



Local Energy – Positive Impact

Investor Day – Q3 revenue update and Cryo Pur acquisition

April 27th, 2022





JULIEN MOULIN

Executive Chairman

Joined in 2009

Entrepreneur with 20 years of experience in the investment (Barclays, UBS, Maoming IM...) and renewable energy sector (Envision...)



ANTOINE FORCINAL

Chief Executive Officer

Joined in 2015

Engineer with 15 years of experience in management of E&P gas developments globally



AURELIE TAN

Chief Financial Officer

Joined in 2020

Financier with 18 years experience in the energy sector working for banks (BNPP, Natixis, Standard Bank...) and corporate (Seplat Energy)



DENIS CLODIC

Chief Technical Officer

Joined in 2022

PhD in Energy from Mines Paris Tech with 32 years experience and co-winner of the Nobel Peace Prize in 2007 for his contributions to the IPCC (Intergovernmental Group of Experts on climate change)

<p>Developing the leading negative carbon energy producer</p>	<ul style="list-style-type: none"> • Over 3 Million tons of CO2eq emissions currently avoided annually*
<p>With a pan European footprint</p>	<ul style="list-style-type: none"> • 12 sites already in production and commissioned in 4 countries (France, Belgium, UK, Norway) <ul style="list-style-type: none"> • 6 sites producing electricity • 4 sites producing and/or injecting gas • 2 sites producing heat • Additional growth potential in hydrogen, Bio-CO2 and carbon storage (CCUS)
<p>Trusted by Tier 1 Partners</p>	<ul style="list-style-type: none"> • Financially sound and reliable clients (Total Energies, EDF, Gasnor...) • Strong banking relationship (Edmond de Rothschild, BPI, Société Générale, ING, Crédit Agricole group, Caisse d'Epargne...) • Large shareholders base (leading energy FO, Arbevel, Allianz, Amiral, Amundi, HSBC...)
<p>Management with a proven track record and recognized expertise</p>	<ul style="list-style-type: none"> • Unique mix of scientific, financial and technical background with project management and capital markets expertise • Recognised ESG policy: 65/100 Gaia Rating (Ethi Finance), leading SME in the energy sector since 2016
<p>On a fast growth trajectory profitable</p>	<ul style="list-style-type: none"> • H1 2022 EBITDA: €5.9M • H1 2022 EBITDA margin: 62% • H1 2022 NET PROFIT: €2.6M • €35M revenues and 45% EBITDA margin on annualized basis targeted for calendar YE 2022
<p>With financial capabilities to support its objectives</p>	<ul style="list-style-type: none"> • €23M of cash in hands as of 31/12/21 • €15M of undraw debt facility (under EDRAM's green bond)

* 1,4 Million tons are certified - Sources: 2019 Ineris certification updated with a Global Warming Potential of 82,5 (AR6 – IPCC) and including the Béthune site (FDE extrapolation), 2022 Polytechnic University Mons study

OUR PORTFOLIO OF SUSTAINABLE ENERGY SOLUTIONS



GAS

- Abandoned Mine Methane (AMM) – 2 sites in operation
- Coal Bed Methane (CBM) – Awaiting state approval on the application for a long term production permit
- Liquefied Biogas (LBG) – 2 sites in operations



POWER

- Abandoned Mine Methane (AMM) – 6 sites in operation and commissioning phase (22.5 MW)
- Photovoltaic (Solar) – 1 site under construction (15 MW) – Production in Q4 2022



HEAT

- Abandoned Mine Methane (AMM) – 1 site in operation
- Thermal Solar - 1 site in operation (2MW)



HYDROGEN

- H2 via Pyrolysis - Member of a Belgium consortium led by EDF
- H2 via Steam reforming with CCUS – Feasibility study ongoing



CO2

- Black Carbon – Member of Belgium consortium led by EDF
- Carbon storage (CCUS) – Lead Member of French Research program with CNRS and University of Lorraine to store carbon in coal seams
- BioCO2 – 2 sites in operation and commissioning phase (UK, Norway)

