



Global
Bioenergies

A growing player of the
environmental transition

10 October 2023

Euronext Paris: ALGBE





Our purpose

Foster the
environmental
transition through
biosciences

Disclaimer

This presentation does not purport to be a complete or exhaustive description of Global Bioenergies nor to predict future events or circumstances. It is prepared solely for the information of investors.

It contains certain forward-looking statements relating in particular to Global Bioenergies' development prospects and strategy. Based on Global Bioenergies' assumptions, estimates and expectations as well as on the state of current knowledge, the information contained herein involves risks and uncertainties linked to various factors whose realization, non-realization or evolution in the future could have an impact on Global Bioenergies' activities, financial situation, results and performance, which could then differ from those indicated in this presentation. These risks and uncertainties include those set forth and detailed in Chapter 1.C "Risk Factors" of the universal registration document, approved by the French Financial Markets Authority (Autorité des Marchés Financiers) under number R.23-021 dated 28 April 2023. This universal registration document is available on Global Bioenergies' website (<https://www.global-bioenergies.com/informations-reglementees>).

Global Bioenergies makes no representation or warranty of any kind as to the completeness or correctness of the information contained herein or that the events contemplated will occur or that the objectives contemplated will be achieved. In no event shall Global Bioenergies, its officers, employees or advisors be liable for any loss or damage whatsoever, whether arising out of or in connection with the use of this presentation or the information contained herein.

Neither this presentation nor a copy hereof, or any information it contains, may be conveyed, disclosed or distributed, whether directly or indirectly, in the United States, Canada, Japan or Australia, or to any resident of those countries. The distribution of this presentation in other countries may be subject to legal restrictions and any person who may come into possession of it must inform itself of the existence of any such restrictions and comply therewith.

This presentation is promotional in nature and does not constitute a prospectus within the meaning of Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 nor an offer or invitation to sell or purchase, or a solicitation of any offer to purchase or subscribe for shares of Global Bioenergies in any country.

Global Bioenergies undertakes no obligation to update the information contained herein, subject to applicable regulations, and any information contained herein is subject to change without notice.



