



# UPGRADING LANDFILL GAS TO BIOMETHANE



WAGA  
ENERGY

June 20, 2023



# 01 MISSION



Methane concentration in the atmosphere is at its highest level for **800,000 years.**

If methane emissions are not reduced, it could **undermine the goals of the Paris Agreement.**

\_\_\_\_\_ 2021 IPCC Report

Countries joining the Global Methane Pledge commit to a collective goal of **reducing global methane emissions by at least 30 % by 2030**

\_\_\_\_\_ 2021 Global Methane Pledge



All over the world, landfill is **a major source of methane emissions** as well as an immediately available gas



Leveraging 15+ years of R&D, **Waga Energy transforms landfill methane emissions into pure biomethane**



#### **Our Mission :**

Curbe pollution by delivering biomethane for all

#### **Our Ambition :**

From a pioneer to a global leading producer of biomethane



Waga Energy, a **unique energy transition investment opportunity** to fight against climate change



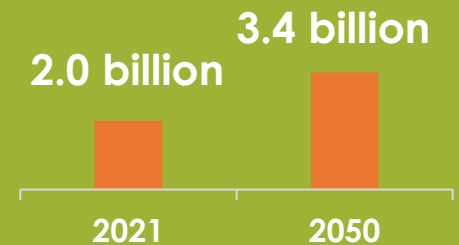
## LANDFILLS, THE SIMPLEST AND CHEAPEST SOLUTION FOR WASTE MANAGEMENT, BUT A FAST GROWING SOURCE OF POLLUTION



Landfill model is the **main way** to manage household waste

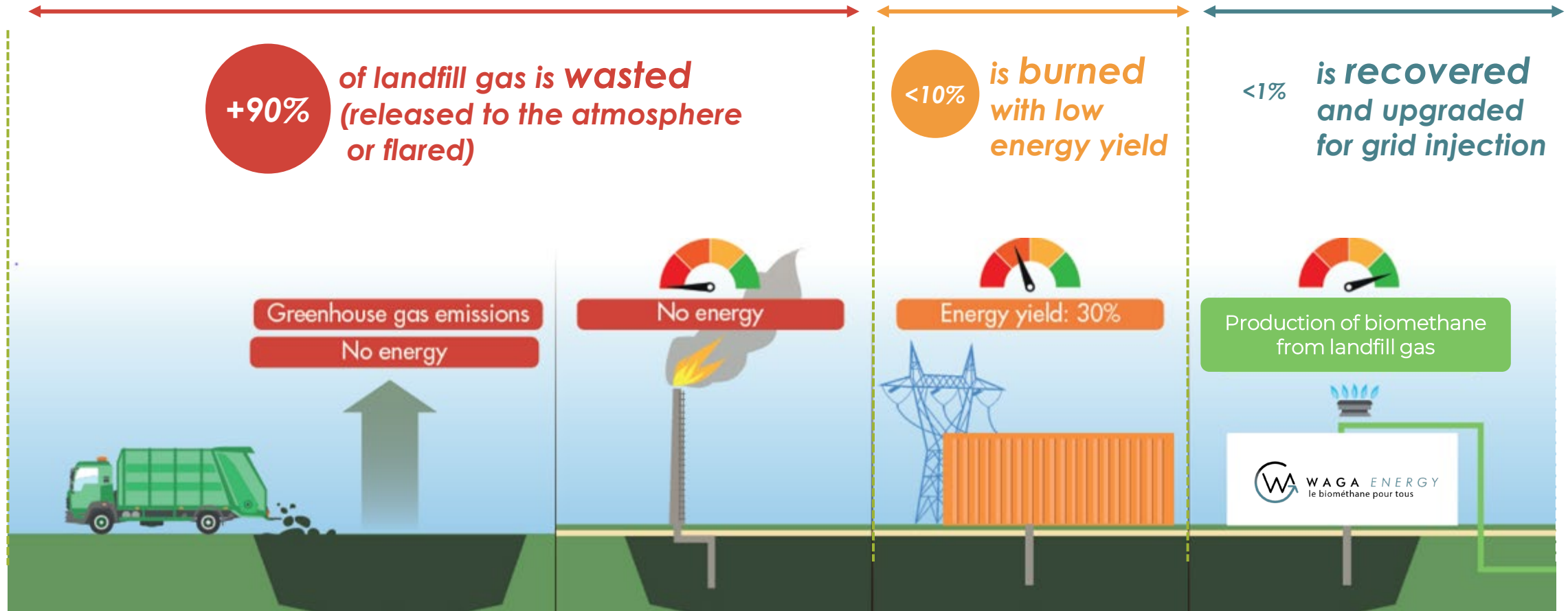


### Tons of waste per year



**70%** of household waste is landfilled worldwide in **>20,000 landfills**

## LANDFILL GAS IS UNEXPLOITED : ONLY <1% IS RECOVERED & UPGRADED FOR GRID INJECTION





## WASTE IS AN UNTAPPED LARGE SOURCE OF BIOMETHANE

### *Landfills' energy potential by:*



**20%**  
of total biomethane  
energy potential



**c.€80bn**  
natural gas equivalent  
of wasted landfill gas annually  
(at 80€/MWh)



## WAGABOX®, A DISRUPTIVE TECHNOLOGY TO UPGRADE LANDFILL GAS INTO BIOMETHANE

### YESTERDAY

*No technology to efficiently upgrade landfill gas into biomethane:*

### 2 CHALLENGES:

- ❌ Separate the **oxygen** and the **nitrogen** included in landfill gas (main challenge)
- ❌ Manage **high volatility** over time and **high composition**

### TODAY



**WAGABOX®**

*the only standardized solution to recover landfill gas and upgrade it into biomethane*

