

# Investors Presentation

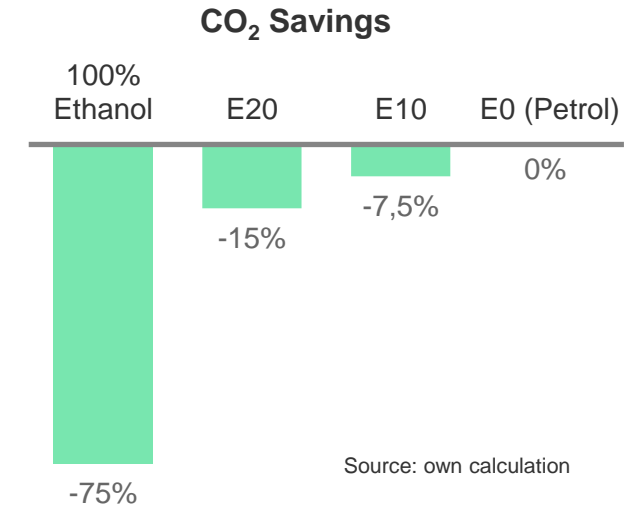
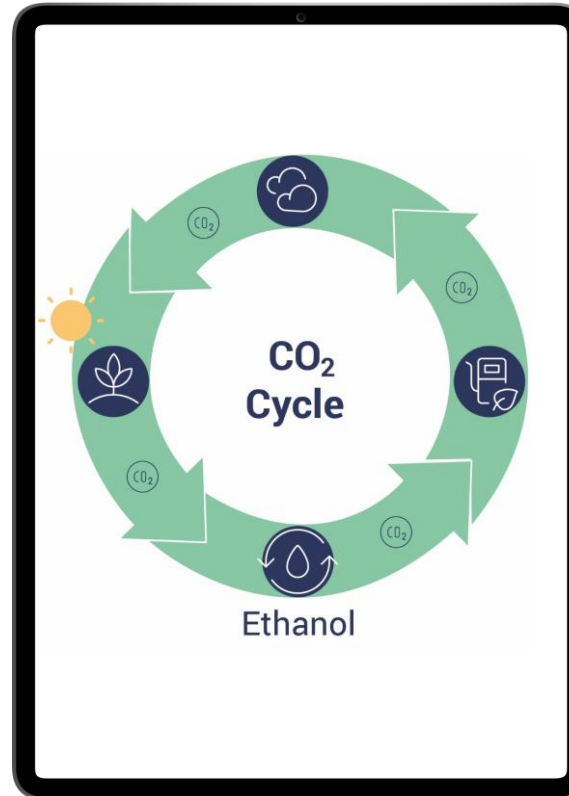
September 2023

Dr Stephan Meeder, CEO/CFO  
Heike Baumbach, Head of Investor Relations

# Renewable ethanol

## Climate protection in the transport sector

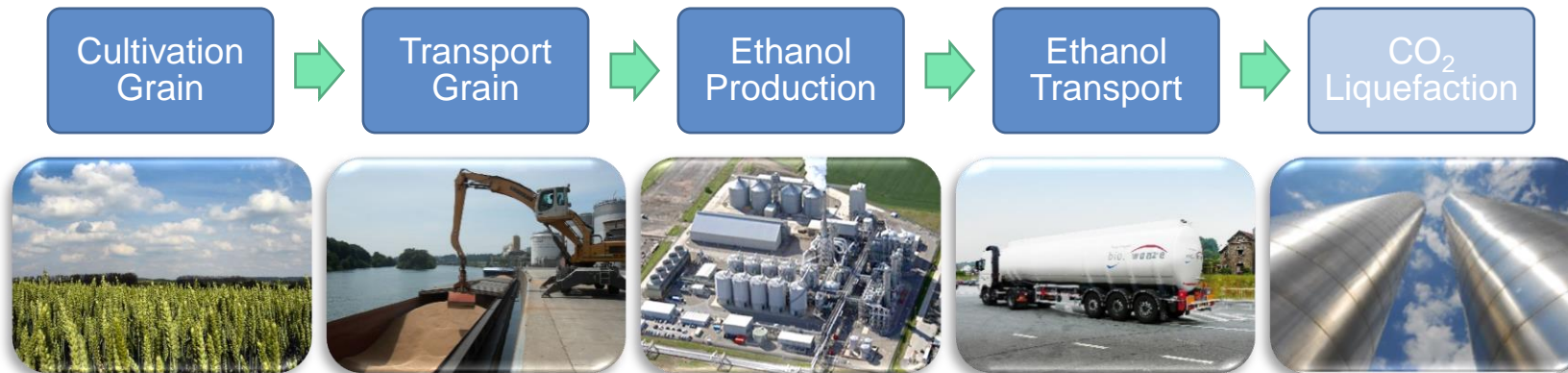
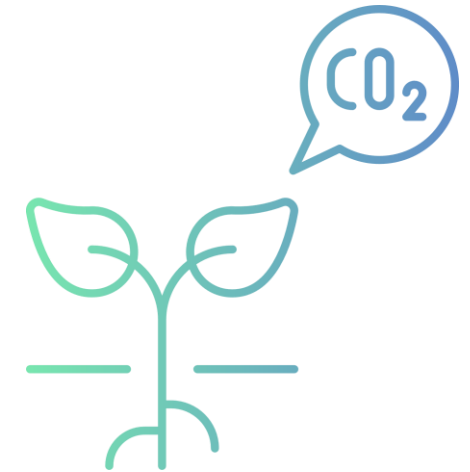
- Produced from domestic, renewable raw materials
- Helps fossil carbons stay in the ground permanently and stops driving climate change
- Less greenhouse gases, nitrogen oxides & particulate matter compared to fossil fuel
- Road transport causes around 20% of greenhouse gases in Europe
- European ethanol saves on average > 75% of greenhouse gases compared to petrol



# Ethanol

>75% less GHG emissions compared to fossil fuels\*

- The GHG values of all elements in the value-added chain are added up
- The emissions from ethanol when used in combustion engines is zero
- European ethanol reduces annual GHG emissions by >10 Mt\*\*



\*94.0 gCO<sub>2</sub>eq/MJ \*\*Own calculations

# Range of products

## Renewable ethanol



As an additive to **petrol** to improve the greenhouse gas balance



As **neutral alcohol** for food and beverages



As **neutral alcohol** for the processing industry: cosmetics, pharmaceuticals, disinfection, technical applications



