

New Ventures
RESEARCH & INNOVATION

ENGIE NEW VENTURES



External presentation

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 94 B€ turnover in 2022, we take action throughout our entire value chain in our 4 core activities:

Renewable Energy

Network

Energy solutions

Flex Gen & Retail

2022 figures

96,400 employees

38% renewable energy in electricity production capacity

93.9 B€ revenues

5.5 B€ growth investment

115 GW installed power generation capacity

3.9 GW extra installed renewables capacity in 2022



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 CO₂eq** 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

Development and operation of renewable projects

1st Wind and solar producer in France

2nd In the world for electricity purchases (PPA)

38 GW
Installed renewables capacity

Acquisition
Eolia in Spain: 0.9GW in operations and 1.2GW of renewable projects

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

Energy transmission, distribution and storage

1st Natural gas transmission network in France and Brazil

1st Natural gas distribution network in Europe

1st Underground gas storage in Europe

255,400 km
Of gas distribution network

4,900 km
Of electricity transmission networks

KEY OBJECTIVES

4TWh of biomethane produced in France by 2030

700km of hydrogen transmission networks

Energy Solutions

Local energy grids based on regional networks

1st Cooling network operator in the world

3rd Heating network worldwide

24.9 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

Flex Gen & Retail

Thermal generation and hydrogen production

2nd Desalination operator globally

50 GW
Installed production capacity

22.5 M
BtoC contracts in the world

KEY OBJECTIVES

+10 GW
of battery storage capacity by 2030

4 GW
renewable hydrogen production capacity by 2030

*As of 2021

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

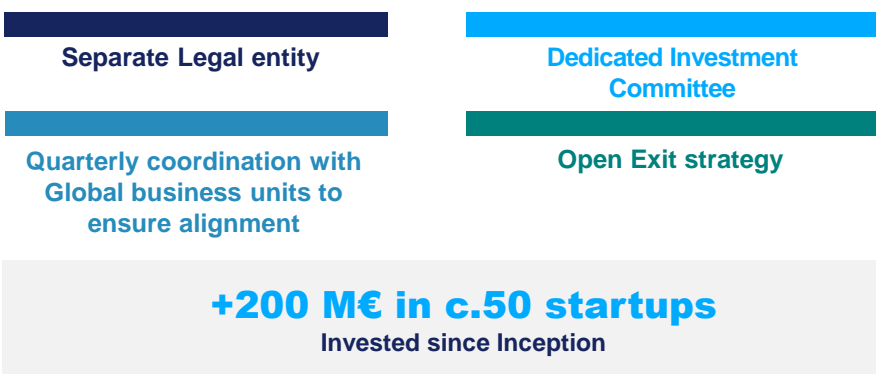
RESEARCH & INNOVATION

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

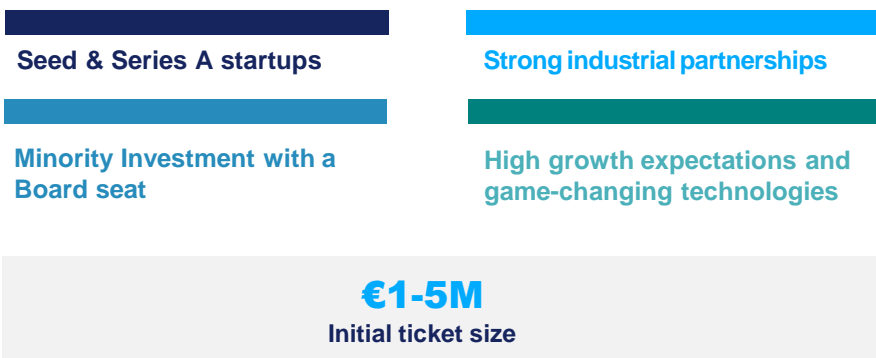
ENGIE Ventures is structured to capture and support external innovation

New Ventures
RESEARCH & INNOVATION

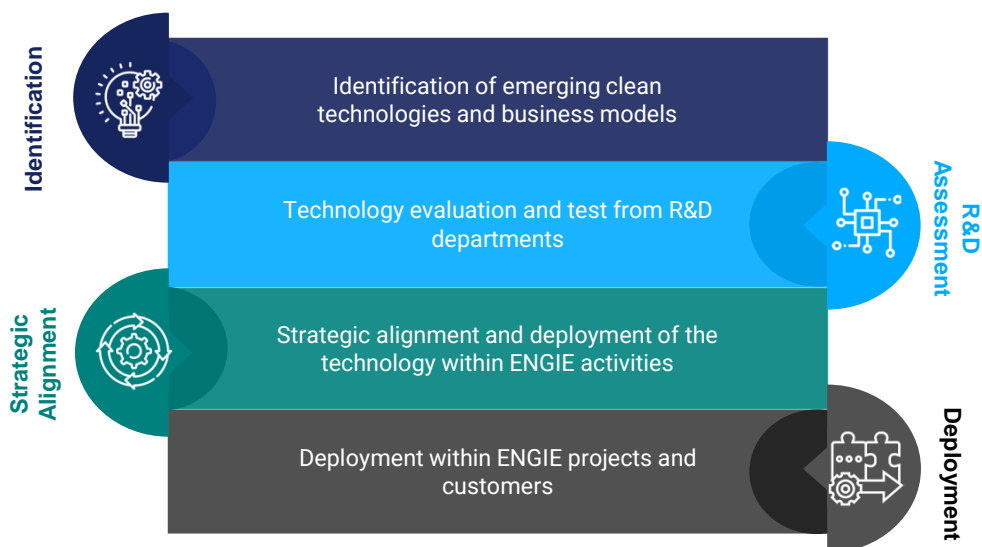
Fund structure - Corporate Venture Capital