**PATENTED TECHNOLOGY**

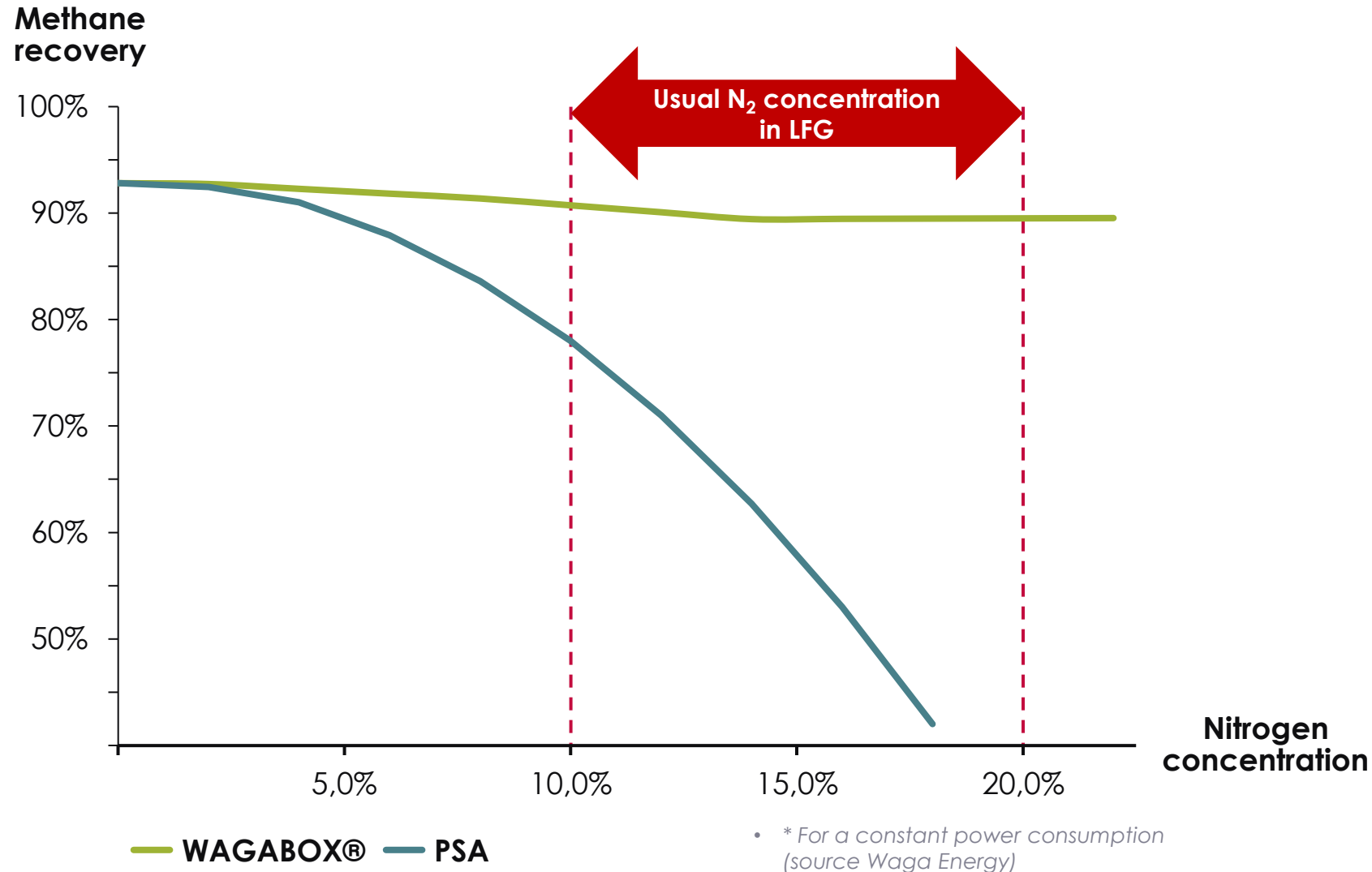
15+ years of R&D





# 01 MISSION

## HIGHER RECOVERY RATE THAN PSA TECHNOLOGIES AS NITROGEN CONCENTRATION INCREASES\*





# A CLOSER LOOK AT THE WAGABOX® #8

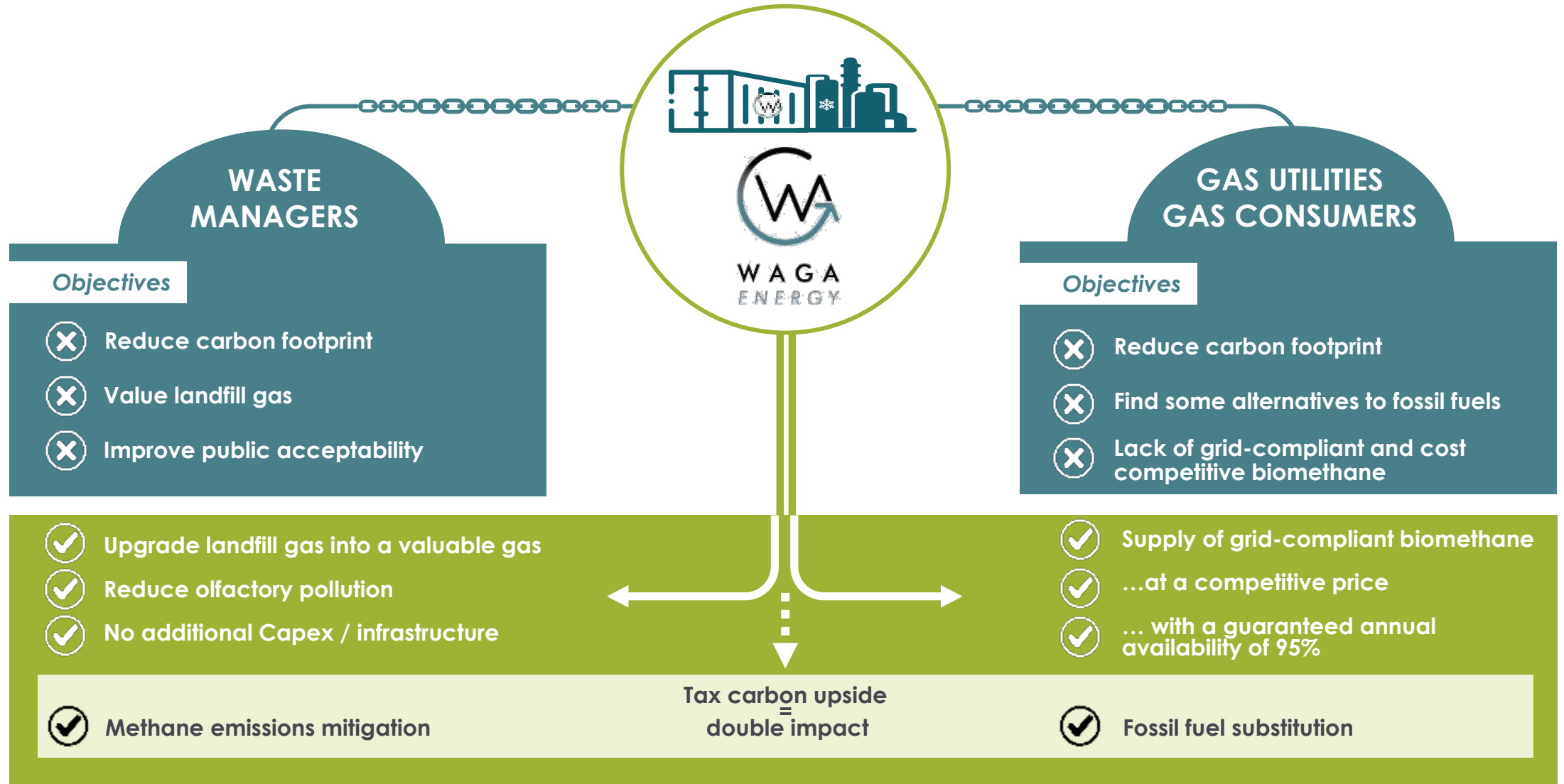


WAGABOX® #8  
SUEZ landfill, France (2020)

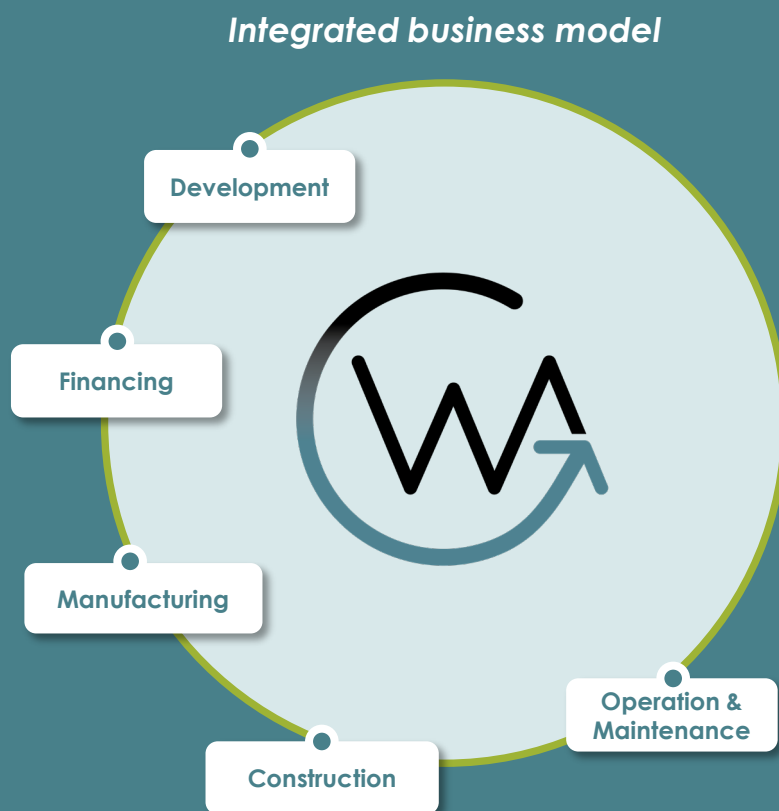
Confidential



## THE MISSING LINK BETWEEN WASTE MANAGERS AND GAS UTILITIES



## UNIQUE POSITIONING AS A RNG PRODUCER WITH A PROPRIETARY TECHNOLOGY



**Benefit for the landfill:  
Revenue sharing of the  
RNG sale backed by 10 to  
20-year gas offtake  
agreements**



# WAGA ENERGY IN A NUTSHELL



**> 600 GWh**

of biomethane injected \*

**> 100,000 tons**

of CO<sub>2</sub>eq avoided\*

*\* Since the commissioning of the first unit in 2017*

FY2022 revenues:  
**€19.2m (+56%)**

FY2022 biomethane production:  
**216 GWh (+49%)**

**16 WAGABOX<sup>®</sup> units operated**  
in France and Canada

**570 GWh/y** of total installed capacity  
Target: **1 TWh** of total installed capacity by 2023

**13 more units under construction**  
in France, Spain, Canada and the US

**95% average uptime**  
for all units in operation in 2022



# 02

## Highlights 2022



*Inauguration of the WAGABOX® unit in Claye-Souilly (May 2022)*



# 01 HIGHLIGHTS 2022

## 2022, A TURNING POINT

### Growth acceleration

- **+4 units** commissioned
- **+7 new contracts** signed
- **+49%** increased in biomethane production
- **+56%** increased in revenues, up to **€19.2m**
- **X3 of CAPEX**, up to **€40m**