OUR CONTRIBUTION TO THE UNITED NATIONS' SDG



AFFORDABLE AND
CLEAN ENERGY



BETHUNE HEATING PROJECT
Reduction of annual
energy bill of
€400/year/household



INDUSTRY, INNOVATION AND
INFRASTRUCTURE



**7 FAMILY OF INTERNATIONAL
PATENTS**
Innovative system to upgrade
biogas and CO₂ into LBG and bio-
Co₂

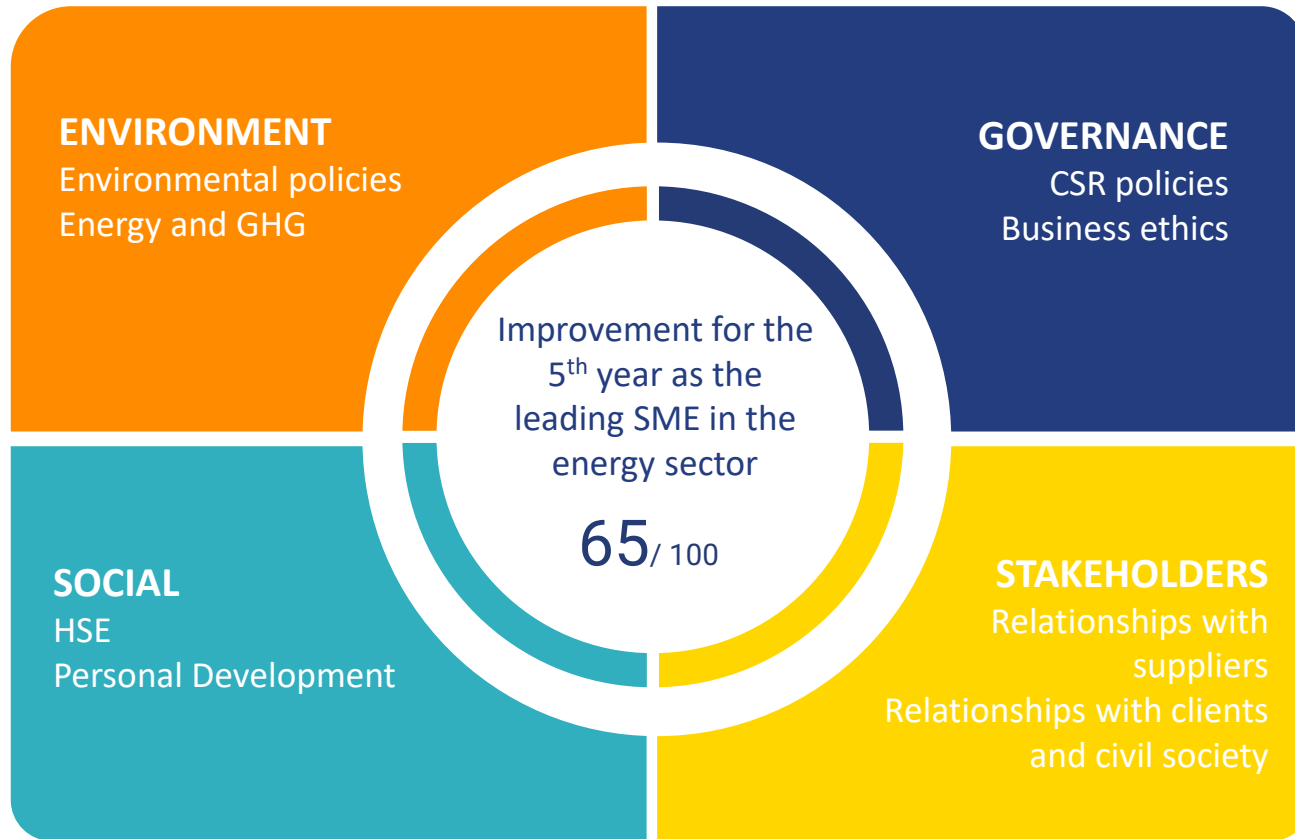


CLIMATE
ACTION

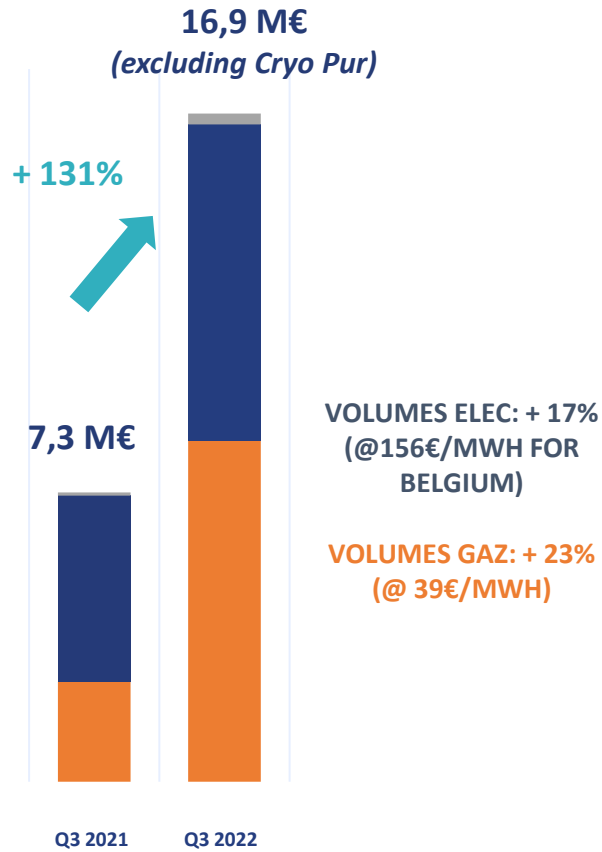


**OVER 3 MILLION TONS CO₂eq
EMISSIONS AVOIDED ANNUALLY**
(of which 1,4 Million tons are
certified)*

* Sources: 2019 Ineris certification updated with a Global Warming Potential of 82,5 (AR6 – IPCC) and including the Béthune site (FDE extrapolation), 2022 Polytechnic University Mons study



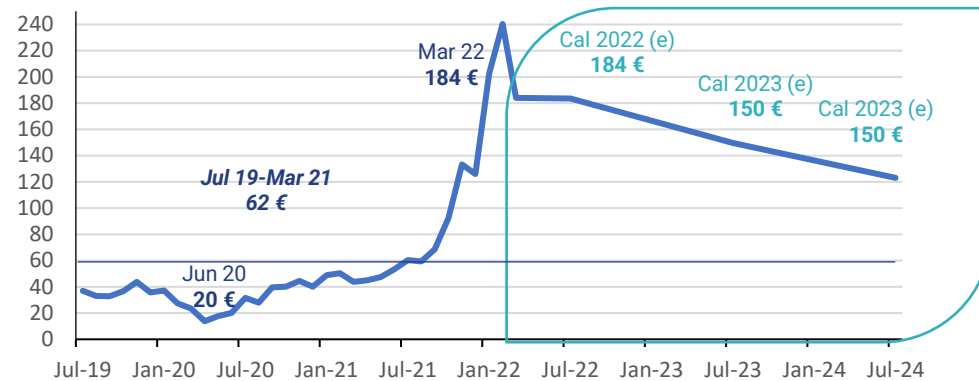
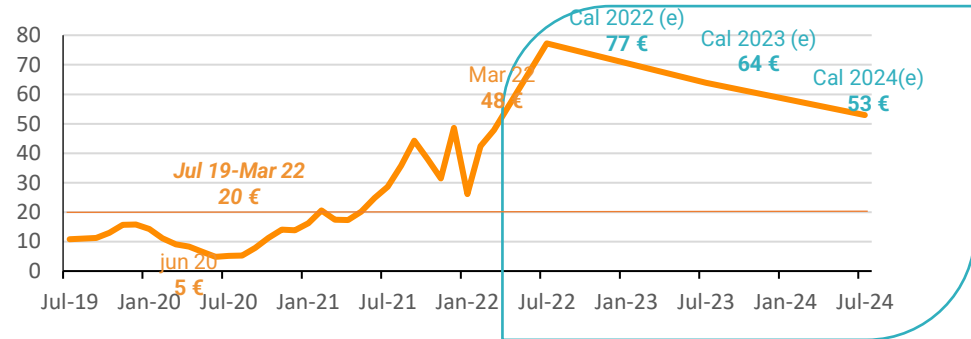
Q3 2022 REVENUES – STRONG REVENUES ACCELERATION



Gas Electricity Heat

29% OF REVENUES BACKED BY FIXED PRICE

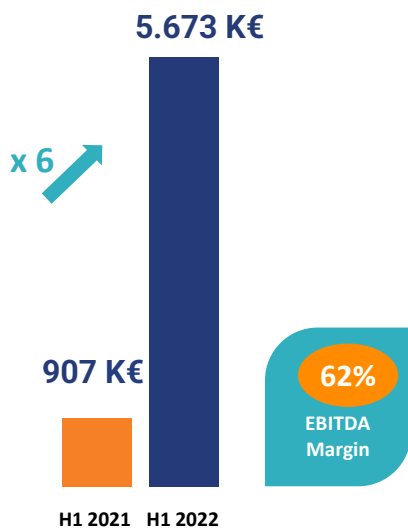
GAZ AND ELECTRICITY PRICE IN BELGIUM(€/MWH)



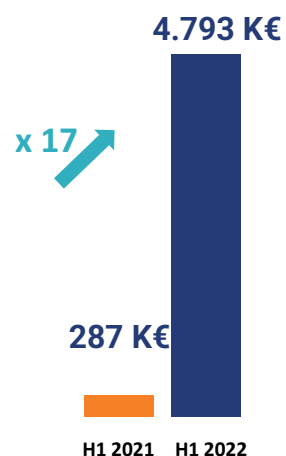
Revenues growth to continue in 2022 on the back on new sites to be commissioned in a favorable energy market