As a **basis material** for the chemical industry



High-quality, renewable **ethanol** (alcohol)



# Food and animal feed

## From ethanol production



**Vital Wheat Gluten**  
Valuable protein product for food and animal feed industry



**ProtiGrain®/ Ensus-DDGS**  
High protein animal feed from dried stillage



**ProtiWanze® – CDS**  
Liquid protein animal feed from stillage



**Food-quality, liquefied CO<sub>2</sub>**  
For food and beverages industries

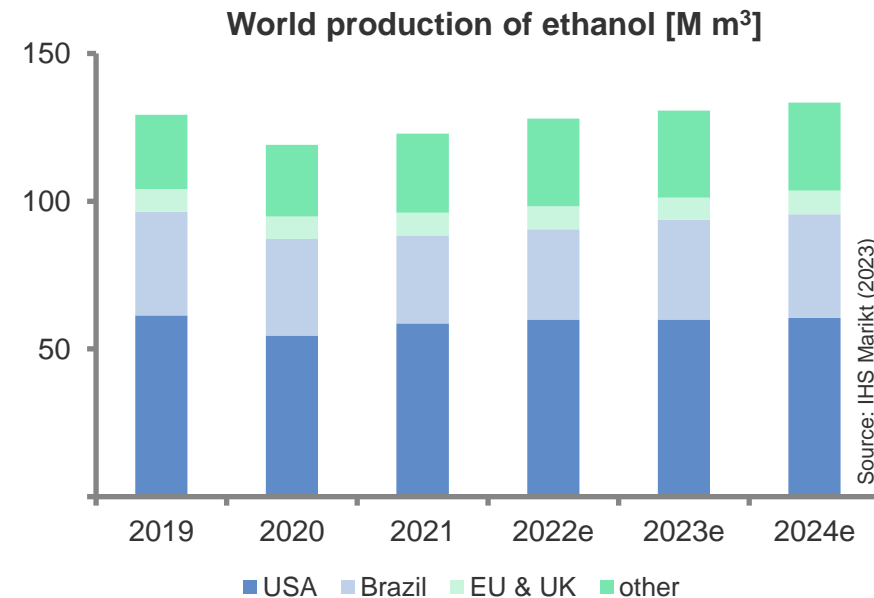
All raw material components are processed into **high-quality products**



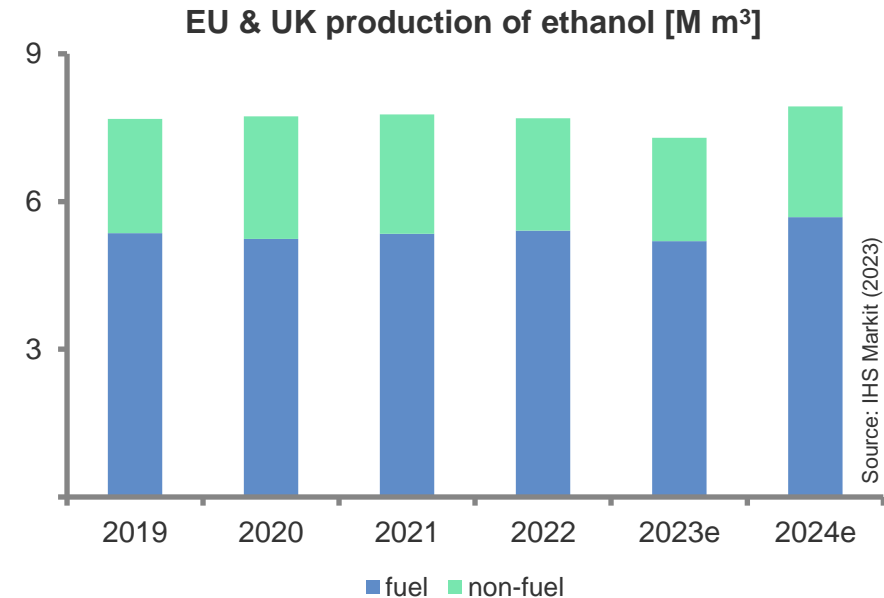
# The ethanol markets

## Production

- World production
  - 2023e: 129 million m<sup>3</sup> (+3%)
    - Fuel applications: 110 million m<sup>3</sup> (+4%)
  - 2024e: 132 million m<sup>3</sup> (+2%)
    - Fuel applications: 113 million m<sup>3</sup> (+3%)



- EU & UK production
  - 2023e: 7.3 million m<sup>3</sup> (-5%)
    - Fuel applications: 5.2 million m<sup>3</sup> (-4%)
  - 2024e: 7.9 million m<sup>3</sup> (+9%)
    - Fuel applications: 5.7 million m<sup>3</sup> (+9%)

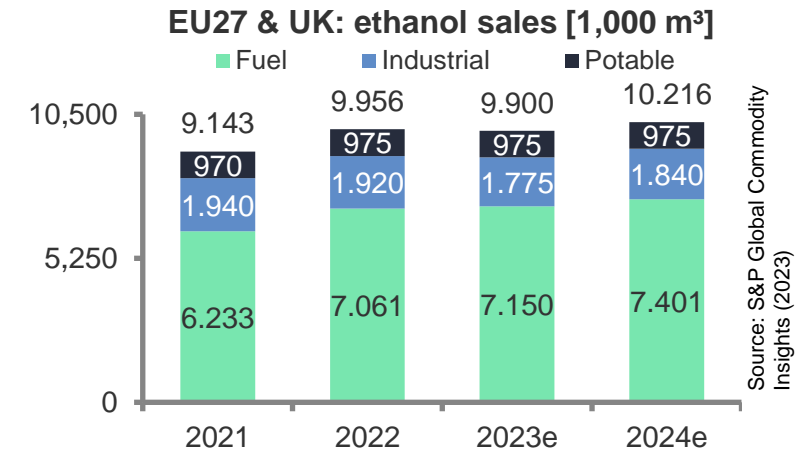


# Market development

## Volumes

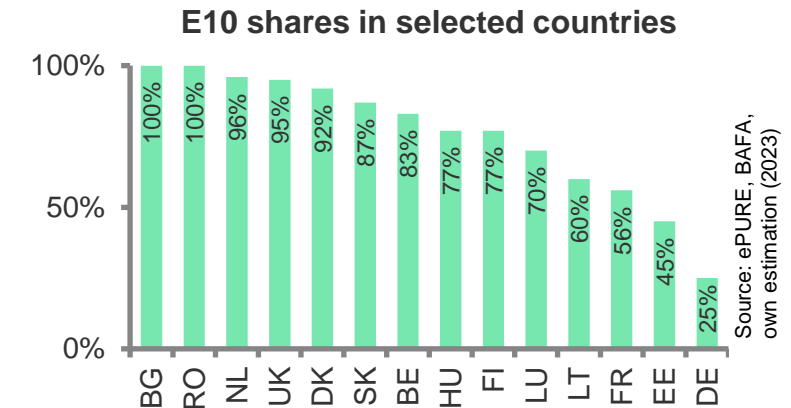
### Ethanol market in the EU27 & UK in 2023 (in million m<sup>3</sup>)