Our vision



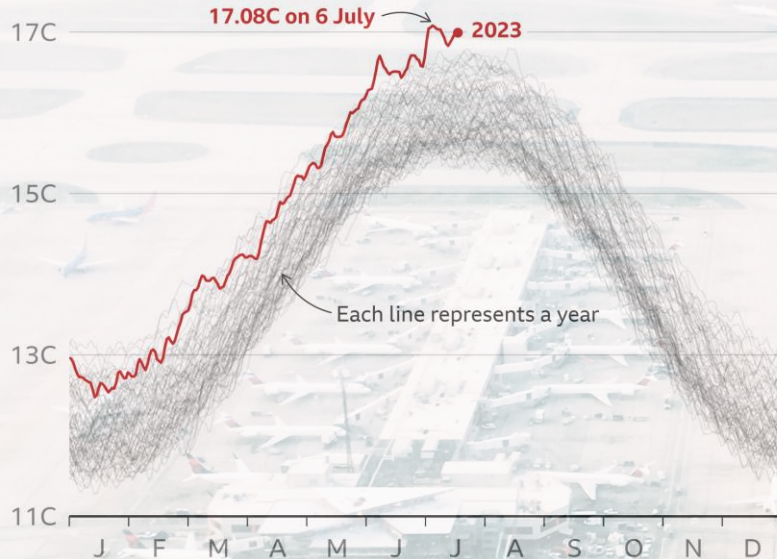
Marc Delcourt
CEO & co-founder



Samuel Dubruque
CFO

Hottest day on record globally

Daily average air temperature, 1940-2023



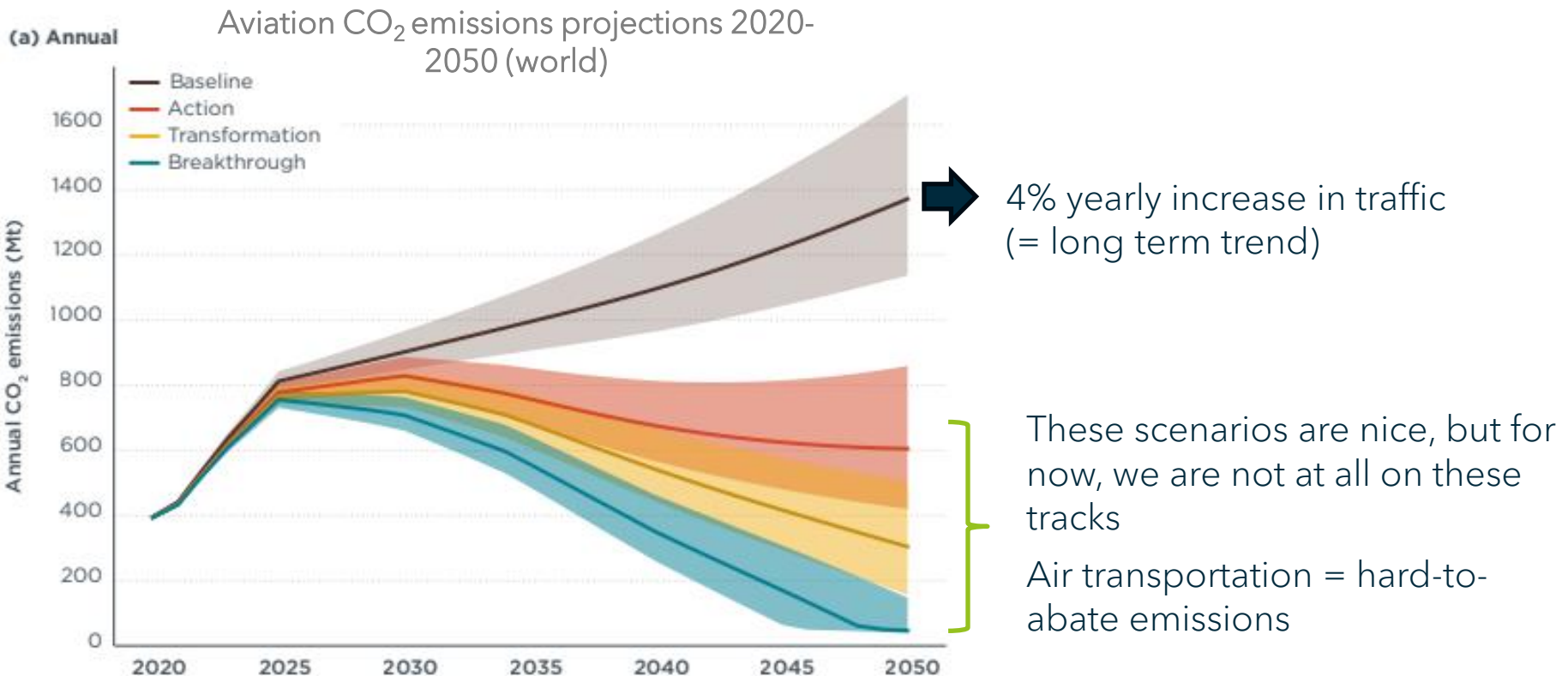
Surprisingly, 6 July 2023 also broke the number of flights in one single day

→ We witness the acceleration of global warming we don't act

Air transport footprint – A major issue...