STRONG FINANCIAL METRICS as of 31/12/2021

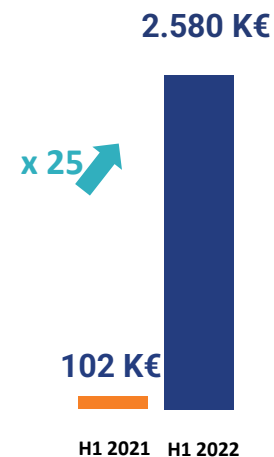
6-m EBITDA



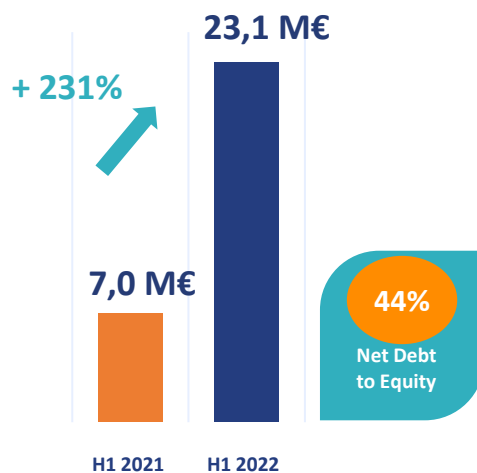
6-m Operating Income



6-m Net Income (group share)



Cash Position



Acquisition of Cryo Pur: 2,5 M€ consideration paid with Group's available cash

Over 15M€ available under the Green Bond to develop FDE's low carbon energy portfolio in Europe

A profitable and fast-growing business, with a conservative debt level, allowing FDE to steadily finance its development.



A NEW LEADER IN
GREEN GAS AND
BIO CO₂...
NOW PART OF FDE



Source : Greenville Site, Ireland, 2020



Activity: Technology leader dedicated to upgrading and liquefaction of gas (from biogas, landfill gas, flare gas, grid gas, industrial gas)

Intellectual Property : 7 families of international patents

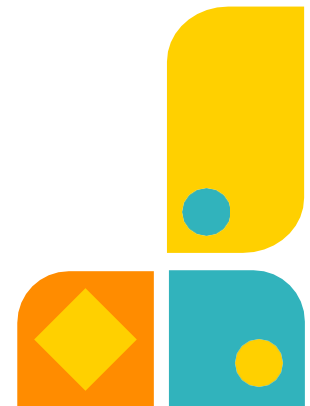
Team : 14 people lead by a Nobel Prize for his IPCC contributions, including PhD-engineers, engineers and technicians

Technology:

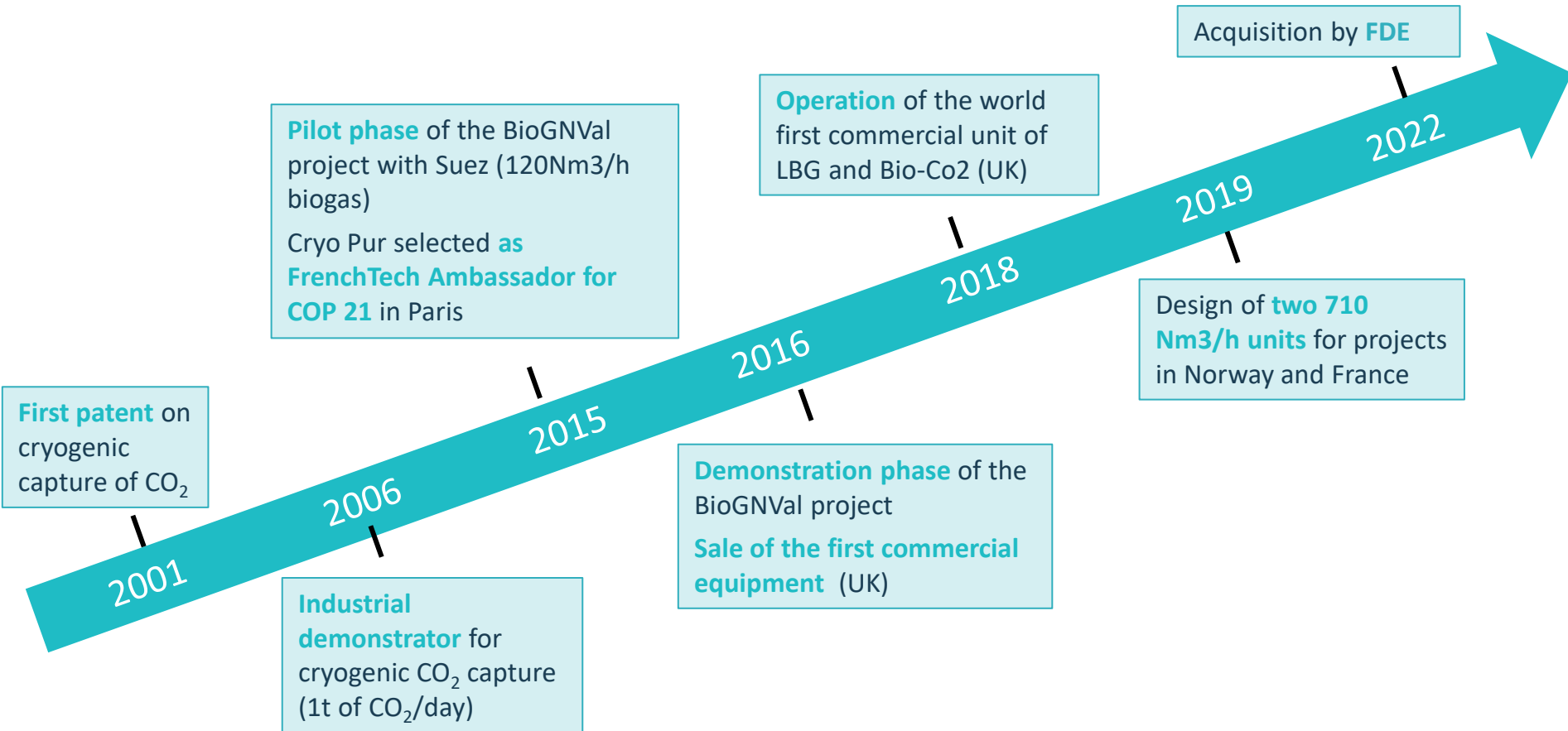
- 35 years of Research & Development, and French Tech Ambassador at the COP21
- 30 M€ invested in the development of the Cryopur process and its implementation
- Field proven technology ready for domestic and international development



Head Office : Massy (Paris area)



FROM R&D TO AN ACCELERATION OF COMMERCIAL ROLL-OUT



R&D as part of the Center for Energy and Processes at MINES ParisTech University and the EREIE start-up

Innovative technologies applied to energy efficiency

First commercial roll-out

Commercial expansion

- ◆ In many countries, it is a challenge to connect small-scale methane production sites to the natural gas grid network
- ◆ In Europe, even in countries with a denser grid, about 1/4 of potential biomethane projects are precluded due to grid limitations (distance, capacity)
- ◆ Worldwide, about 2/3 of the small-scale upstream flaring sites are distant from gas (and electricity) networks