### Geographic expansion and group structuring

- **Recruitment of 74 talents**, with critical skills for the future
- **France relocated HQ**, new center for excellence in RNG
- Stronger presence and business dev. in North America
- Opening **subsidiaries in Italy and the UK**
- **79%** of the project pipeline now outside France

### Robust financial capabilities

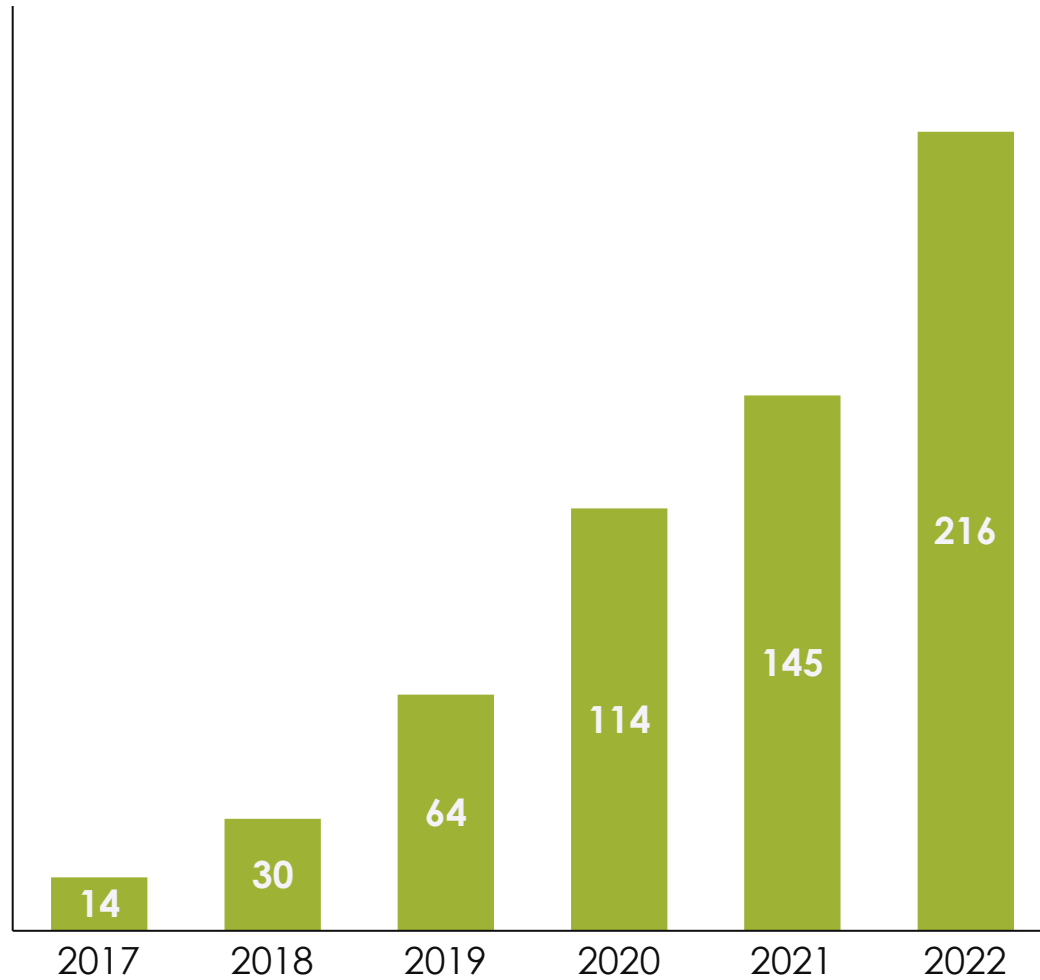
- **EBITDA losses limited to 3.2M€** (vs 0.2M€ in 2021)
- Net cash variation: **31M€**
- Net debt as of 31/12/2022: **52.6M€**



*The new Waga Energy headquarters in Eybens, France*

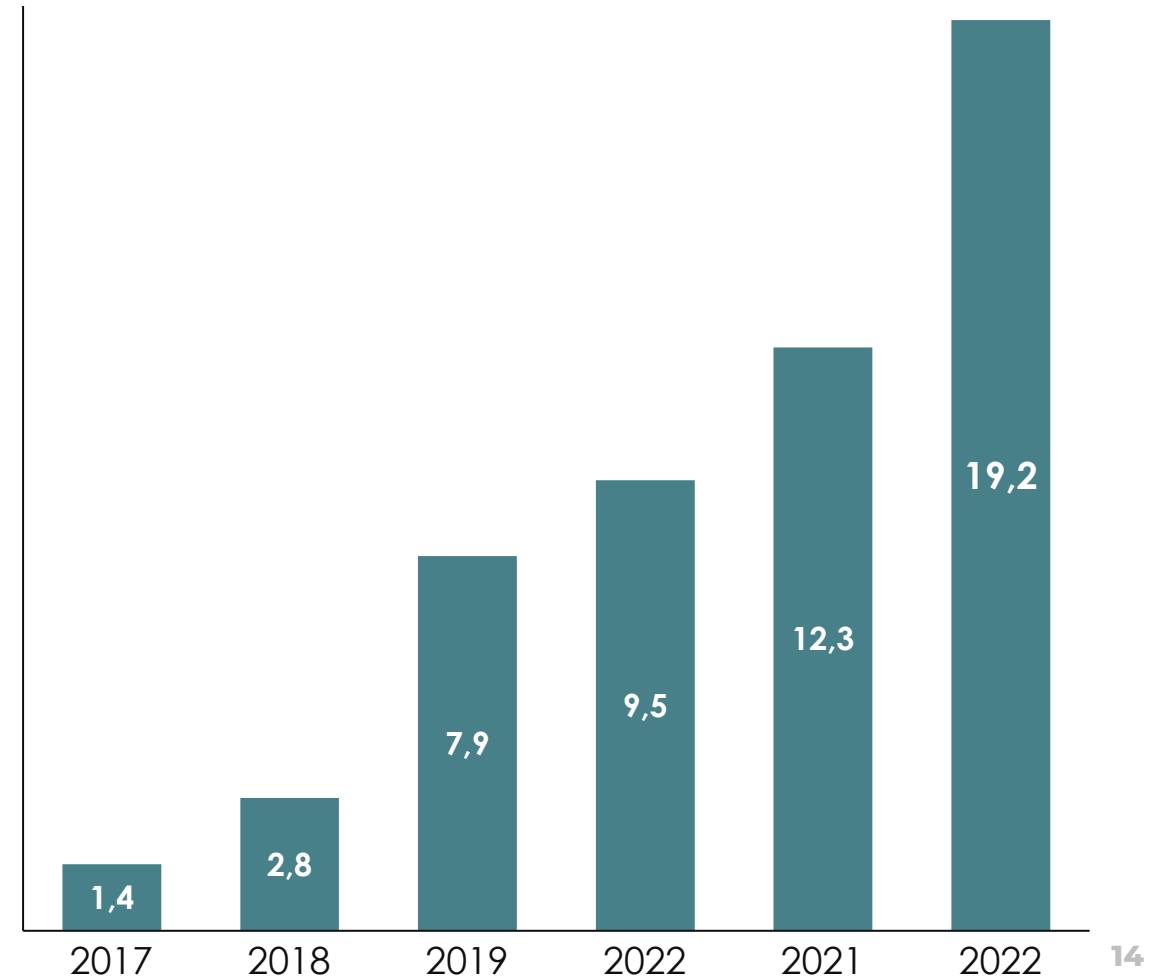
## STRONG GROWTH IN BIOMETHANE PRODUCTION AND REVENUES