- Consumption: 9.9 -1% (7.2 fuel | 2.8 non-fuel)
- Production: 7.3 -5% (5.2 fuel | 2.1 non-fuel)
- Fuel ethanol sales expected to increase further in 2024
- Non-fuel ethanol sales expected to decrease slightly



### E10 no. 1 petrol in many European countries

- Currently, 17 EU member states plus Norway and the UK have rolled out E10 at petrol stations
- Sales growth in particular in France, Sweden and UK
- E10 sales in Germany also increasing
- Start of E10 sale in Ireland, Austria and Norway in April 2023
- Introduction in Poland planned at beginning of 2024



# Market development

## Imports and prices

### Imports expected to remain at high level in 2023

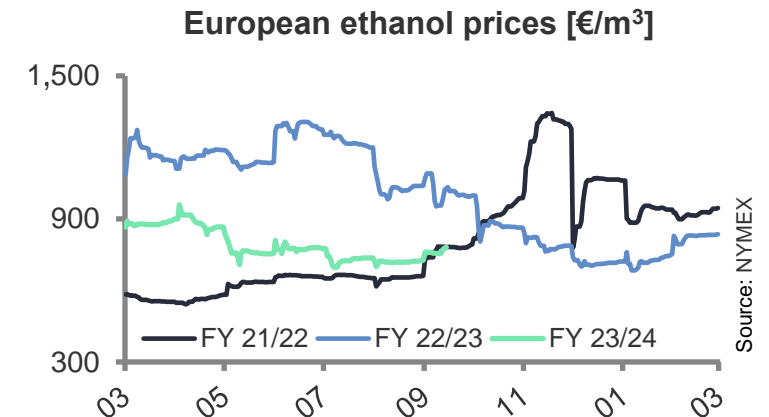
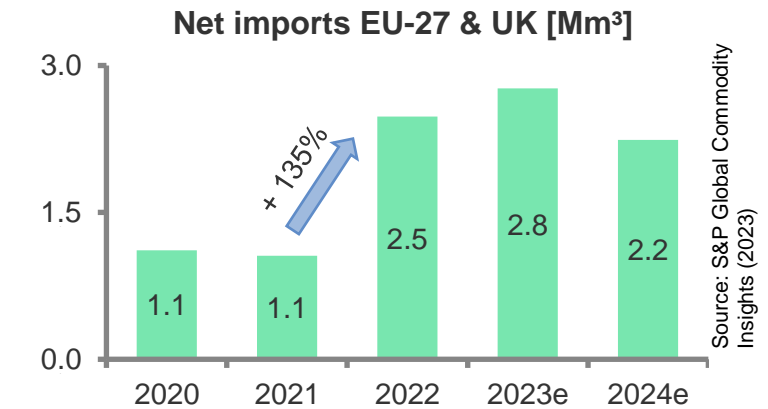
- Large price difference made imports to Europe attractive
- Price gap has decreased in recent months
- Europe needs imports to cover rising demand

### European ethanol price\* in 2023

- Average ethanol price in Q2 2023/24 € 746 (1,171) /m<sup>3</sup>
- Lower price level due to general normalisation of price levels on commodity markets
- Closed arbitrage over the last months making imports less attractive

\* Ethanol T2 FOB Rdam, next date of expiry

September 2023





# Market development

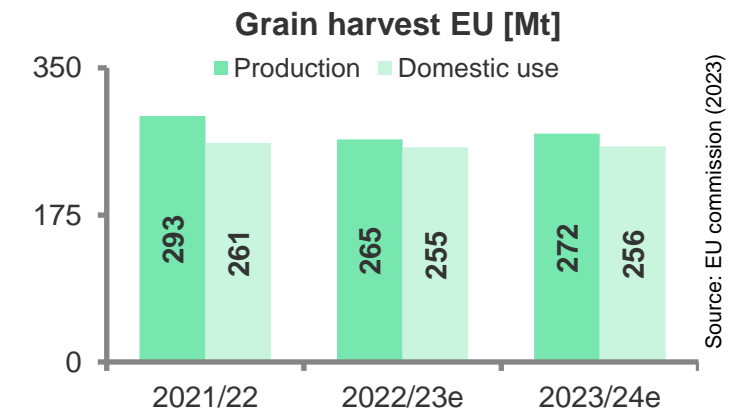
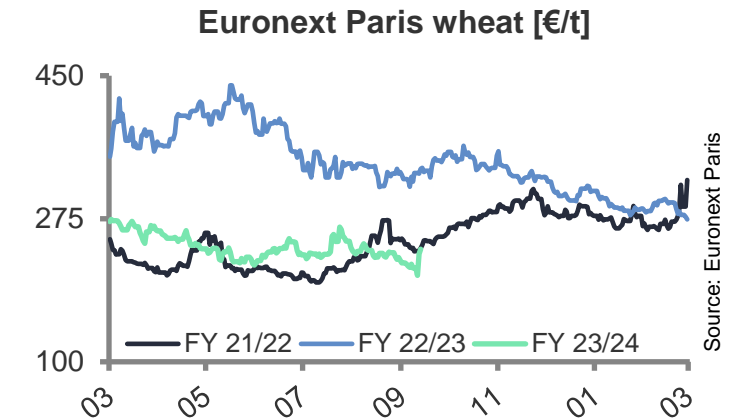
## Feedstock market

### Grain market 2023/24

- Grain prices in Q2 2023/24\*: € 236 (350) /t
- EU grain harvest: 272 (265) Mt exceeds consumption of 256 (255) Mt
- Imports to EU are expected to normalize after sharp increase in grain year 2022/23
- IGC expects rise of global grain harvest with 2,294 (2,263) Mt
- Recent price increase due to battle operations at the black sea