European consumption of nat. gas : 400 billion m3 in 2021, that is about 4000 TWh

Global natural gas consumption: 3,350 billion m3 in 2021, i.e. approximately 32,000 TWh

LNG: 30% of global natural gas trade

497 million tonnes in 2019 = 350 billion m3

Potential global biogas production by 2040: 8500 TWh =25% of current natural gas consumption according to IEA

Potential European biogas production by 2050 according to Engie:

1700 TWh including 600 by pyrogasification of wood waste

...while avoiding CH4 and other GHG emissions



ENVIRONMENTAL ASSESSMENTS

- A growing need for **bio fuels** to power Heavy Duty Vehicles, ships
- **Wastes** have a value
- **Process must be as green** as possible



FINANCIAL ASSESSMENTS

- **CO2 is not waste**, it is valuable
- Circular economy is a long term, win-win model
- Beyond CHP contracts: **what is next?**



TECHNICAL ASSESSMENTS

- Transforming waste to energy rely on a technology that must be
- **Efficient**
 - **Simple to operate**
 - Able to deliver **high quality**

THE SOLUTION

Cryo Pur has developed a unique cryogenic solution to produce bioCO2 and LBG



A technology adapted to the market

- Minimal energy consumption
- **No methane slip**
- **All CO2 recovered**
- High CO2 and LBG quality
- **Full integrated system**, easy to operate

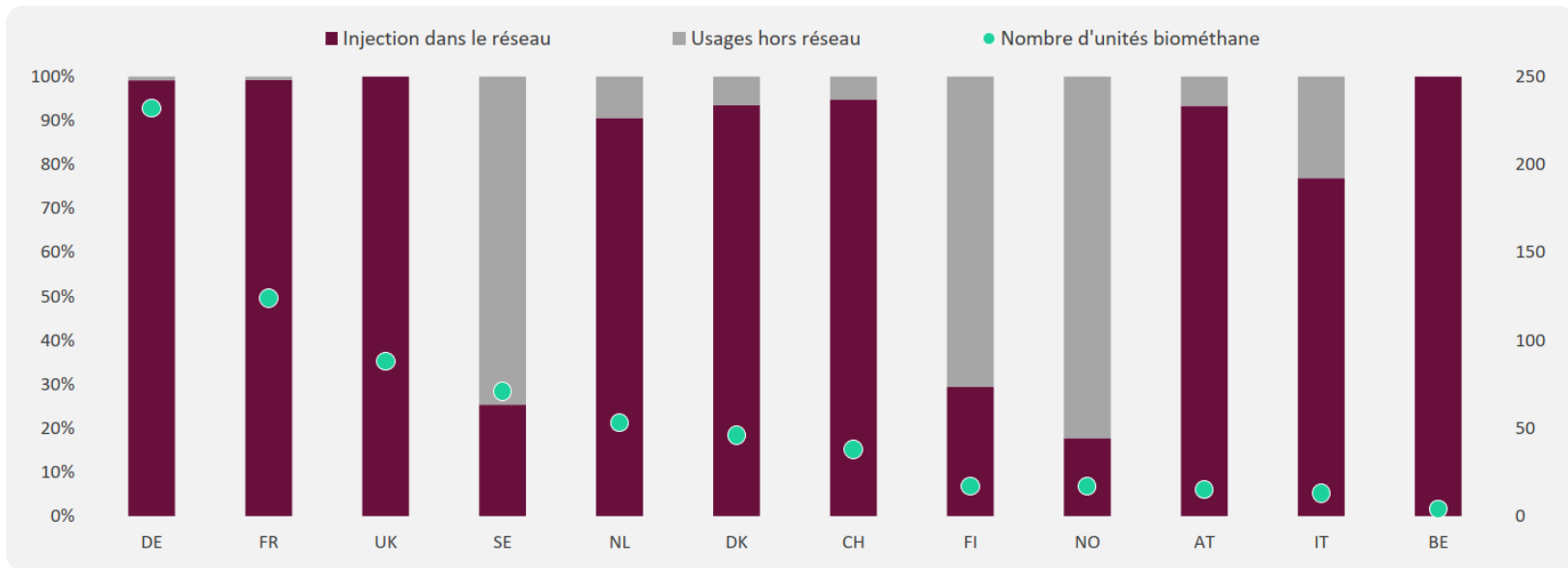


Cryo Pur commits to its partners

- We adapt to specific needs
- We **co-invest** in SPV
- We **guarantee performance** and availability
- We operate and maintain our plant

GROWTH OF BIOMETHANE IN EUROPE

- Historically most of the biogas produced is burnt (co-generation) – that was **the first wave**
- Then incentives were implemented so now out of the 1,000 + biomethane production units in operation as of the end of 2021, more than 90% of production is injected into the networks, that is **the second wave**
- Now following the technological progress and the renewed focus on CO₂, LBG is being promoted by operators and regulators as **the third wave**
- Scandinavia is leading the effort with voluntary regulatory policies to push LBG as key solution to accelerate fuel decarbonization by 2030

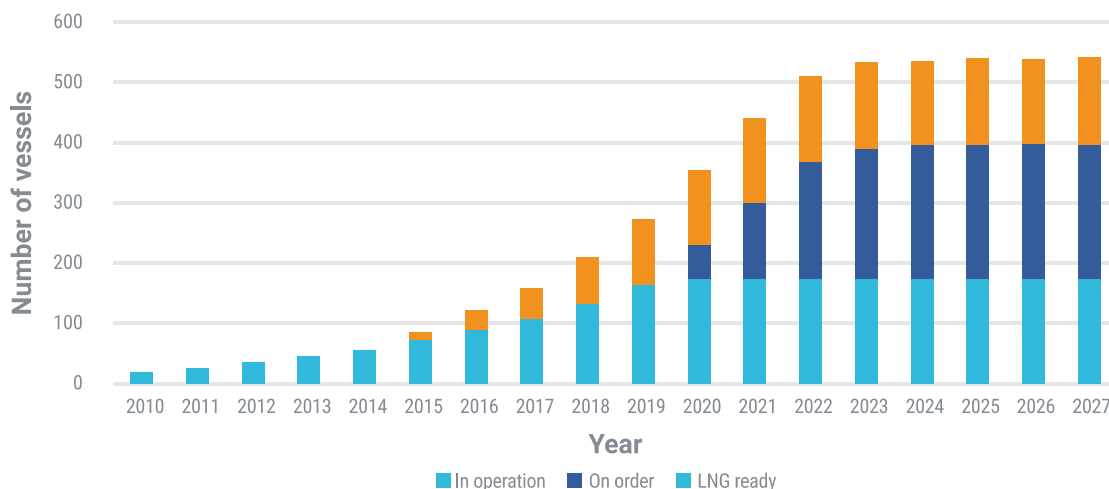


SIA Partners "Benchmark biomethane Europe"

A biogas world full of opportunities for LBG producers

EXAMPLE OF THE OPPORTUNITY IN THE SHIPPING INDUSTRY

Development of LNG-fuelled fleet



2020: 175 merchant marine vessels are powered by LNG (mainly in the 3 families with the highest emissions)