Today, air transportation accounts for ~3% of global CO₂ emissions

CO₂ + contrails → responsible of 6% of global warming



Air transportation faces an existential crisis



=11 tons
CO₂

Annual carbon footprint
of each European
citizen



1 Paris-New York round trip
= 2 tons CO₂
emissions per
passenger



The first lever to
reduce carbon
footprint is cancel
unnecessary
flights








Anne Rigail, CEO at Air France, the largest Sustainable Aviation Fuels (SAF) purchaser worldwide:

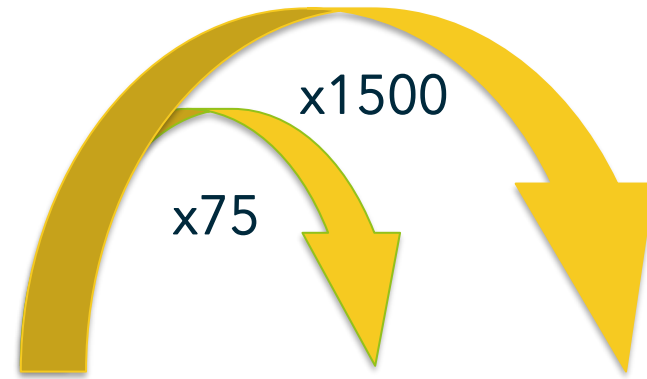
« We hope that new technologies and SAF massification will limit the cost increase per travel, and thus prevent air transportation revert to niche market, as it was before the 90s. »

Interview to *L'Usine Nouvelle*, June 2023

Solutions to reduce CO₂ emissions/km

	Technology	Feedstock	Maturity	Deployment	
SUSTAINABLE AVIATION FUELS	Hydrotreated Esters and Fatty Acids (HEFA)	Waste and residue lipids, vegetable oils, palm, and used cooking oil		Technology already implemented at large scale but not scalable due to feedstock availability & logistical constraints	2025
	Fischer Tropsch (FT)	Municipal solid waste, coal, ash, and sawdust		Financing of the first large scale plant projects ongoing	2030
	Fermentation: ATJ-SPK or IBN-SPK	Sugarcane, sugar beet, sawdust, plant dry matter (biomass)		Financing of the first large scale plant projects ongoing	2030
	Power-to-Liquid (PtL) E-fuels	CO ₂ , water, renewable Electricity		First small scale pilot plants starting	2035
	Electricity and hydrogen	N/A		Not drop in : new equipment & new infrastructure needed → huge investments Consensus in the aviation that it will not happen except for small planes/short haul maybe	2050+

...And an exponential demand



Million tons/yr	2019	2020	2021	2022
SAF output	0,02	0,05	0,08	0,24
Global Jet Fuel	288	157	182	254
% SAF	<0,01%	0,03%	0,04%	0,1%

Up to now

Only 0,1% of global fuel consumption
 → Up to now, SAF are a drop in the ocean!

	2030	2050
SAF output	18	380
Global Jet Fuel	350	760
% SAF	5%	50%

As of tomorrow

→ SAF upcoming needs are gigantic and require a complete change of scale

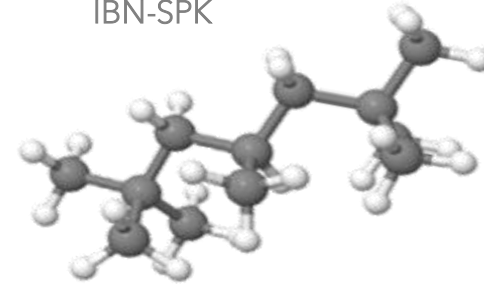
Our solution: IBN-SPK a new, innovative SAF technology

Technology

- ✓ Technical feasibility proven
- ✓ Small number of industrial steps
- ✓ Protected by 40 patent families
- ✓ Compatible with several feedstocks



IBN-SPK



Product

- ✓ Cut CO₂ emissions & maintain performance
→ *no compromise*
- ✓ Very good cold flow properties
→ *does not freeze even at very low temperature*
- ✓ Very good combustion properties
→ *potential reduction in particles, meaning less contrails and thus less global warming*