\* Wheat (Euronext Paris), next date of expiry

September 2023

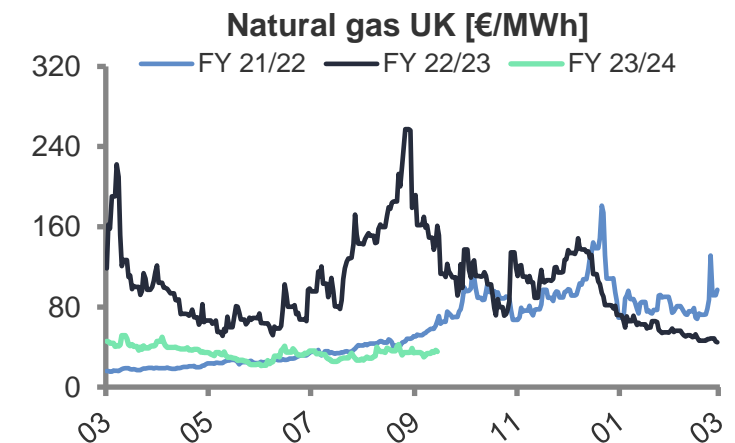
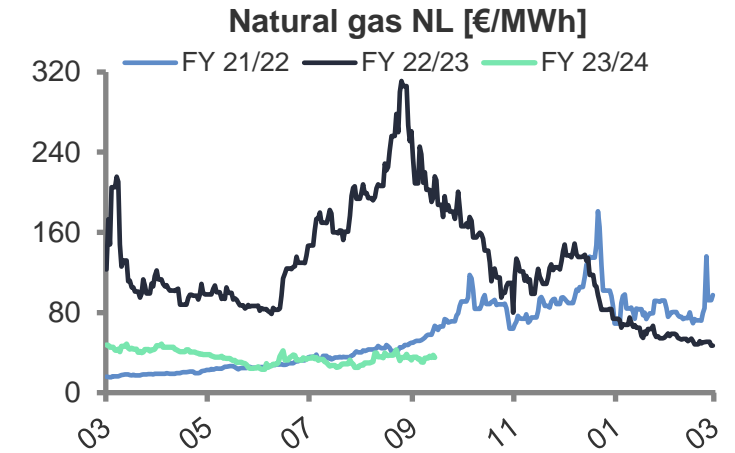


# Market development

## Energy markets

### Gas price quotations shifted upwards on supply uncertainties

- Spot prices are up week-on-week on the Australian strikes limiting LNG sendouts
- Further price developments and security of supply in Europe will mainly be determined by
  - global LNG supply and demand (outcome of strike negotiations in Australia)
  - storage levels
  - natural gas consumption
  - weather conditions
- Crude oil price as central benchmark is slowly rising



# Current political framework – RED\* II

## 14% renewable energy in transport sector by 2030

### Arable crops



- 2020 level, max. 7%
- Local, sustainable
- Proteins
- **Commitment to 1G as reliable basis for low-emission transport sector necessary**

### Annex IX-A



- Min. 0.2% in 2022
- Min. 1.0 % in 2025
- At least 3.5% in 2030
- Strong market potential
- Very capital intense
- **Investment security and investment incentives decisive**

### Annex IX-B



- Max. 1.7%, but still x2 versus today
- UCO imports: 10x within last 10 years
- **Compatibility with law on waste needs to be ensured**

### Electricity



- Important component in the future
- But: discretionary multiplier (x4) does not save a single gram of CO<sub>2</sub>
- **Extension only reasonable if additional green electricity will be produced**

\* Renewable Energy Directive

# Green Deal and Fit-for-55 package

## Parliament and Council agree on several key legislative initiatives

**Fit-for-55: Overall goal to reduce GHG emissions by 55% in 2030**

### **Emission Trading System (ETS)**

- More ambitious GHG reduction goal of 62% (vs. 43%)
- Introduction of a separate new ETS for buildings, road transport and fuels

### **Renewable Energy Directive (RED-III)**

- Share of renewable energy overall shall increase to 42.5% (vs. 32%)
- More renewables in industry, heating & cooling and transport required

### **ReFuelEU aviation and Fuel EU maritime**

- Sustainable aviation fuels (SAF) of 6% in 2030 increasing to 70% until 2050
- GHG savings in maritime fuels of 6% in 2030 increasing to 80% until 2050

### **CO<sub>2</sub> standards for cars and vans**

- Increased CO<sub>2</sub> emission targets of -55% in 2030 and -100% in 2035 for new cars
- Clear violation of the principle of technology openness and neutrality despite limited loophole for synthetic fuels



# Revision “Renewable Energy Directive”

## Agreement between Council and Parliament

### Overall energy consumption

- Target for renewable energies raised to 42.5% by 2030 with an additional 2.5% indicative top up

### Transport sector

- Member States can choose between one of two binding targets by 2030:
  - Reduction of greenhouse gas intensity by at least 14.5% or
  - At least 29% share of renewable energies
- Crop-cap – no further restrictions: share in 2020 plus 1% (max. 7%)
- Binding combined sub-target of 5.5% for advanced biofuels and renewable fuels of non-biological origin (RFNBO), thereof at least 1%-point of RFNBOs