2021: 200 ordered

By 2024: 250 addition LNG vessels to come to the market

Source: BioLNG in transport –joint white paper EBA- Sea LNG

- ◆ **Emissions 2020:** 940 million tons CO2 or 2.6% of total emissions which were 36.4 billion tons in 2020
- ◆ The European shipping industry **will join the EUTS mechanism in 2023** => They have to clean their act
- ◆ The shipping industry is going to accelerate its **migration towards cleaner fuel**
- ◆ **The future is liquid fuel** and LBG will take a significant portion of this large market

Source: REJ Schnurr ,T.R Walker Marine transport & energy Use 2019

Transport (excluding aviation) accounts for **25% of Europe's greenhouse gas emissions**

More fuel will come from Biofuels: **Biofuels of all generations represent just under 20% of forecast consumption for 2030** with LBG and biomethane to represent approximately 25% of all biofuels

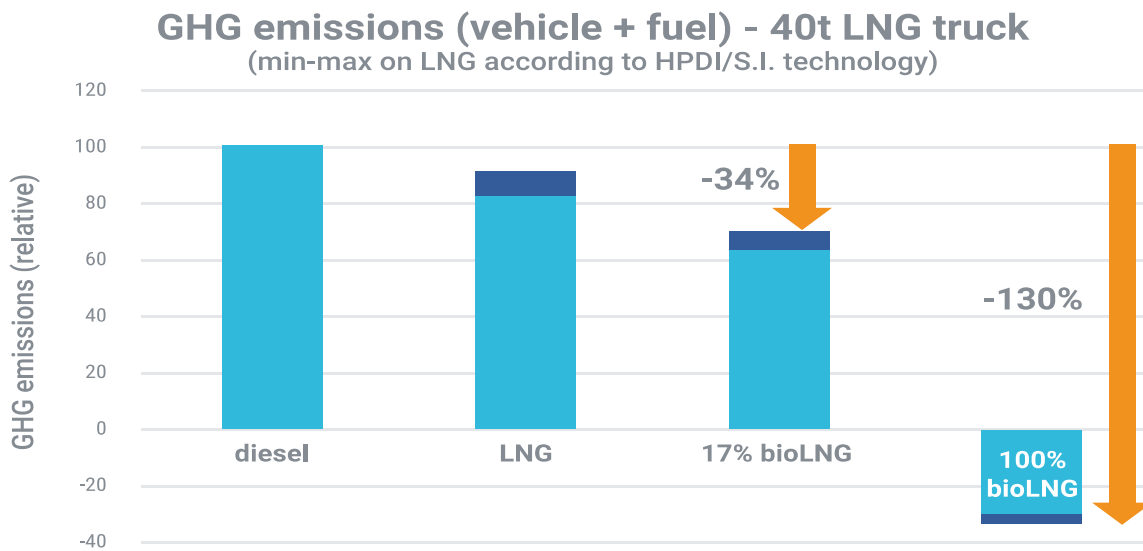


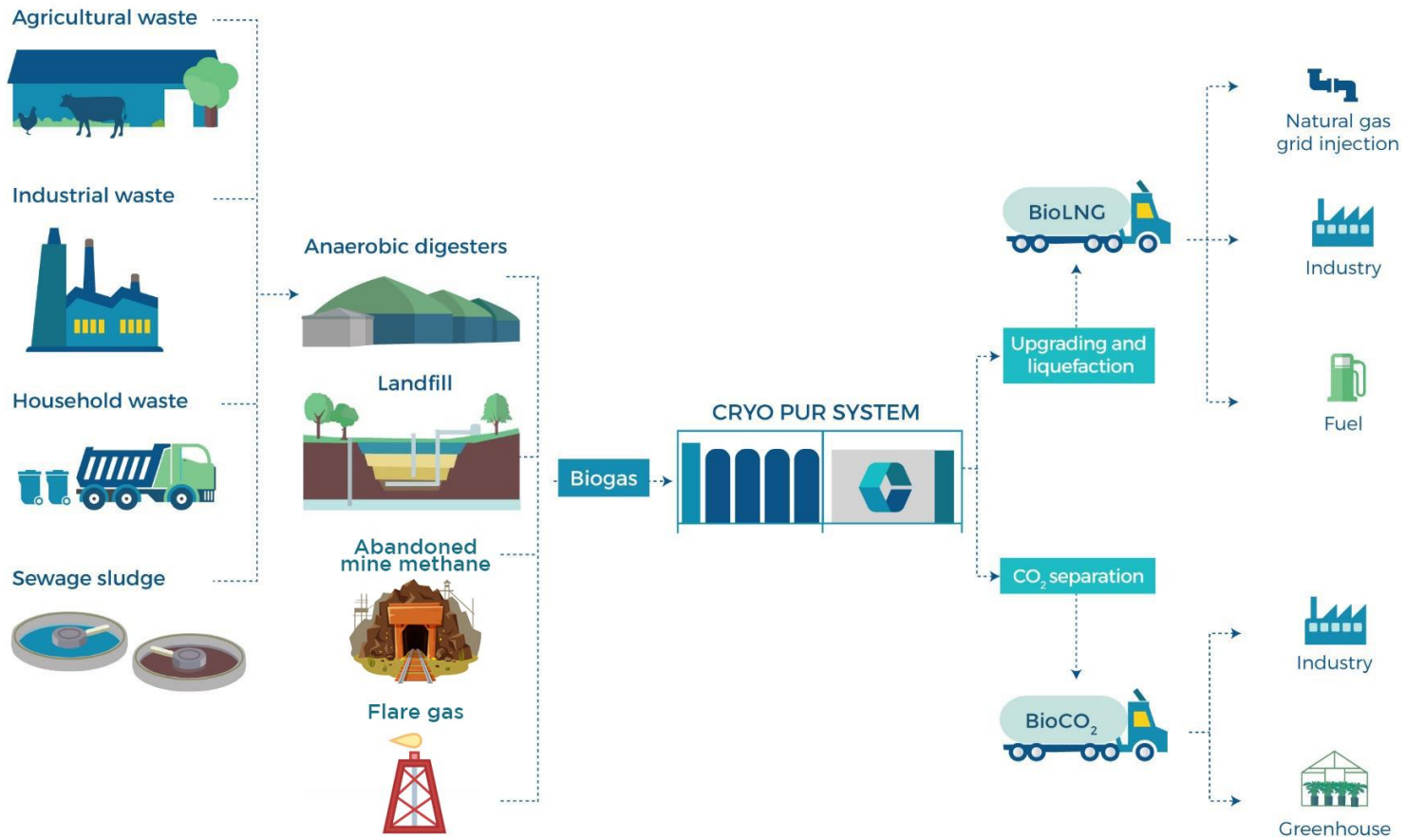
Figure 9: well-to wheel emissions comparison

Source: BioLNG in transport –joint white paper EBA- Sea LNG

- ◆ LBG mixed or “pure” **is going to be a game changer** since it reduces drastically the carbon footprint of the fuel used in transportation
- ◆ **The future is liquid fuel** and LBG will take a significant portion of this **€ multi-billion market**