GWh



\* Data GRDF

€m





## COMMISSIONING OF FIVE NEW WAGABOX® UNITS: + 220 GWH/YEAR IN INSTALLED CAPACITY

January 26, 2022  
**Gournay  
(France)**

Partner: **SEG Gournay**  
IC\*: 25 GWh/y  
~3,000 tons of eqCO<sub>2</sub>  
avoided/y



March 9, 2022  
**Claye-Souilly  
(France)**

Partner: **Veolia**  
IC: 120 GWh/y  
~16,500 tons of  
eqCO<sub>2</sub> avoided/y



April 6, 2022  
**Le Ham  
(France)**

Partner: **Veolia**  
IC: 25 GWh/y  
~3,000 tons of eqCO<sub>2</sub>  
avoided /y



October 10, 2022  
**Milhac-  
d'Auberoche  
(France)**

Partner: **Suez**  
IC: 25 GWh/y  
~3,000 tons of eqCO<sub>2</sub>  
avoided /y



January 26, 2023  
**Montois  
-La-Montagne  
(France)**

Partner: **Suez**  
IC: 25 GWh/y  
~3,000 tons of eqCO<sub>2</sub>  
avoided /y





# 01 HIGHLIGHTS 2022

## SEVEN NEW CONTRACTS IN FRANCE AND CANADA



Signature du contrat de Clermont-Ferrand avec le Valtom.

## 250 GWH/Y INCREASE IN INSTALLED CAPACITY

- **Eteignères**  
Partner: Arcavi  
IC\*: 25 GWh/y
- **Cusset (France)**  
Partners: Suez/Vichy Communauté  
IC: 25 GWh/y
- **Sainte-Marie-Kerque (France)**  
Partners: Séché Environnement  
IC: 25 GWh/y
- **Canada**  
(to be disclosed soon)  
IC: 25 GWh/y
- **Hartland (Canada, BC)**  
Partners: CRD  
IC: 100 GWh/y
- **Granges (France)**  
Partners: Veolia  
IC: 25 GWh/y
- **Clermont-Ferrand (France)**  
Partners: Valtom  
IC: 15 GWh/y

\* IC: Installed Capacity



## 16 WAGABOX® UNITS UP-AND-RUNNING, 13 MORE UNDER CONSTRUCTION



### CANADA

- 1 **SAINT-ÉTIENNE-DES-GRÈS**  
130 GWh/an (Energycycle)
- 2 **COWANSVILLE**  
30 GWh/an (RIGMRBM)
- 3 **Annoncé prochainement**  
25 GWh/an

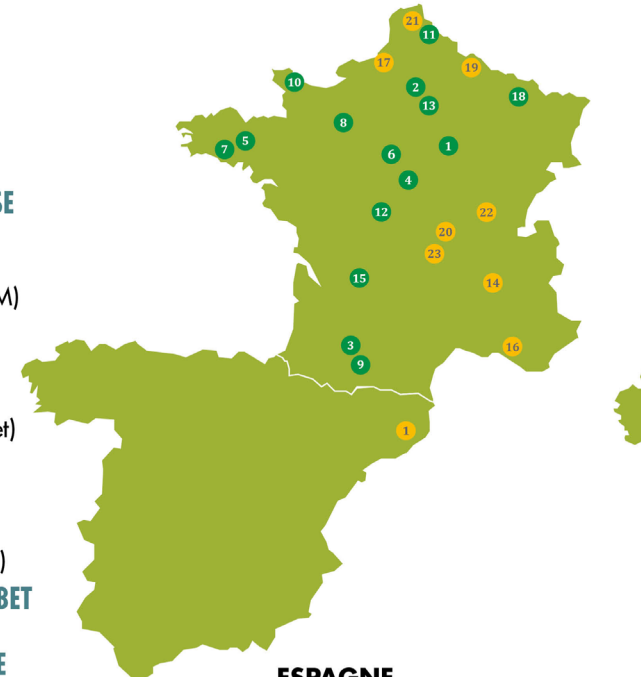
- 4 **HARTLAND**  
100 GWh/an (CRD)

### ÉTATS-UNIS

- 1 **BATH, NY**  
60 GWh/an (Steuben County)

### FRANCE

- 1 **SAINT-FLORENTIN**  
25 GWh/year (Coved)
- 2 **SAINT-MAXIMIN**  
25 GWh/year (Suez)
- 3 **PAVIE**  
15 GWh/year (Trigone)
- 4 **SAINT-PALAIS**  
20 GWh/year (Veolia)
- 5 **GUELTAS**  
25 GWh/year (Suez)
- 6 **CHEVILLY**  
15 GWh/year (Suez)
- 7 **INZINZAC-LOCHRIST**  
15 GWh/year (Lorient)
- 8 **LES VENTES-DE-BOURSE**  
25 GWh/year (Suez)
- 9 **LIÉOUX**  
35 GWh/year (SGMAM)
- 10 **LE HAM**  
20 GWh/year (Veolia)
- 11 **BLARINGHEM**  
25 GWh/year (Baudalet)
- 12 **GOURNAY**  
15 GWh/year (SEG)
- 13 **CLAYE-SOUILLY**  
120 GWh/year (Veolia)
- 14 **CHATUZANGE-LE-GOUBET**  
25 GWh/year (Veolia)
- 15 **MILHAC-D'AUBEROCHE**  
25 GWh/year (Suez)
- 16 **Annoncé shortly**  
25 GWh/year
- 17 **Annoncé shortly**  
25 GWh/year
- 18 **MONTOIS-LA-MONTAGNE**  
35 GWh/year (Suez)
- 19 **ÉTEIGNIÈRES**  
25 GWh/year (Arcavi)
- 20 **CUSSET**  
25 GWh/year (Suez)
- 21 **SAINTE-MARIE-KERQUE**  
20 GWh/year (Séché)
- 22 **GRANGES**  
20 GWh/year (Veolia)
- 23 **CLERMONT-FERRAND**  
15 GWh/year (Valtom)



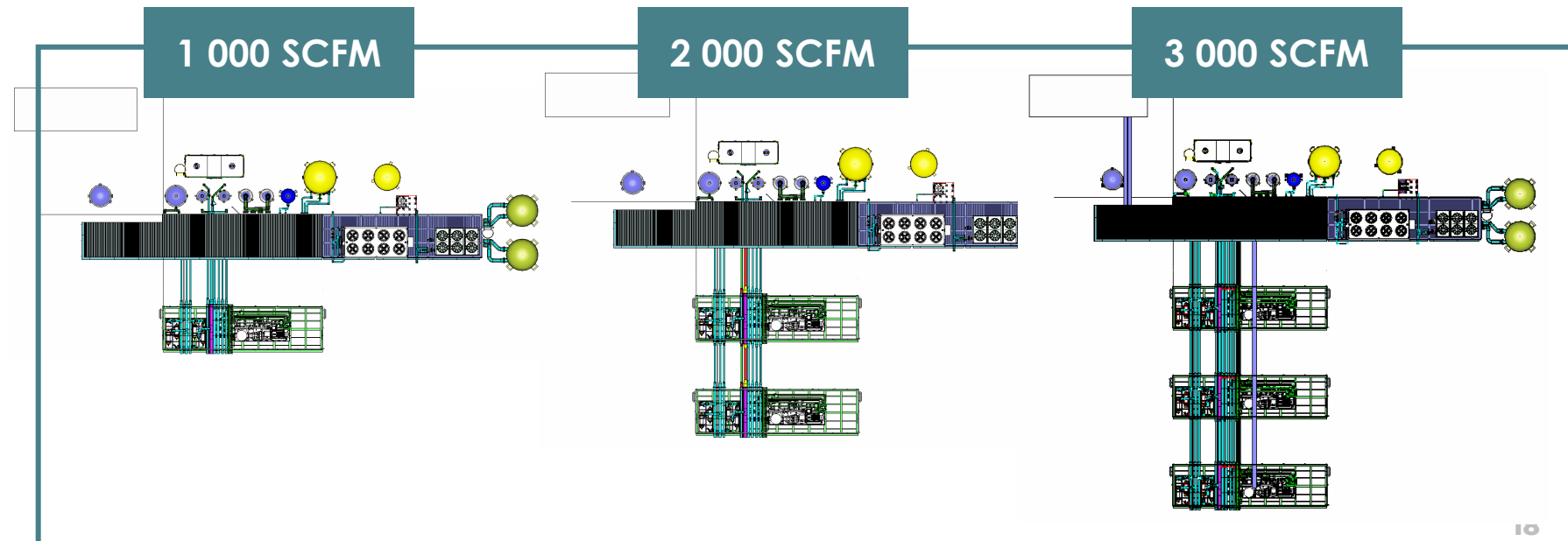
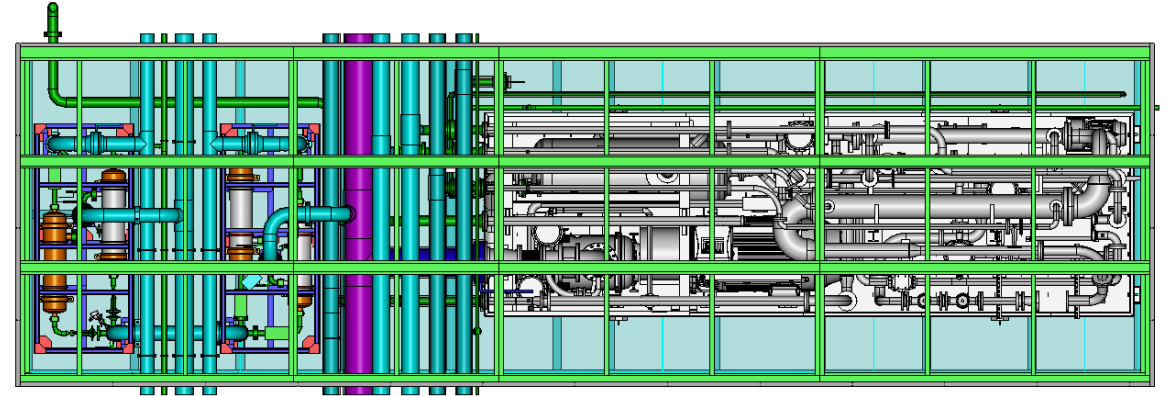
### ESPAGNE