**Approval of European Parliament on 12 September - next step formal approval of European Council**



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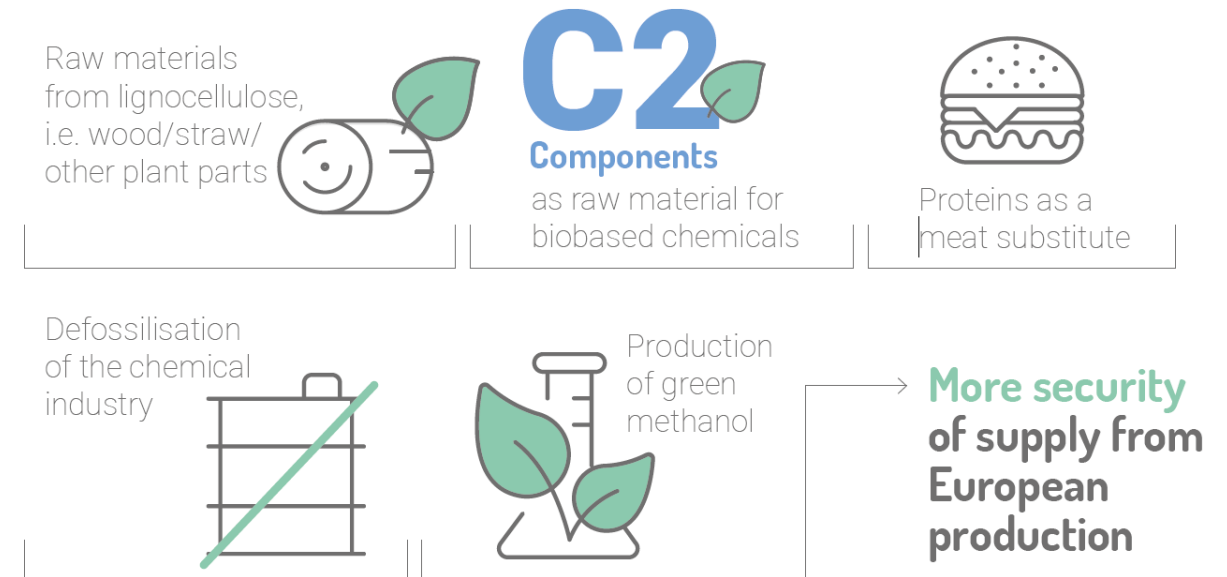
## Innovation from Biomass

For our future:

### Sustainability and climate neutrality

- Core business of mobility – with sustainable and climate-friendly fuels
- New business area – based on ethanol derivatives as an alternative to fossil raw materials
- Biogenic CO<sub>2</sub> as the raw material of the future and for the company's further development
- Protein products for the food and feed industry serve growth market and deepen value creation
- New business area for green electricity and green hydrogen

### New product and production concepts



# Protein Concentrate “EnPro”

## Investment of ~ € 75 million at Ensus plant

- New product will be marketed under the brand name EnPro
- High-protein product aimed at UK and European aquafeed and pet food markets
  - Protein content around 55-60%
  - GMO free and sustainable
- Diversification of overall product portfolio
- Total investment approximately € 75 million
- Commissioning scheduled for 2025
- Further investments of ~ € 25 million planned to improve plant reliability and reduce emissions of Ensus' production site

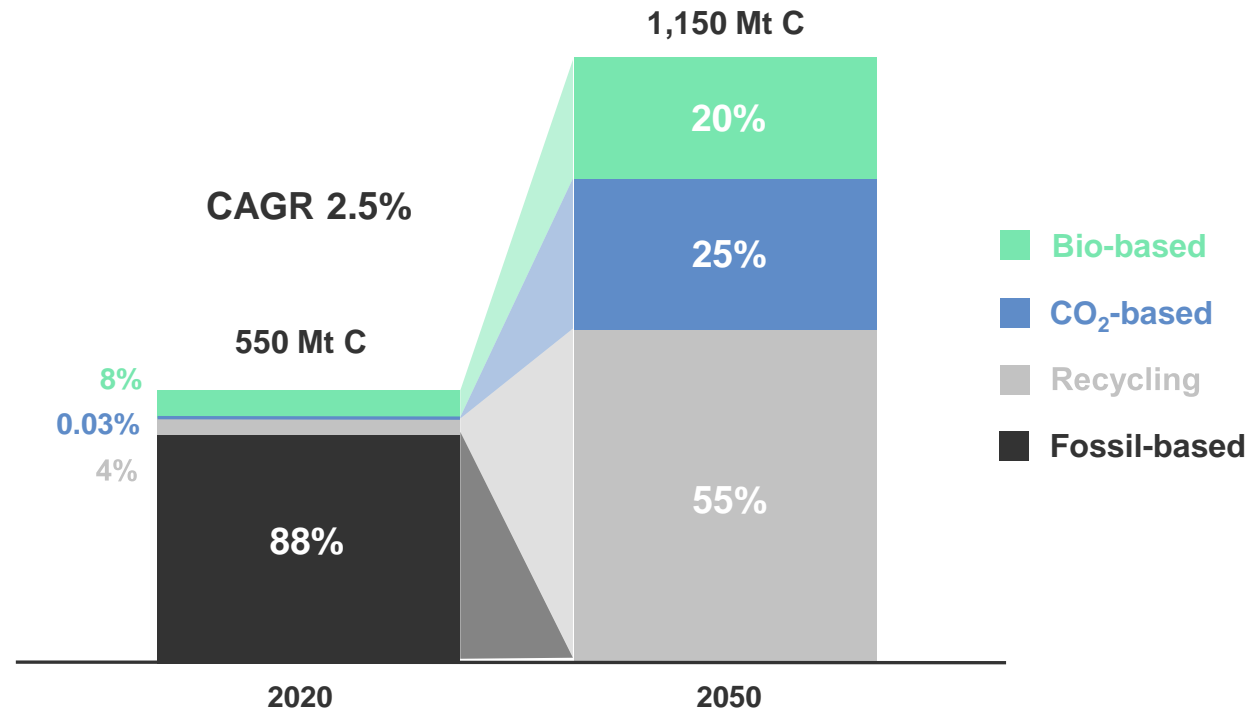


# Biobased Chemicals (BBC)

## Green carbons: growth opportunity for CropEnergies

### Global demand for carbon for chemicals increases

(million tonnes of embedded carbon)