CRYO PUR'S DOUBLE IMPACT

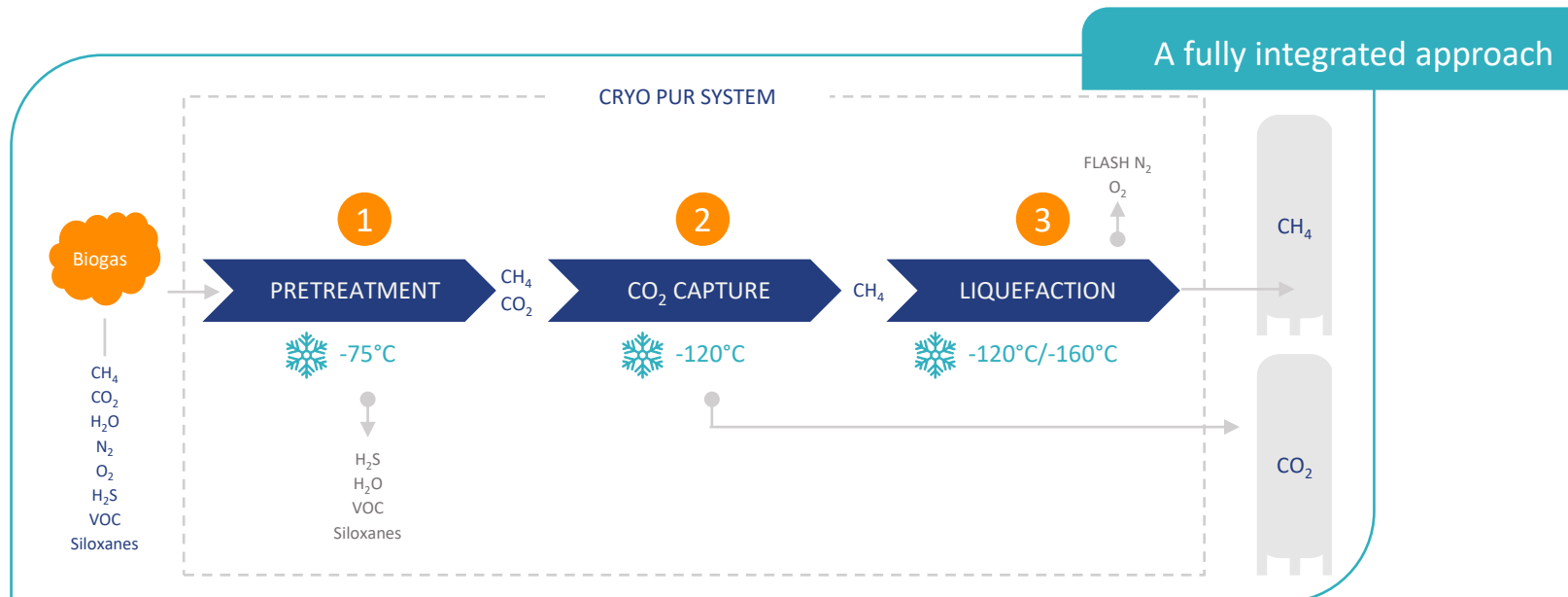
Methane emission mitigation for farmers, cooperatives, waste managers, industrials and oil producers



Fossil fuel substitution for the consumer

CRYO PUR'S PRODUCTION OF LBG AND BIO CO₂

- All technical options implemented
- Use controlled cooling for the valorization of molecules of interest
- The molecules of interest are CH₄; CO₂, CO, H₂, Rare gases
- Cryo Pur and Bio LNG: cryogenics makes it possible to produce Bio LNG at 50 ppm of residual CO₂



[Link to video here...](#)

FIRST INDUSTRIAL DEMONSTRATOR WITH SUEZ



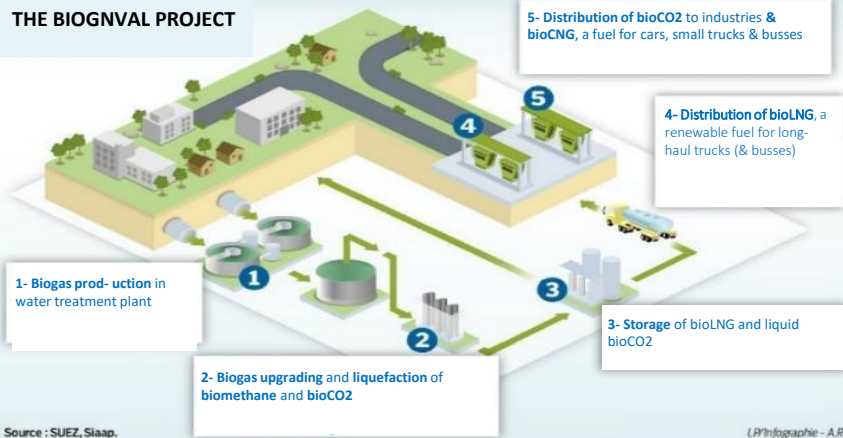
Site : Valenton Waste Water Treatment Plant, France (Paris Area)

Flow rate :
120 Nm³/h raw biogas

Feedstock : Sewage sludge

Start date : October 2015

THE BIOGVAL PROJECT



Financing & technical expertise



Project coordinator



Bio-LNG filling station



WWTP owner



Biogas to bio-LNG (&LCO₂) technology



Bio-LNG truck

FIRST FARM SCALE BIO-LNG PLANT IN THE WORLD: GREENVILLE



Site : Omagh,
Northern Ireland (UK)