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 23 active investments

Current portfolio investments



Fund of Funds



Examples of Exits



Latam Factory Startups

Our strategic priorities to lead the energy transition



RENEWABLE ENERGY

- Optimizing renewable generation
- Bring flexibility and dispatchability



NETWORKS

- Bio & e-methane technologies
- Gas usages



ENERGY SOLUTIONS

- District heating and cooling solutions
- Customer Decarbonation



FLEX GEN & RETAIL

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

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

New Ventures
RESEARCH & 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)



Rajat Dewan
(Investment Analyst)



Adama Cisse
(Executive Assistant)

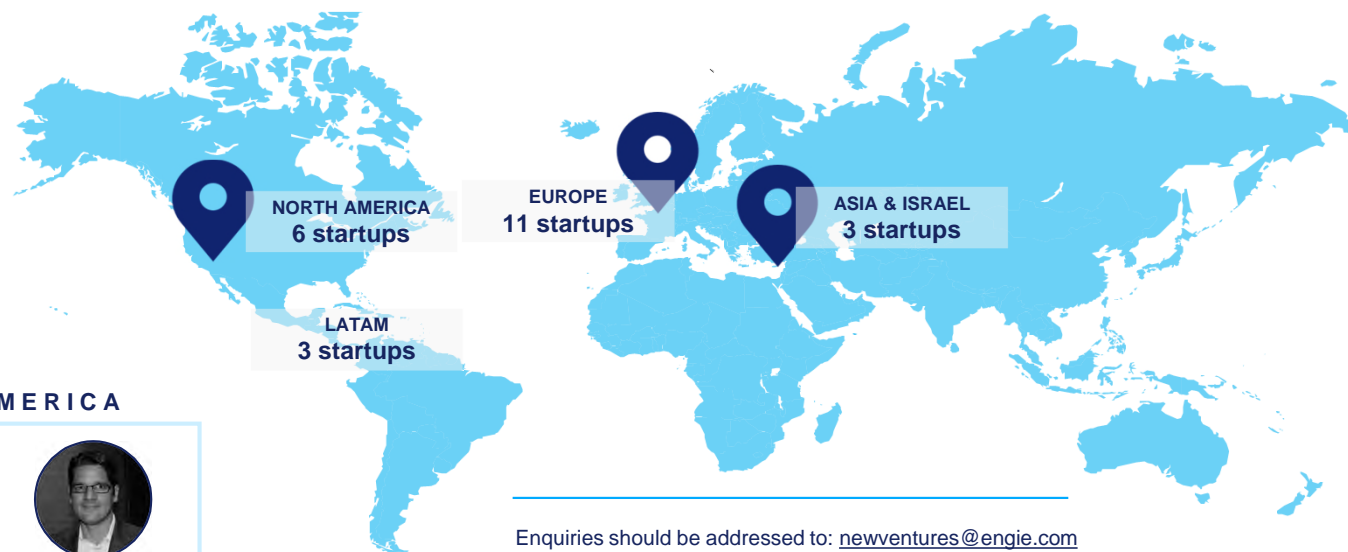
EUROPE

10+

Team members

23

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

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

Startups focus



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.

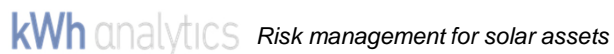


Location: Fos-sur-Mer, France
Founded Year: 2022
Web site: <https://gravithy.eu/>



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

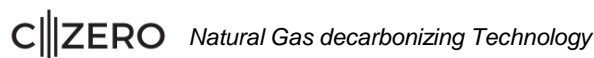


Location: San Francisco, USA
Founded Year: 2012
Web site: <https://www.kwhanalytics.com/>



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.czzero.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: 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.

Startups focus



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 a 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.



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

Startups focus

 **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.


 **HOME BIOGAS®** 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.


 **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.

 **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.

 **Heliateg** Organic solar films
The future is light

Location: Dresden, DE
Founded Year: 2006
Web site: <https://www.heliateg.com/de/>



Heliateg

With a patented technology and unique roll-to-roll production process, Heliateg 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.

 **unabiz** 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.

Startups focus

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.



ALPINOV X

Cold Production System

Location: Grenoble, France
Founded Year: 2017
Web site: <https://alpinovx.com/>



Alpinov X

Alpinov X develops a patented cold production process using water as natural refrigerant, well suited for district cooling, data center cooling (as well as snow production).



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.



CONNECTED
ENERGY

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.



vyn.

SmartVideoNotes.

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.