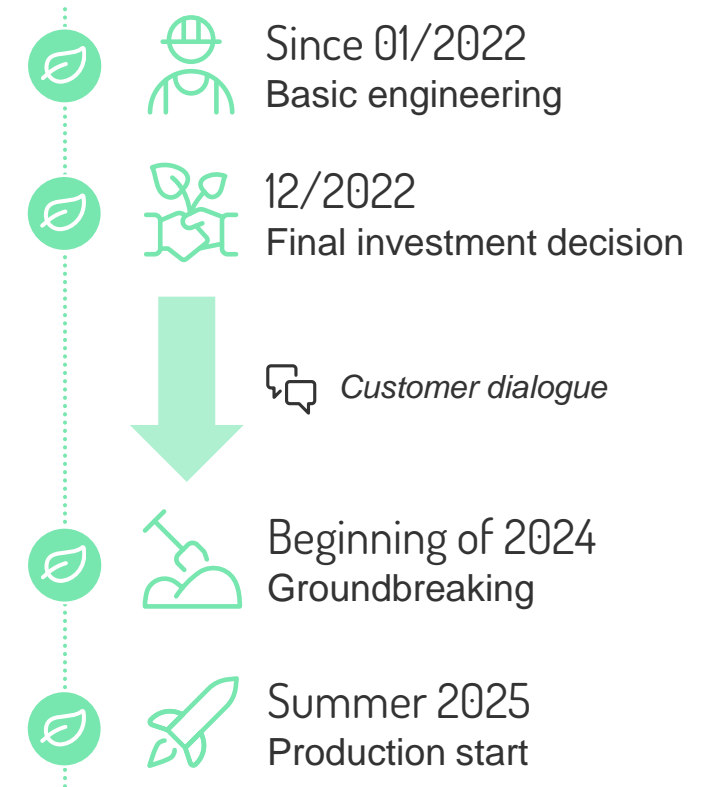


Source: Kähler, F., Porc, O. and Carus, M. 2023. RCI Carbon Flows Report: Compilation of supply and demand of fossil and renewable carbon on a global and European level. Editor: Renewable Carbon Initiative, May 2023. Available at: [www.renewable-carbon-initiative.com](http://www.renewable-carbon-initiative.com)

# Project ZETAC

## € 120-130 million investment in renewable ethyl acetate

- Construction of the first of its kind production facility in Europe based on Johnson Matthey technology
  - Production of 50,000 t ethyl acetate with a valuable hydrogen by-product stream directly from ethanol
  - Location: Zeitz Chemical and Industrial Park
- Ethyl acetate is widely used in the manufacture of cosmetics, flexible packaging and coatings, paints and adhesives, as well as in the food, beverage and pharmaceutical industries



# Renewable Ethylen

## A further step towards Biobased Chemicals (BBC)

### Acquisition of 50% in the Dutch start-up Syclus BV

- Objective: construction and operation of a first of its kind ethanol-to-ethylene facility at the Chemelot industrial park in Geleen, Netherlands
  - Annual production capacity approx. 100,000 t
  - Technical and economic feasibility until end of 2023
  - Investment requirement in the range of € 120-130 million
- Renewable ethylene – alternative to oil and gas
  - European demand for (fossil) ethylene approx. 20 million tonnes per year
  - Main building block for plastics and polymers, e. g. packaging, building materials, automotive applications, paints, adhesives, fibers, clothing and many more everyday products

SYCLUS



Chemelot industrial park



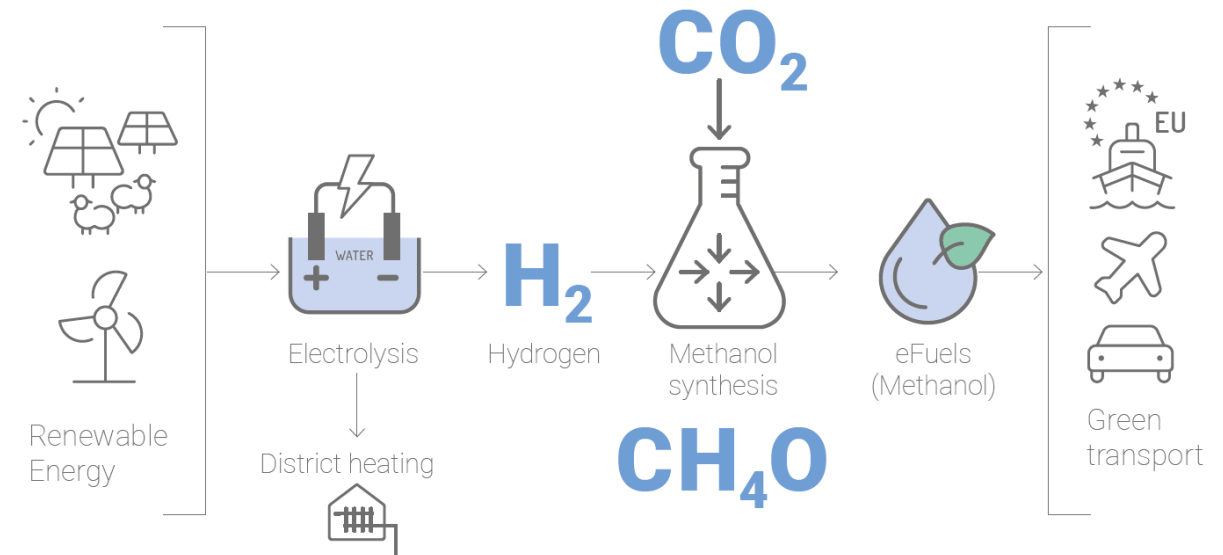
# Participation in East Energy

## Energy transition requires green electricity

- In September 2022, CropEnergies acquired a 25% stake in East Energy
- East Energy plans the construction of several large photovoltaic parks in North-Eastern Germany
- Production of green hydrogen from self-generated electricity envisaged
- Production of methanol as fuel for ships and aviation under investigation



### eFuels from solar and wind energy



# CropEnergies acquires stake in LXP Group



## Next step in strategic realignment

**CropEnergies secured approx. 20% of the biotech startup**

### **Access to innovative technology for 2<sup>nd</sup> generation feedstocks**

- Patented process – mild digestion of cellulosic and hemicellulosic biomass like forest and wood residues or straw for advanced biofuels and biobased chemicals
- In addition, high-purity, natural lignin – for e.g., 3D printer ink, carbon fibers or phenolic resins
- Technology can also be integrated into existing biorefineries
- LXP Group GmbH plans to build a pilot plant using 15,000 t of biomass in 2024/2025



**LXP GROUP**

# Financials

## 1<sup>st</sup> quarter 2023/24



# Overview 1<sup>st</sup> quarter 2023/24

• Ethanol production	221 (281) ,000 m³	- 21%
• Revenues	€ 321.4 (398.9) million	- 19%
• EBITDA	€ 25.1 (97.8) million	- € 73 million
• Operating profit	€ 14.1 (87.2) million	- € 73 million
• Net income	€ 11.2 (64.9) million	- € 54 million
• Net financial assets (vs. 28.02.2023)	€ 295.6 (318.1) million	- € 23 million