Flow rate :
300 Nm³/h raw biogas
3t LNG / 5t CO₂

Feedstock : Agricultural waste

Start date : January 2018



Supplier of biogas
and LBG/bio-CO₂ offtaker



Biogas to
LBG & Bio-CO₂
technology

FIRST INDUSTRIAL PLANT IN SCANDINAVIA WITH RENEVO



Site : Stord, Norway

Flow rate :
600 Nm³/h raw biogas
8t LNG / 10t CO₂

Feedstock : Salmon
Farming Waste

Start date : April 2022

RENEVO

Supplier of biogas and owner of the plant

Gasnor

LBG offtaker

ENOVA

Innovation Agency in Norway
provider of financing

 **Cryo Pur**

Biogas to
LBG and bio-CO₂
technology

 **Antec Biogas**

Provider of Anaerobic Digestion
Solutions

Competitive Financing

- Bank project finance (SPVs)
- Crowdfunding
- Subsidies



Performing Equipment

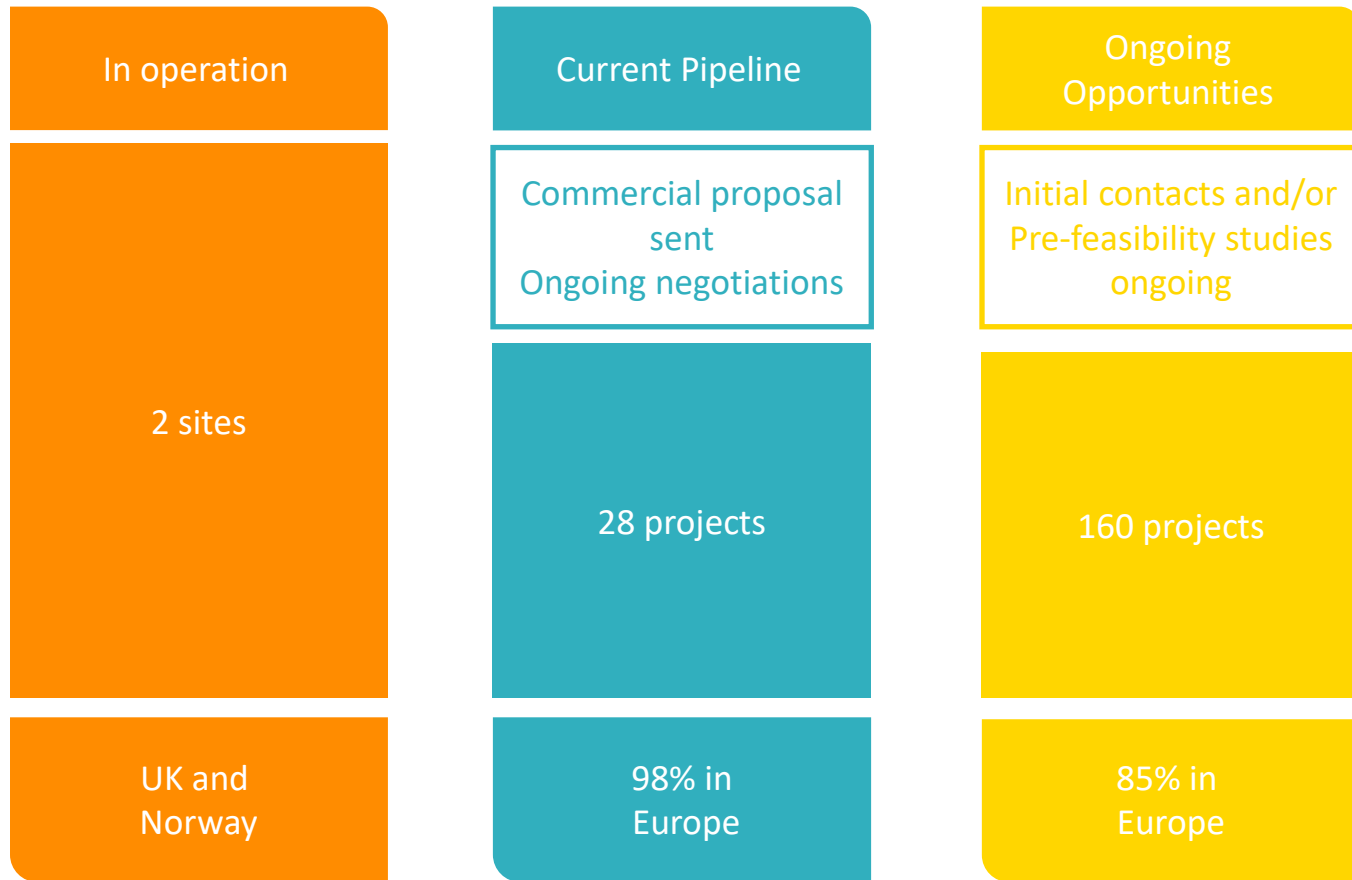
- Design
- Integration
- Commissioning and start up
- 12 months to build and commission a new site

FDE O&M

- Exploitation and maintenance
- Performance related contracts

- ◆ Competitive LBG and Bio-CO2 producer
- ◆ Sale of LBG and Bio-CO2 through competitive offtake contracts with preferred clients
- ◆ Securing of inlet gas through long terms contracts

SIGNIFICANT PIPELINE SUPPORTING FUTURE GROWTH



Accretive acquisition for FDE

- ◆ Extensive technical due diligence done in 2018 for application to FDE's portfolio in Belgium
- ◆ €2.5M Acquisition cost – a massive discount due to special situation
- ◆ Instantaneous significant value creation for FDE that now benefits from a unique set of technology to target LBG, flare gas and bio-CO2 markets

Unlocking large opportunities in a growing markets

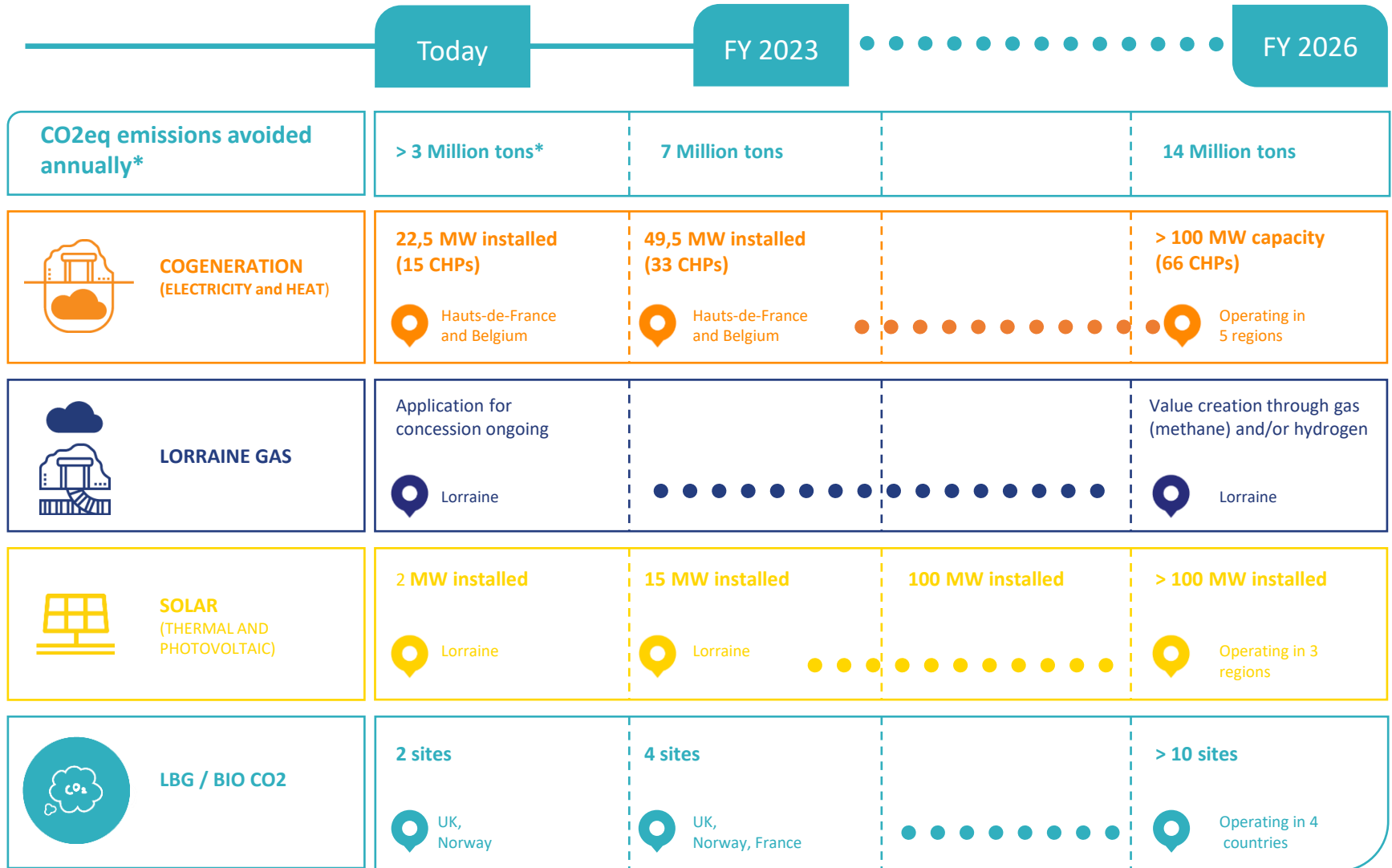
- ◆ Synergies on FDE's portfolio to monetize gas and CO2 on the back of the group's large reserve base
- ◆ Position FDE on growing strategic green gas and CO2 markets
- ◆ Benefitting from the founder's technical expertise to unlock value on CO2 certificates and other GHG related opportunities

