**Location:** Dresden, DE

**Founded Year:** 2006

**Web site:** <https://www.heliatak.com/de/>



## Heliatak

With a patented technology and unique roll-to-roll production process, Heliatak is the world's first series producer of organic solar films, which open up new possibilities for generating clean electricity, enabling a world of independent energy-supplied buildings.



*IoT solutions*

**Location:** Singapore

**Founded Year:** 2016

**Web site:** <https://www.unabiz.com/>



## Unabiz

UnaBiz manages two IoT-dedicated networks in Singapore and Taiwan and offers energy-efficient, highly scalable, and simple to deploy solutions. Today, it provides a diversified range of expertise from product design to manufacturing.

## H2 SITE

On-site hydrogen production

**Location:** Derio, Spain  
**Founded Year:** 2019  
**Web site:** <https://www.h2site.eu/fr/>



### H2Site

H2Site's mission is to produce the most cost efficient, on site, renewable H2 for industry and mobility using feedstock versatile membrane reactors, enabling clients to have a on-site technology for production, transportation and storage of hydrogen.

## gogoro

Electric scooters and battery swapping

**Location:** Taoyuan, TW  
**Founded Year:** 2011  
**Web site:** <https://www.gogoro.com/>



### Gogoro

The company offers electric scooters that utilize rechargeable smart batteries, along with a dedicated application that shows where customers can exchange and recharge their batteries and also operates charging stations, enabling people to commute in a cleaner way and reduce pollution.



Energy management services

**Location:** Santiago, Chile  
**Founded Year:** 2016  
**Web site:** <https://wenuwork.cl/>



### WenuWork

The company's services utilize the internet of things and a private web platform to provide easy-to-understand information regarding the energy efficiency project, real-time information regarding energy consumption and diagnostic report on energy consumption.



Online sustainable store

**Location:** Santiago, Chile  
**Founded Year:** 2016  
**Web site:** <https://denda.cl/>



### Denda

The company's platform offer innovative and useful products for recycling and composting and a wide range of energy saving services aiming to reduce the carbon footprint providing a sustainable life and also provides online payment system and with home delivery or retirement options.



Second life EV batteries

**Location:** New Castle, UK  
**Founded Year:** 2014  
**Web site:** <http://www.c-e-int.com/>



### Connected Energy

The company's technology provides the same performance as equivalent first life batteries but at a lower cost and in an environmentally friendly manner and it is designed for industrial and commercial behind the meter applications.



Smart video notes

**Location:** London, UK  
**Founded Year:** 2013  
**Web site:** <https://vyntelligence.com/>



### Vyntelligence

Vyntelligence business focus on data capture through smart video. Vyn smart video technology is deployed to help industrial companies gain visibility and insights over the assets and operations, by empowering field worker to create smart videos reports directly on site.