- 1 **ELS HOSTALET DE PIEROLA**  
70 GWh/an (PreZero)

## STANDARDIZED MANUFACTURING AND MODULAR APPROACH TO OPTIMIZE COSTS AND REDUCE TIME TO MARKET

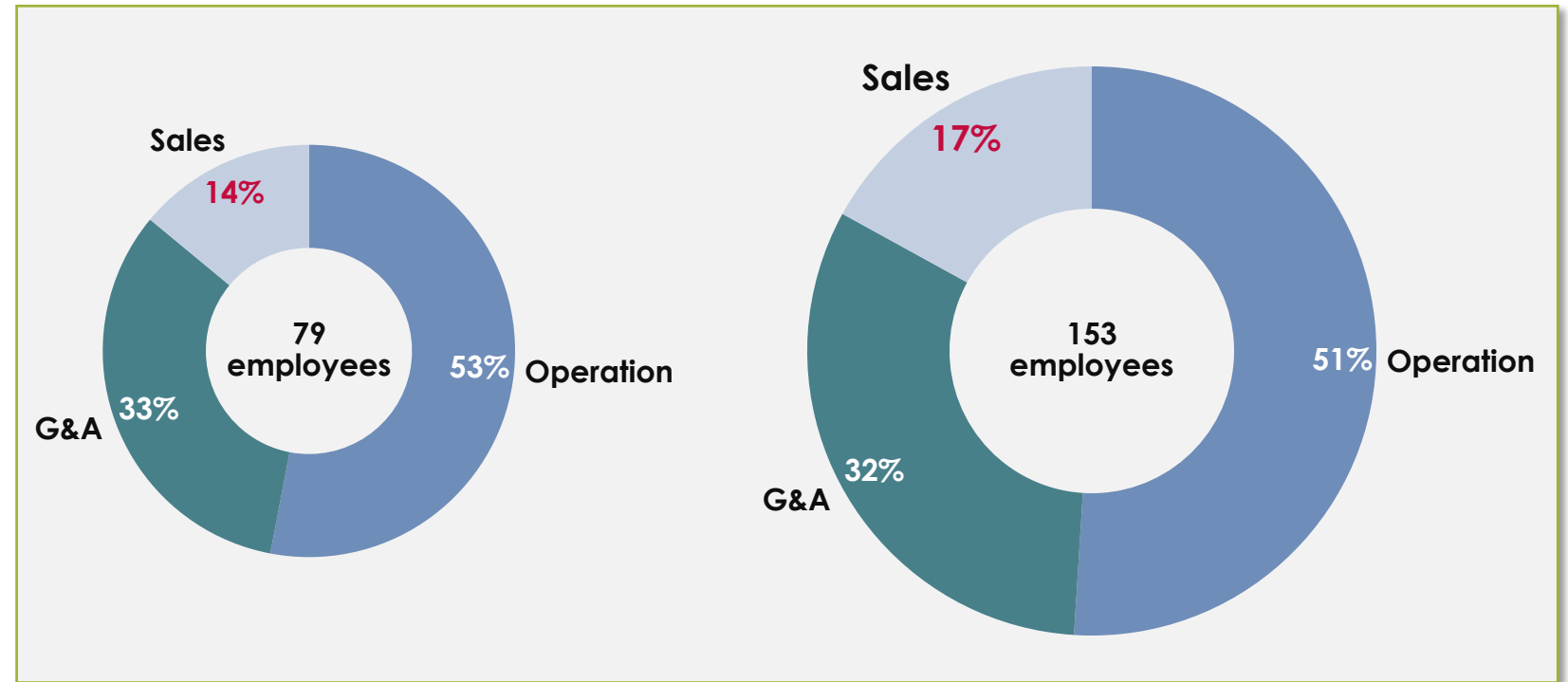
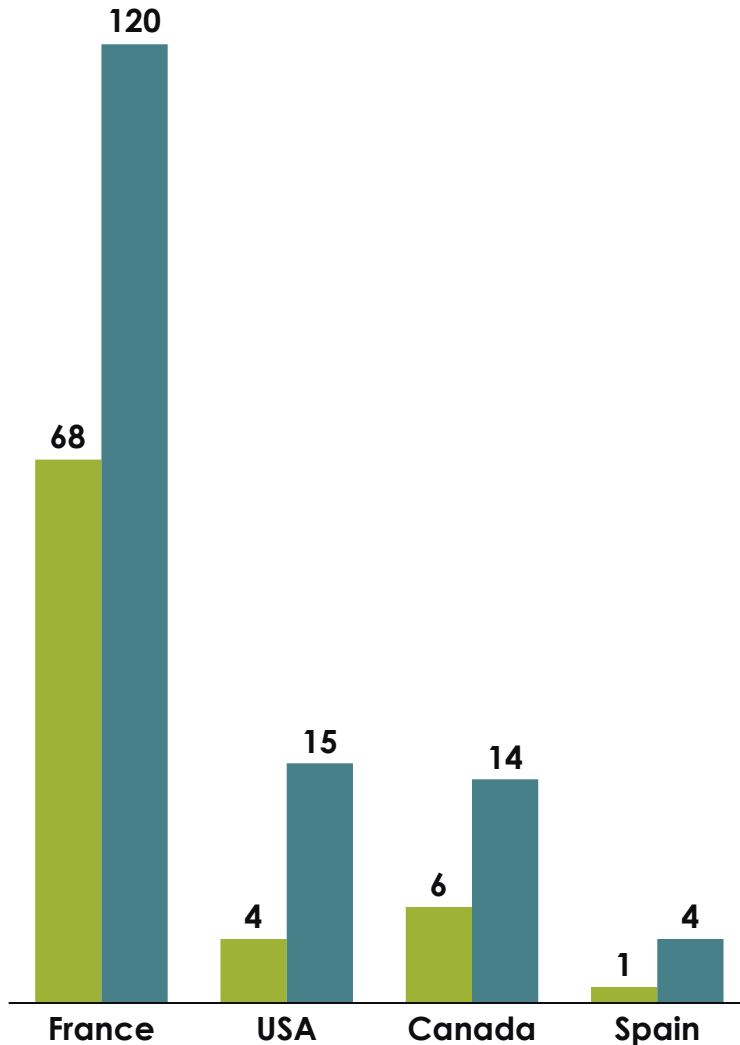
All units can be assembled from:

- Membranes filtration container
- Cryogenic distillation modules





## ACTIVE RECRUITMENT PROGRAM: DOUBLING THE HEADCOUNT TO SUPPORT GROWTH



- All functions equally reinforced in France
- Strong international development, especially in business development

## LONG TERM BUSINESS MODEL AND VISIBILITY



**2,8 years**

Average Wagabox® asset age \*



**11,9 years**

Average remaining Biomethane Purchase Agreement duration<sup>1</sup>



**~€46m**

in annual recurring revenue<sup>2</sup> secured

<sup>1</sup> Weighted by production volume of WAGABOX® installations

<sup>2</sup> The annual contractual recurring revenue correspond to the revenues anticipated by the company over a period of 10 to 20 years in the context of long-term contracts, either for the sale of biomethane or for purification services. It does not constitute a forecast and is intended to represent, at the date, the potential of the installed base of WAGABOX® units and those under construction.