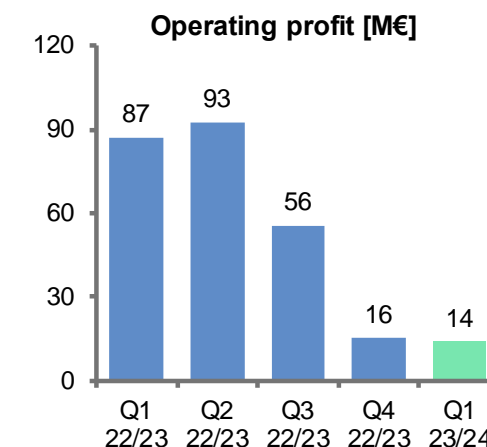
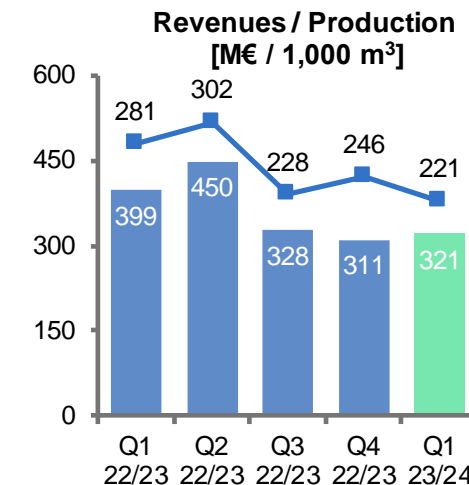
Note: Figures in parentheses relate to the corresponding prior-year period.

# Operating profit

(in € million)	Q1 2023/24	Q1 2022/23	Δ
Revenues	321.4	398.9	- 19%
<b>Overall performance</b>	<b>310.0</b>	<b>396.3</b>	<b>- 22%</b>
Cost of materials*	- 254.0	- 277.1	+ 8%
<b>Spread (gross)</b>	<b>56.0</b>	<b>119.2</b>	<b>- 53%</b>
<i>in % of overall performance</i>	18.1%	30.1%	
Further operating expenses/income*	- 30.9	- 21.4	- 44%
<b>EBITDA*</b>	<b>25.1</b>	<b>97.8</b>	<b>- 74%</b>
<i>Margin</i>	4.4%	21.8%	-
Depreciation*	- 11.0	- 10.6	- 3%
<b>Operating profit</b>	<b>14.1</b>	<b>87.2</b>	<b>- 84%</b>

\*without restructuring costs and special items

- Decrease in production, sales volumes and revenues due to scheduled maintenance downtime
- Sharp price increase on the commodity markets caused by the Ukraine conflict now also reflected in raw material expenses





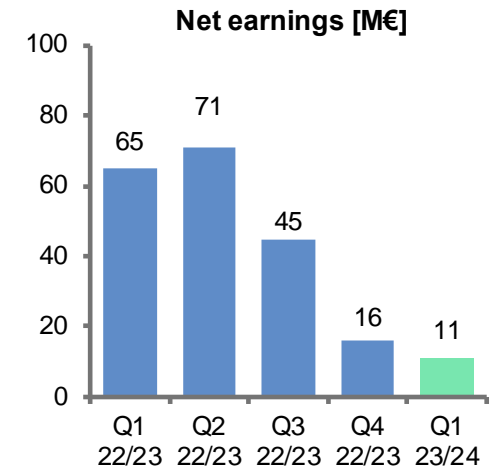
# Net earnings

(in € million)	Q1 2023/24	Q1 2022/23	Δ
<b>Operating profit</b>	<b>14.1</b>	<b>87.2</b>	<b>- 84%</b>
Restructuring costs / special items	- 0.2	0.0	-
At-equity result	0.0	0.1	- 81%
Income from operations	13.9	87.2	- 84%
<b>Financial result</b>	<b>1.3</b>	<b>0.5</b>	<b>&gt; + 100 %</b>
<b>Earnings before income taxes</b>	<b>15.2</b>	<b>87.7</b>	<b>- 83%</b>
Taxes on income	- 4.0	- 22.8	+ 83%
<b>Net earnings for the period</b>	<b>11.2</b>	<b>64.9</b>	<b>- 83%</b>
<b>Earnings per share (in €)*</b>	<b>0.13</b>	<b>0.74</b>	<b>- 83%</b>

\*without restructuring costs and special items

\*based on 87.2 million time-weighted shares

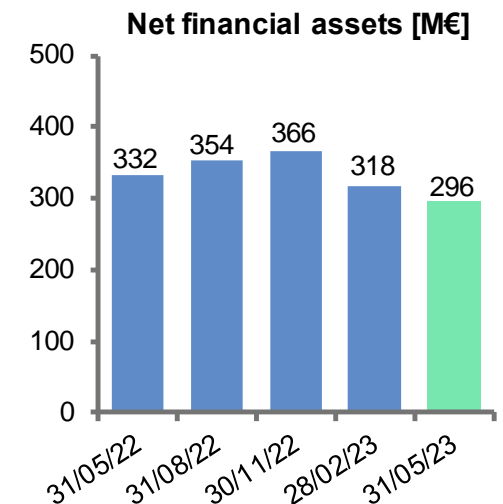
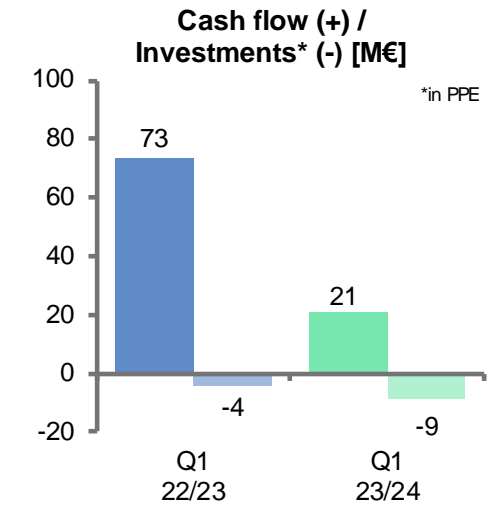
- Increased interest income leads to improved financial result
- EPS follows earnings development