⇒ Best in class products obtained through the most direct technology

What we have accomplished



Frédéric Ollivier
Technology Director

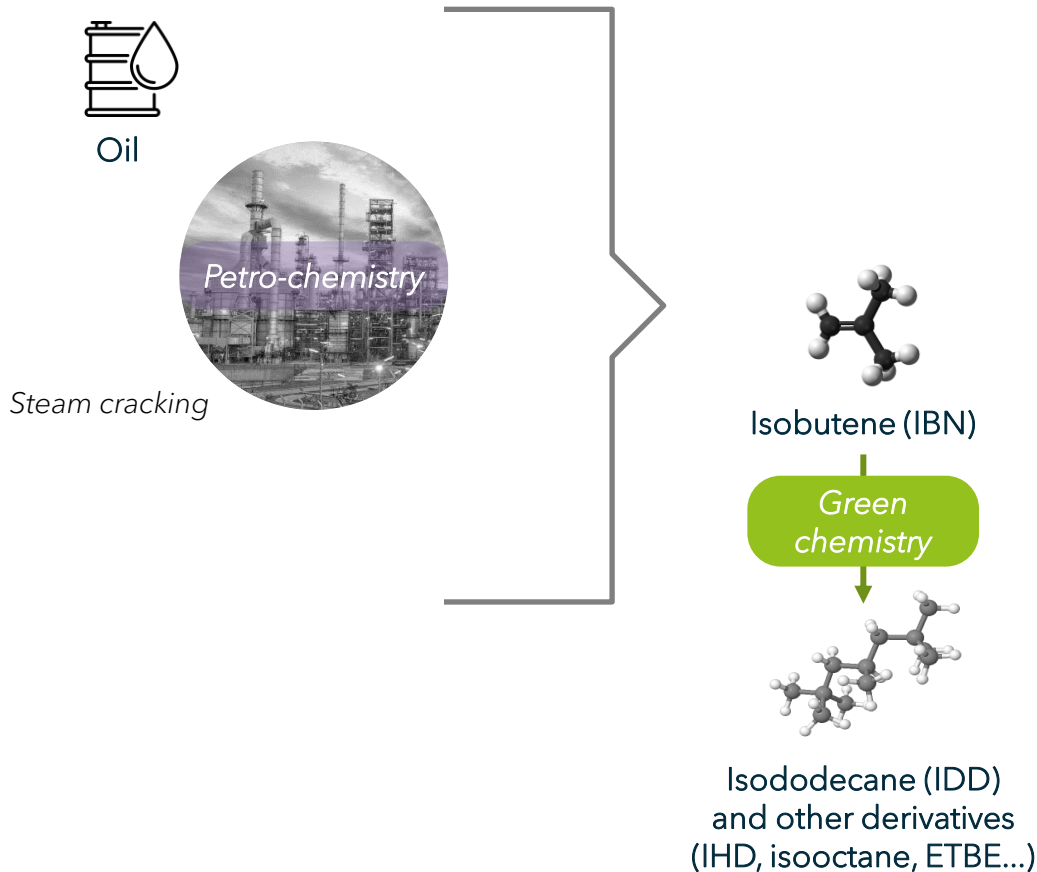
Process

Current widespread process

VS.

GBE's bio-sourced process

Unique technology protected by 40 patent families



Why isobutene?

The smallest branched (=non linear) carbon structure.

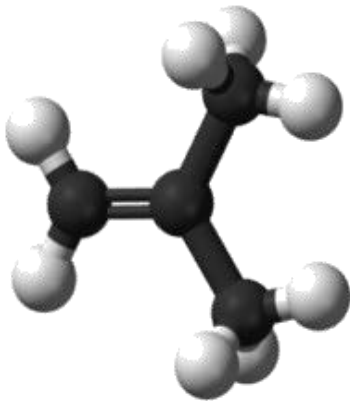
Gaseous

Easily converted into numerous compounds bringing various performances:

- octane rating for gasoline
- air tightness for elastomers
- volatility for cosmetic oils
- cold flow resistance for jet fuel
- ...