Through an integrated business model

- ◆ Implementation of FDE's business model and strategy:
 - ◆ development, construction and operatorship of green gas and CO2 projects
 - ◆ standardized approach being applied for a large deployment (12-month time to market): pre-assembled and shipped units, limited on-site EPC work, automated operation and maintenance, etc

While avoiding significant amount of GHG emissions

FDE'S INTEGRATED GROWTH PLAN



* Of which 1.4Mtons is certified - Sources: 2019 Ineris certification updated with a Global Warming Potential of 82,5 (AR6 – IPCC) and including the Béthune site (FDE extrapolation), 2022 Polytechnic University Mons study

CALENDAR YEAR END 2022 TARGETS CONFIRMED

35 M€
annualized
revenues

EBITDA margin
 $\geq 45\%$



Updated objectives: July 21st, 2022

KEY CORPORATE INFORMATION (as of 26 April 2022)

Listing	Euronext Paris
Share price	€52,8 / share
Shares outstanding	5,2 M
Market capitalisation	275 M€



SELL SIDE COVERAGE

✓ BUY

Target Price: €67

April 2022

Analyst: Henning.Breiter@ha-ib.de



HAUCK & AUFHÄUSER
PRIVATBANK SEIT 1796

✓ BUY

Target Price: €56

April 2022

Analyst: aderyckx@midcapp.com



✓ Hold

Target Price: €50

April 2022

Analyst: anis.zgaya@oddo-bhf.com



ODDO BHF

✓ BUY

Target Price: €42-61

April 2022

Analyst: thomas.martin@exanebnpparibas.com





FDE

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FDE
Local energy,
positive impact



Annexes

A RECOGNIZED OPERATOR SUPPORTED BY TIER 1 PARTNERS

SCIENTIFICALLY PROVEN



INSTITUTIONAL BACK UP



CERTIFIED APPROACH



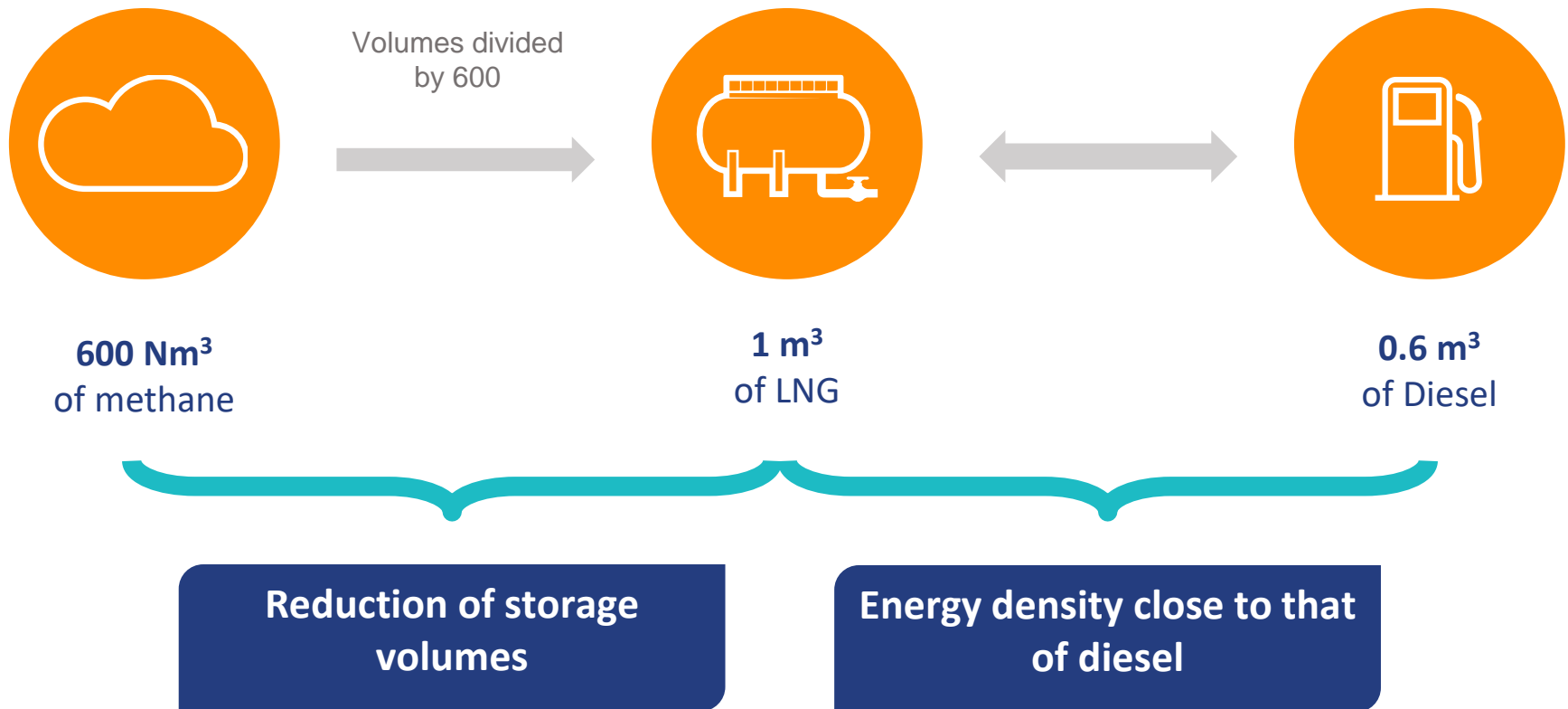
OUR COMMERCIAL PARTNERS



OUR FINANCIAL PARTNERS



WHY LIQUEFYING GAS?



CRYO PUR UNIQUE INTEGRATED APPROACH