# 03

## 2023 OUTLOOK

03 OUTLOOK 2023

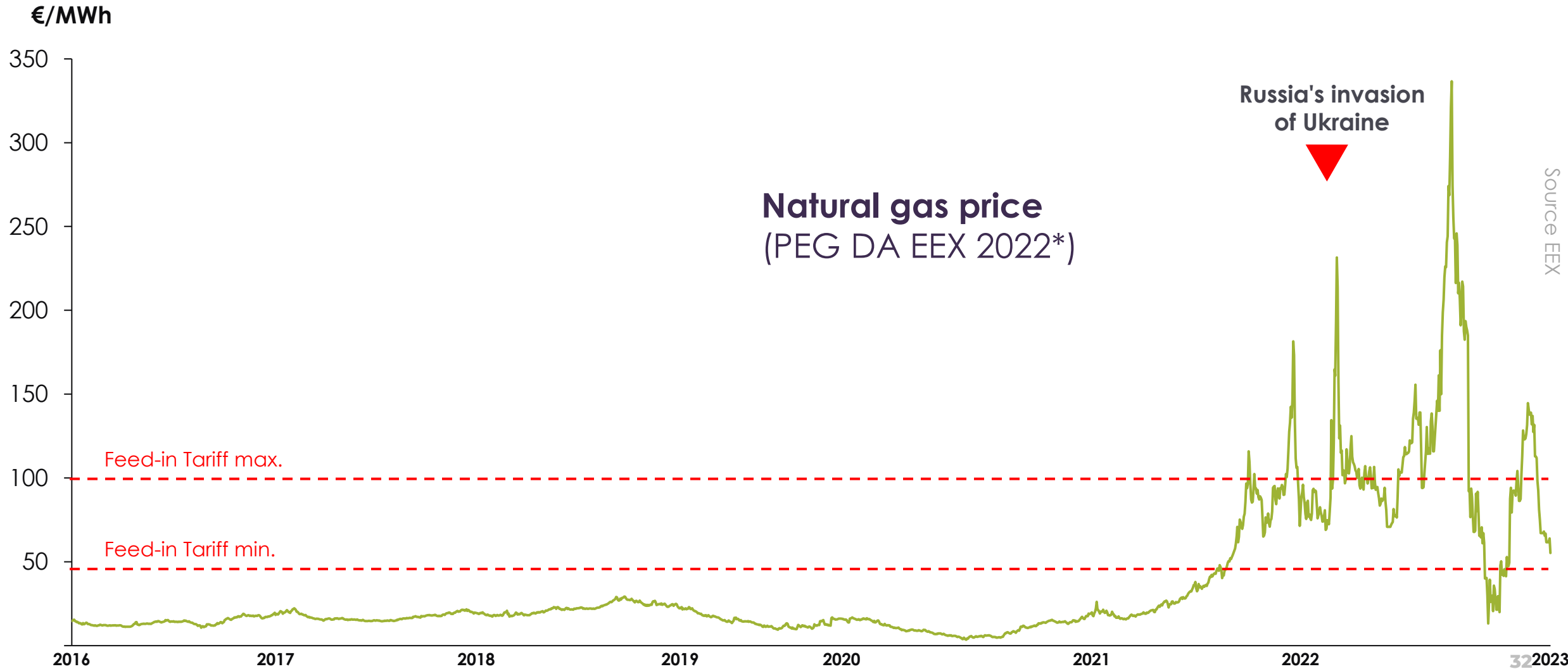
## READY TO BECOME A WORLD LEADER IN LANDFILL GAS UPGRADING INTO BIOMETHANE

- ✓ A unique and proven technology
- ✓ A global and dedicated organization
- ✓ Significant financial resources
- ✓ For a booming and strategic market





## A SIGNIFICANT INCREASE IN THE VALUE OF BIOMETHANE



## RENEGOCIATING BPA (BIOMETHANE PURCHASE AGREEMENT)



Biomethane is now considered as **a strategic resource** to be developed

A dynamic market trend supported by:

- Domestic energy supply
- Decarbonation
- REPowerEU
- Inflation Reduction Act (IRA)

**+60%** increase in the price  
of the biomethane to be produced in our Spanish unit  
Other biomethane sale contracts under renegotiation



## “ISCC EU” CERTIFICATION FOR THE SPANISH BIOMETHANE PRODUCTION UNIT



*“ISCC certification guarantees that the biomethane we produce is traceable and compliant with European biofuel regulations, which helps boost its value”.*