These performances directly rely on the branched structure of isobutene

Isobutene is not produced in Nature → our process is the only way to access these performances in a sustainable way



Industrial scale

Demoplant
(2017)



Leuna, Germany

&



Semi-works
(2022)

Pomacle, France

Production sold on niche markets of cosmetic ingredients

ISONATURANE®

- ✓ Proprietary make up brand LAST®, first ever long lasting & natural (www.colors-that-last.com)
- ✓ Ingredients qualified by multiple major cosmetic players (brands, CDMOs, distributors)
- ✓ First tons sold and delivered to several clients among which L'Oréal

€ thousands	from 01/01/23 to 30/06/23	from 01/01/22 to 30/06/22	from 01/01/21 to 30/06/21
Revenue	3,102	144	33
Net profit (loss)	-4,084	-5,759	-7,621

Infrastructure to reach SAF performances

A seasoned R&D team

powering a unique “gas-fermentation oriented”
Laboratory

& a pilot plant to scale up improved versions of
the process



Objectives

Continuous productivity improvements

Bring cost as low as possible to
address SAF markets (expected ~5€/kg)

ASTM certification



ASTM certification is mandatory for all fuels used in the aviation industry

Very few SAF technologies have been certified so far
-> *extensive and lengthy process reviewed by all the major players*

Global Bioenergies's process has been certified in June 2023

Technologies certified		
Oleochemical path	Biochemical path	Thermochemical path
HEFA-SPK (50%)*	ATJ-SPK (50%)	FT-SPK (50%)
HH-SPK (10%)	SIP (10%)	FTSPKVA (50%)
Co-processing HEFA (5%)	IBN-SPK (50%)	Co-processing FT (5%)
CHJ (50%)		

What's next?



Marc Delcourt
CEO & co-founder



Roland Desvignes
Industrial Director

10kt plant

Start of production 2027	Location France
Capacity 10k tons/year	Financing under process

An evolutive plant

Potential to address several markets
→ Starting in cosmetics, and moving up to SAF

Compatible with multiple resources:

- 1st generation feedstocks (sugar beet, starch...)
- Emerging 2nd generation feedstocks (sugars from wood chips, straw, bagasse...)

Roadmap - 10kt plant



French government awards Global Bioenergies €16.4 million to help fund construction of the world's first biosourced isobutene plant

Presentation of design and construction schedule

Final Investment Decision

Plant commissioning



Technology deployment



The first large plant is the Showcase. High level of replicability



Compatibility with several feedstocks among various geographies



Discussions with numerous international stakeholders (investors, industrialists, offtakers...)



Flexible Business model from proprietary project development to joint-ventures and licensing...



Potential combination with other technologies such as e-fuels to enhance their performance



Additional potential markets left to be addressed: pneumatics, fragrances..

⇒ Huge technology deployment potential



Markets



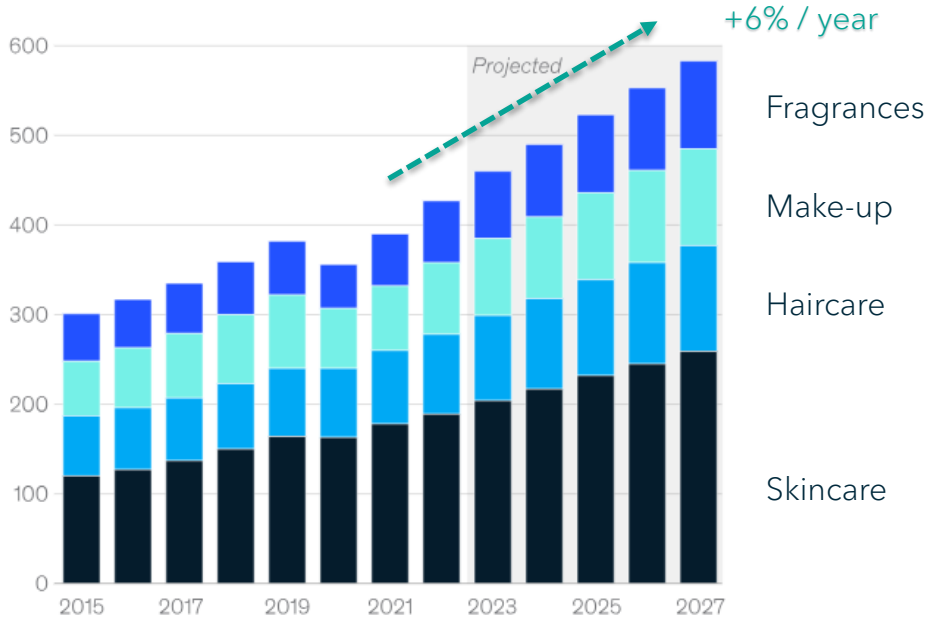
Daphné Galvez
Head of Sales



Bernard Chaud
Industrial Strategy
Director

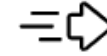
Cosmetics

Global beauty market retail sales, by category, \$ billion



Source: Euromonitor; McKinsey analysis; McKinsey Global Institute analysis

Reliance on
IDD/IHD



Fragrances

Make-up

Haircare

Skincare



A worldwide massive growing market (\$580 billion in 2027)

isobutene derivatives massively used in 4 of the 5 segments

naturalness is the key driver for a majority of consumers

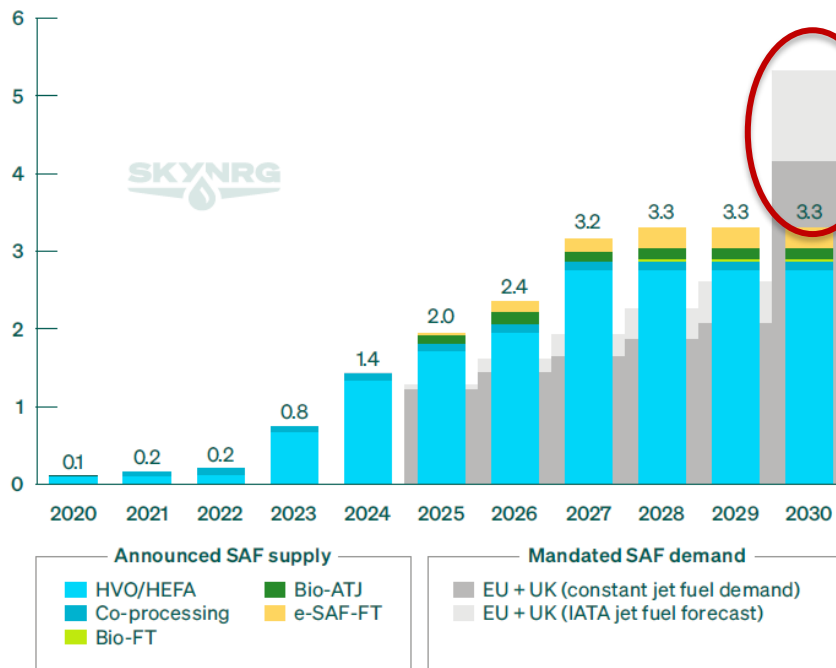
ISONATURANE®

- ✓ First renewable IDD and IHD cosmetics quality
- ✓ 100% naturally derived (ISO 16 128)
- ✓ Key substitute to synthetic IDD/IHD and silicone D5
- ✓ Bring naturalness & maintain performance
- ✓ Significant market in the cosmetics : tens of thousand tons

SAF in Europe

More announcements or imports are needed to close 'supply gap' in 2030*

SAF capacity EU + UK (Mt)



Unmet need Europe 2030
1 000 to 2 000kT

EU legislation: RefuelEU
(voted in Sept 2023 at the
European Parliament)