**Lucie Tonnellier,**  
Energy Director



## COMMISSIONING OF THE FIRST INTERNATIONAL WAGABOX® UNIT IN CANADA



**130 GWh/y**  
of biomethane  
injected  
into the Énergir grid

**8,000** local  
households supplied  
with biomethane

**21,500 tonnes**  
of eqCO<sub>2</sub> emission  
avoided



# 03 OUTLOOK 2023

## OVER 1.7 TWH OF INSTALLED CAPACITY UNDER EXCLUSIVE NEGOTIATIONS IN NORTH AMERICA

36 employees to date

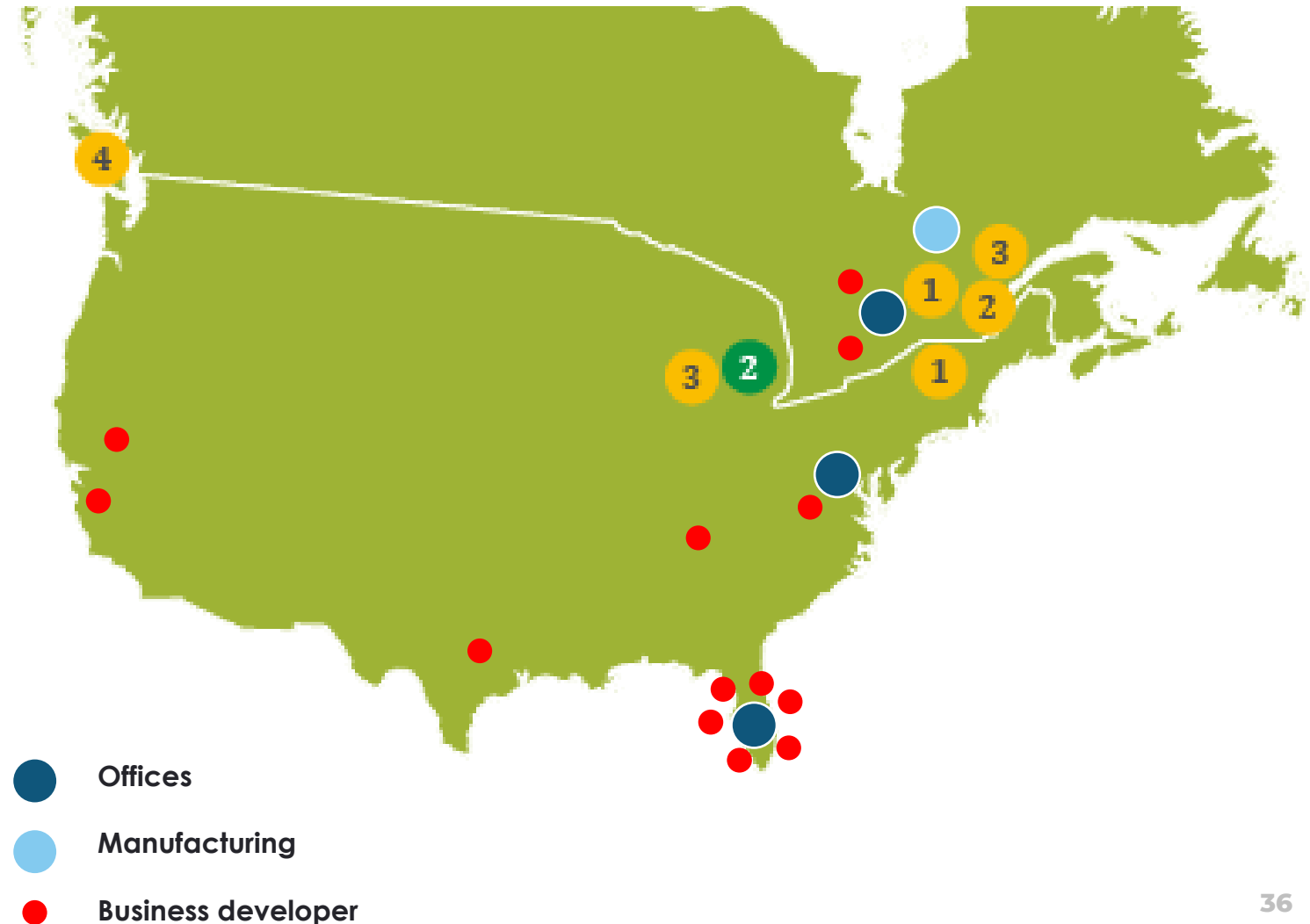
12 business developers

1 WAGABOX units in operation

4 WAGABOX units under construction

1 cryo module in operation

2 cryo modules under construction



## SIGNIFICANT PIPELINE BACKING THE INTERNATIONAL RAMP-UP



ADDRESSABLE MARKET

=

3 Landfill selection criteria



1 Compliant distance to natural gas grid

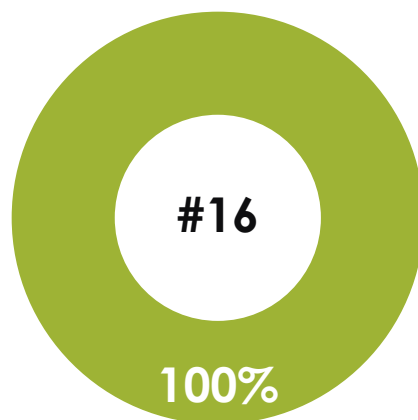


2 Sufficient landfill gas production



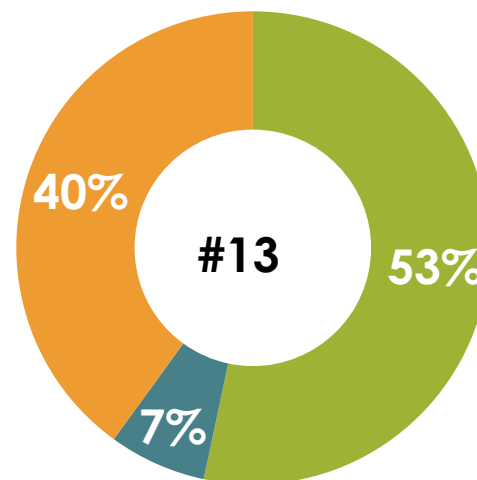
3 Compliant waste managers (regulatory requirements)