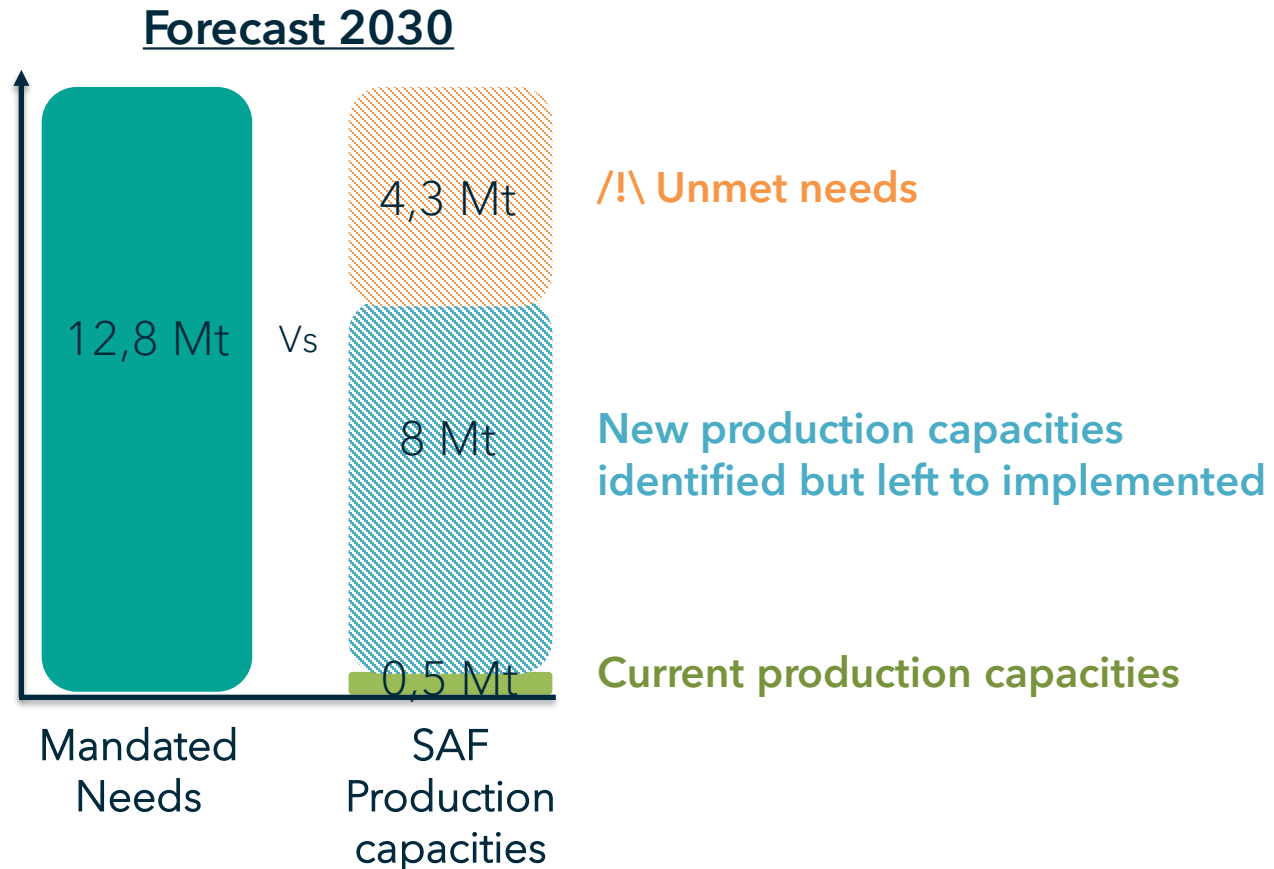
incorporation mandates

	2025	2030	2040	2050
SAF	2%	6%	34%	70%

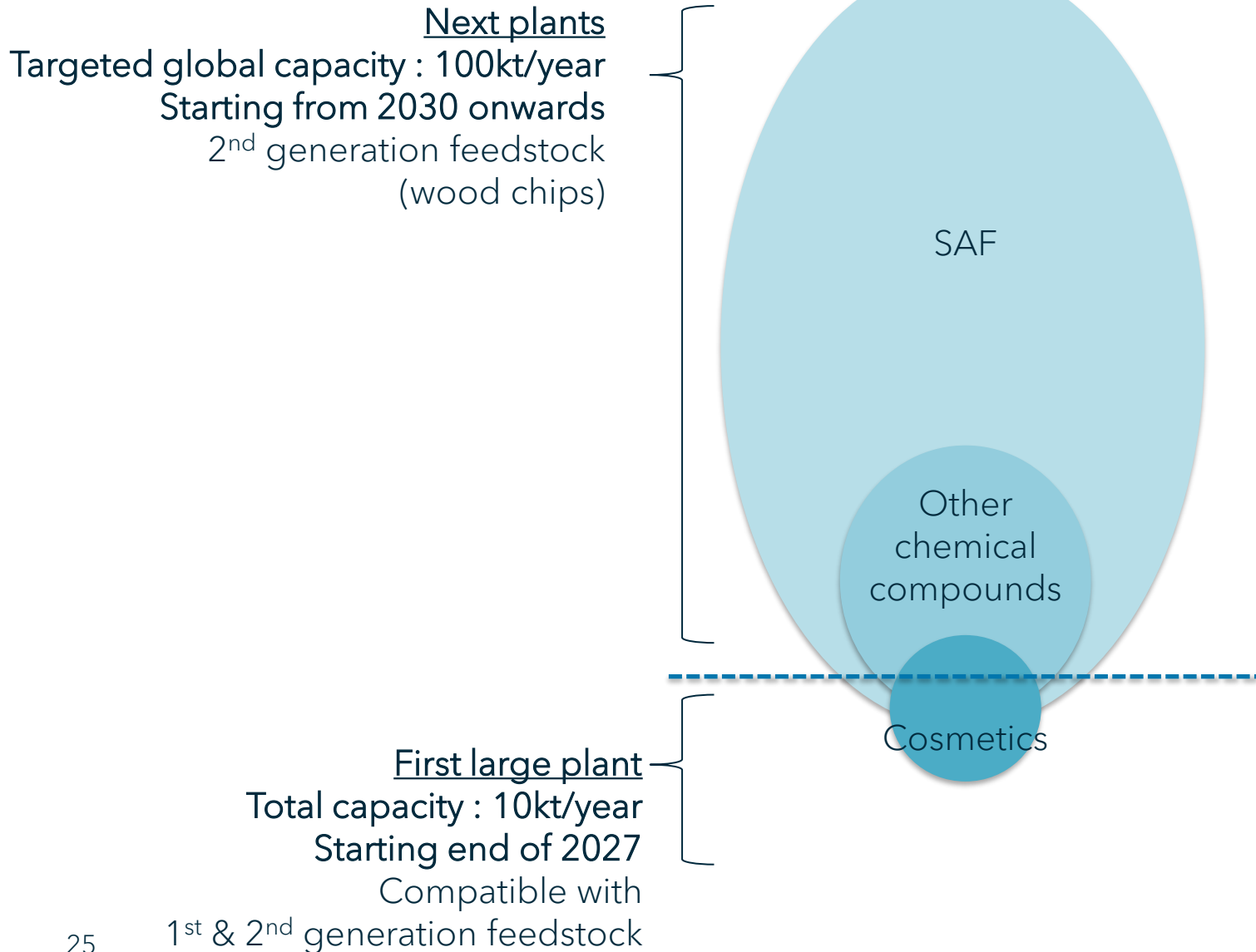
All SAF must rely on 2G
resources

Source : SkyNRG - Sustainable Aviation Fuel Market Outlook, May 2023

SAF worldwide – additional opportunities for GBE



Global Bioenergies' vision at 2030



Technology is key but will never be sufficient to curb global warming by itself



Sobriety comes first to fight climate change



Contact

Global Bioenergies
5 rue Henri Desbruères
91000 Evry Courcouronnes



invest@global-bioenergies.com



+33 1 64 98 20 50



www.global-bioenergies.com