In operation



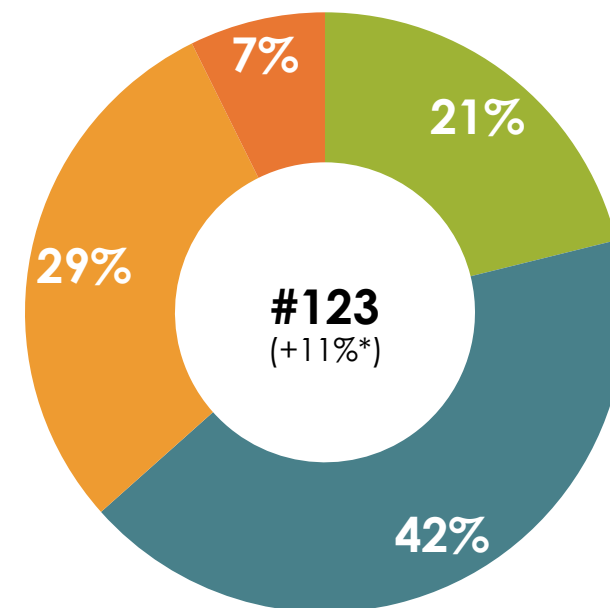
Under construction

Contracts signed



Pipeline

Negotiations ongoing



France

Europe

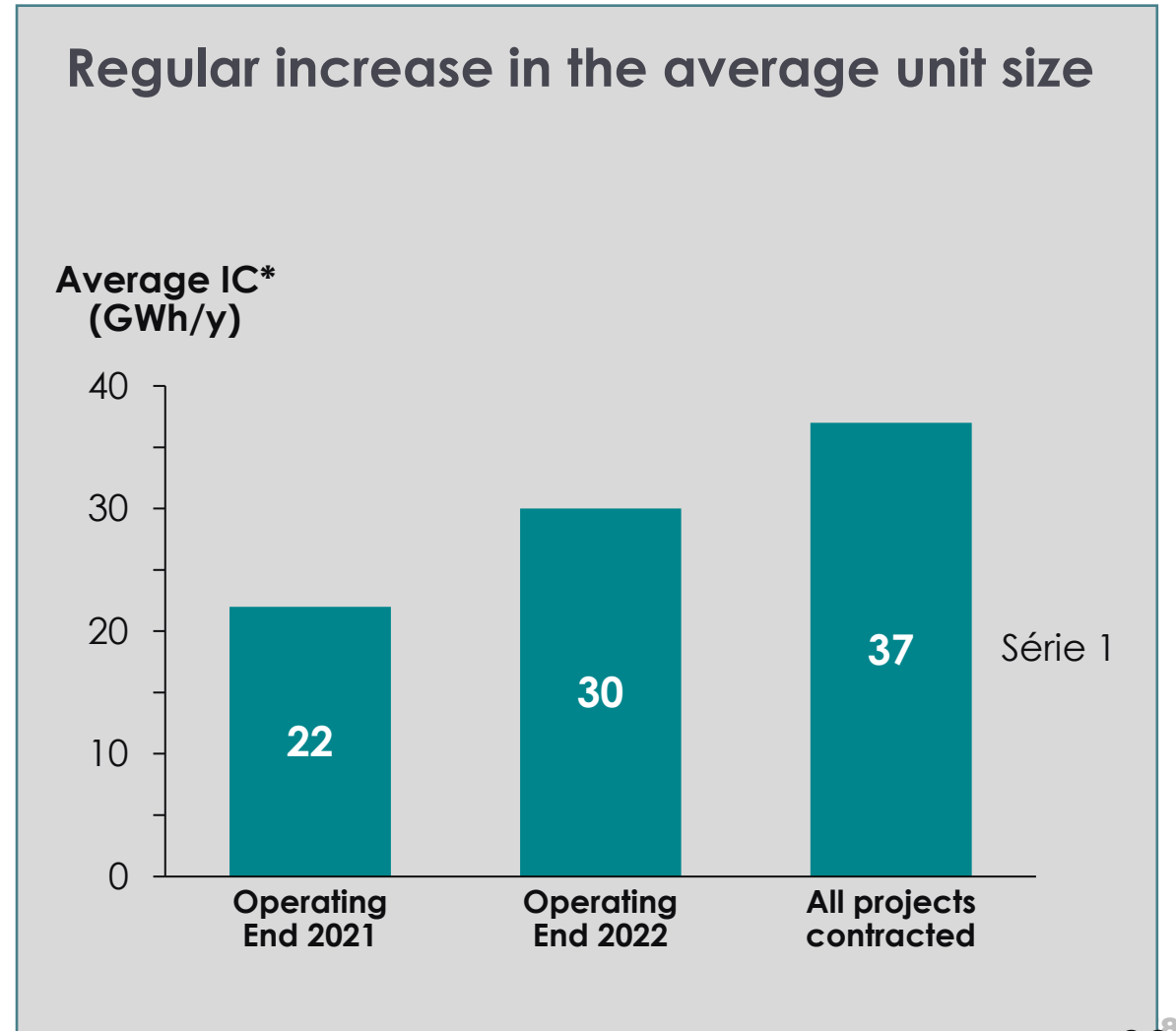
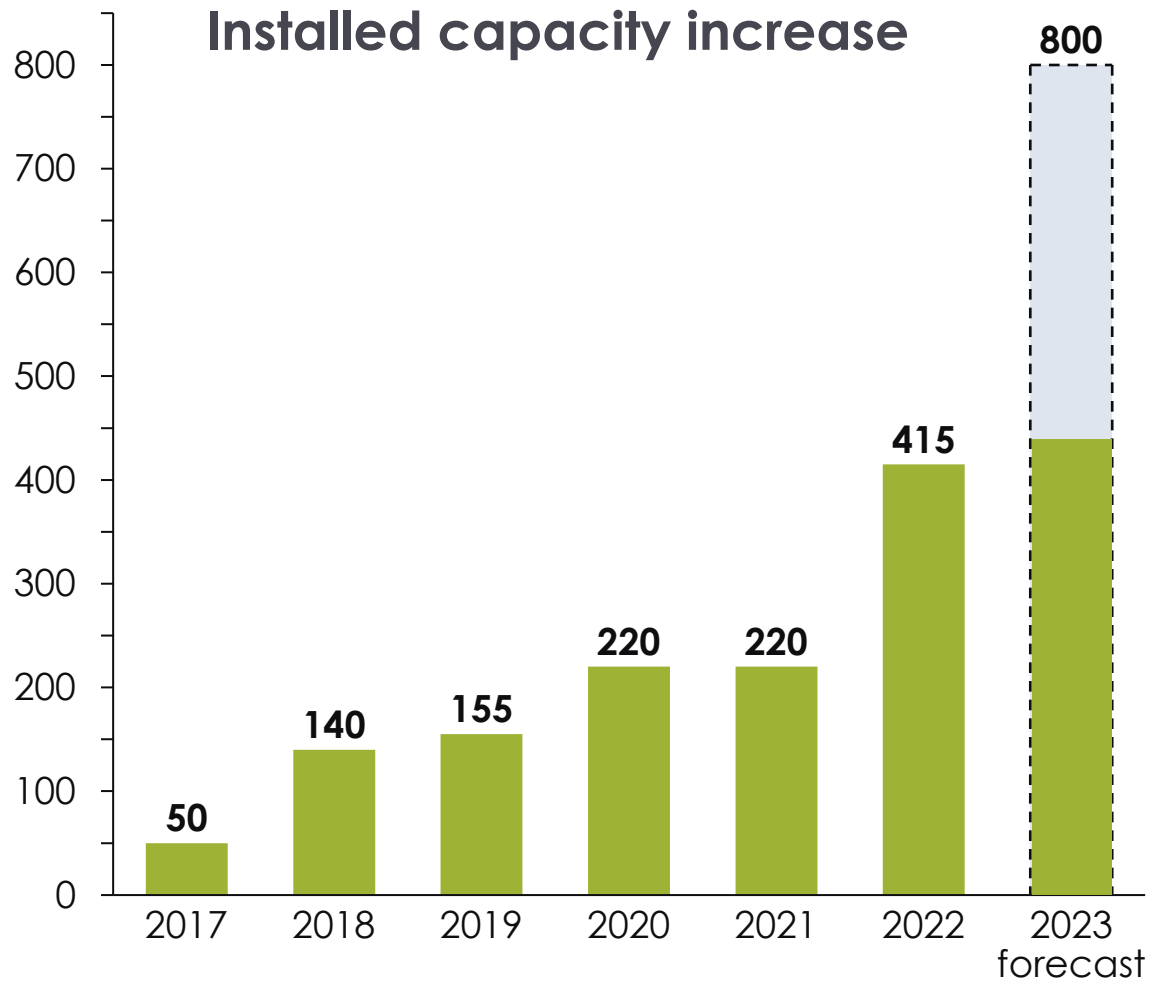
North America

Rest of the world

\* Since last publication in May 2, 2022



## EIGHT COMMISSIONINGS PLANNED BY 2023 FOR A TOTAL INSTALLED CAPACITY OF 800 GWH



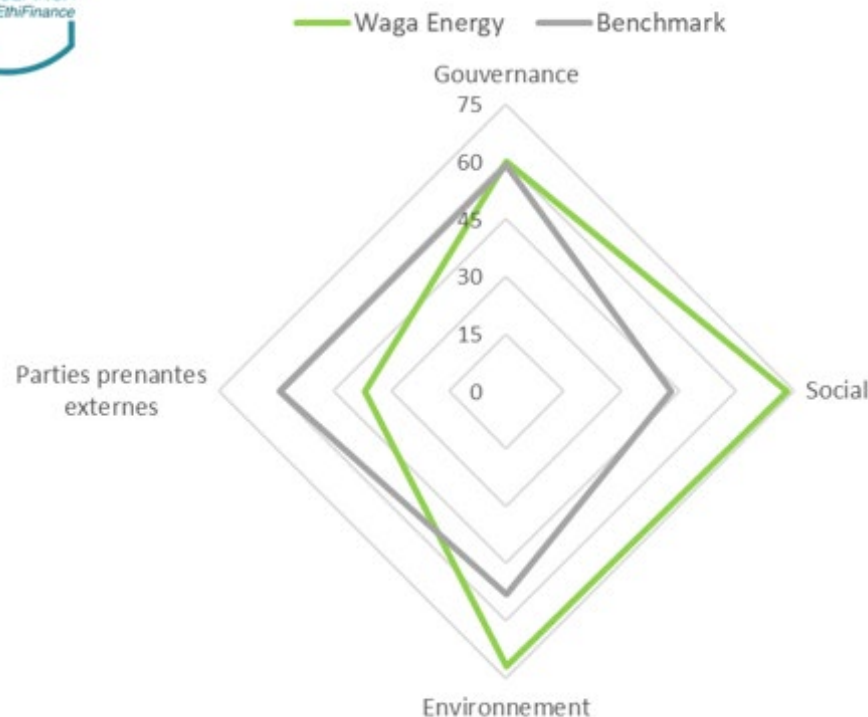
# 03 OUTLOOK 2023

## STRONG FOCUS ON ESG

- Launch of Waga Energy's **carbon footprint**
- Structuring the ESG function within the **executive committee**
- Publication of an **ESG report** in the coming URD



### Notation 2021



Extra-financial Rating by



# 65/100

Overall Rating (vs 50/100 for benchmark)

### Key strengths

- Governance in line with all Middledenext guidelines
- Strong ethics culture
- Employee skills development
- Proactive monitoring of environmental KPIs

### EU TAXONOMY ASSESSMENT

- Waga Activities are 100% eligible to EU Taxonomy
- Waga Energy meets 3 out of the 4 Do No Significant Harm Principles
- Waga complies with Minimum Social Safeguards of the EU Taxonomy

100%

of WAGA Energy 2020 turnover is

Eligible for EU Taxonomy-alignment





# 03 OUTLOOK 2023

## **CONFIDENCE TO DELIVER A VERY POSITIVE YEAR**

**Increase of installed capacity**  
up to 800 GWh by end-2023

**Execution Of The Hartland Project**

**Delivering Of The Cryo Modules To Air Liquide**

**Offtake Price Increases**

Alongside better Renewable Natural Gas market conditions



**STRONG GROWTH EXPECTED  
ON 2023 REVENUES**



# 03 OUTLOOK 2023

## AMBITIOUS GROWTH OBJECTIVES



### Objectives

**100**  
WAGABOX® units  
in operation at  
year-end 2026



**c. 4 TWh**  
production capacity



**c. 700kt**  
CO2eq avoided



**€200m**  
Revenue in  
2026



**€400m**  
Run-rate annual  
revenue<sup>(1)</sup>  
secured



Note: (1) Corresponding to the 120 Wagabox® engaged at year-end 2026 (in operation + in construction)



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## IMPORTANT NOTICE

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