# Cash flow

(in € million)	Q1 2023/24	Q1 2022/23	Δ
<b>Cash flow</b>	<b>20.6</b>	<b>73.4</b>	<b>- 52.8</b>
Change in net working capital	- 31.9	35.1	- 67.0
<b>Net cash flow from operating activities</b>	<b>- 11.3</b>	<b>108.5</b>	<b>- 119.8</b>
Investments in property, plant et al.	- 9.0	- 4.2	- 4.8
Investments in financial assets	- 0.8	- 1.1	+ 0.3
Increase / Decrease in financial receivables	- 11.5	- 126.7	+ 115.2
Payments into current financial investments	24.9	0.0	+ 24.9
<b>Cash flow from investing activities</b>	<b>3.6</b>	<b>- 132.0</b>	<b>+ 135.6</b>
<b>Cash flow from financing activities</b>	<b>1.0</b>	<b>9.7</b>	<b>- 8.7</b>
Changes in exchange rates / consolidation basis	0.1	- 0.2	+ 0.3
<b>Change in cash and cash equivalents</b>	<b>- 6.6</b>	<b>- 13.9</b>	<b>+ 7.3</b>
	31/05/2023	31/05/2022	Δ
<b>Net financial assets</b>	<b>295.6</b>	<b>331.6</b>	<b>- 36.0</b>

- First investments for renewable ethyl acetate plant
- Increase in working capital driven by higher margin calls



# Outlook 2023/24 confirmed

- Revenues between € 1.27 to € 1.37 (previous year: € 1.49) billion
- EBITDA in a range of € 140 to € 190 (previous year: € 294) million
- Operating profit between € 95 to € 145 (previous year: € 251) million
- Assumptions
  - Gradual decrease in volatility on the sales, raw material and energy markets
  - The introduction of E10 in further European countries points to stable sales of fuel ethanol
  - This will be met by continued high import volumes



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# Sustainability



# CropEnergies climate targets - we are on track



## Targets

- Reduction of fossil CO<sub>2</sub> scope1 & 2: - 50% by 2030
- Intermediate target of - 24% by 2026
- “Net zero“ by 2045 or before

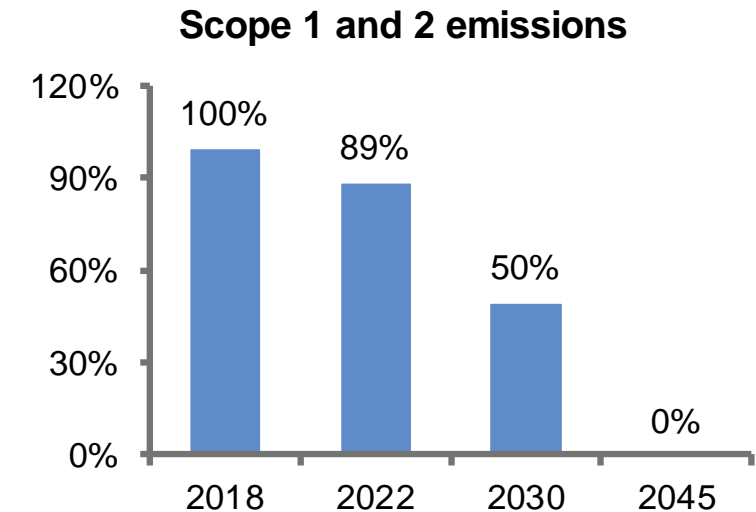
## Future Measures

- Usage of waste heat
- Improve energy efficiency
- Electrification of processes (e.g. heat pumps, vapor recompression)
- Fuel switch

**CropEnergies is part of the Südzucker Group commitment to SBTi\*, including the goal of - 30% scope 3 emissions by 2030**

\* Science Based Targets initiative

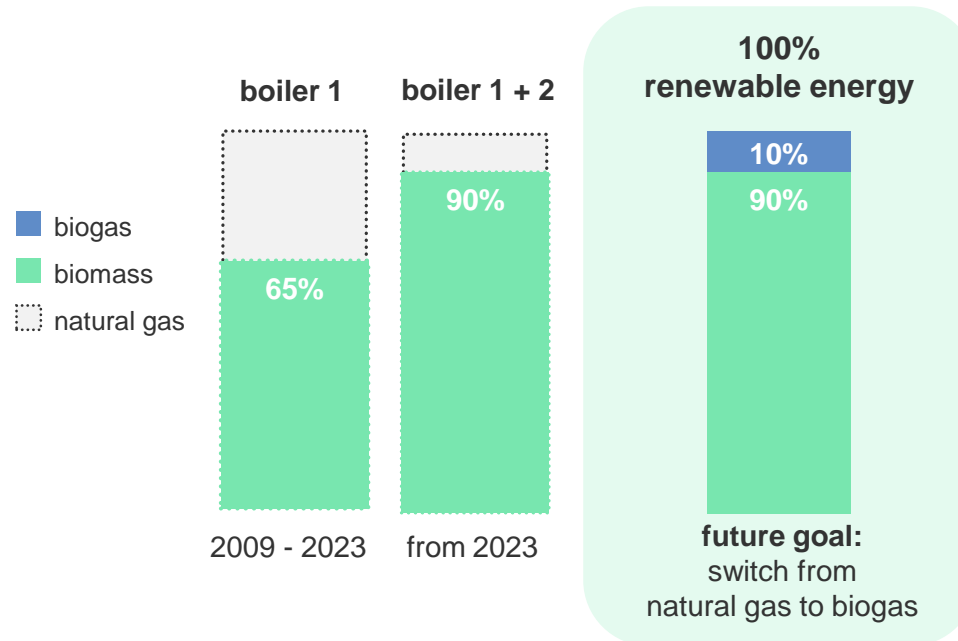
September 2023





## Our first plant on the way to a fossil free production process

- Second biomass boiler in test phase – fully operational in Q3/2023
- 50,000 t CO<sub>2</sub> reduction per year



New biomass boiler

# Sustainability initiatives and external ratings

## Review of developments FY 2022/23

- CE underlined it's strong commitment to global sustainability goals by joining several voluntary initiatives in 2022/23
- CE increases transparency through participation in ratings and disclosure projects
- CE is aiming to increase its engagement in sustainability platforms

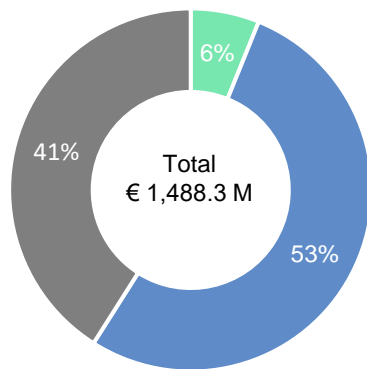


\*CSRD- Corporate Sustainability Reporting Directive

# EU-Taxonomy

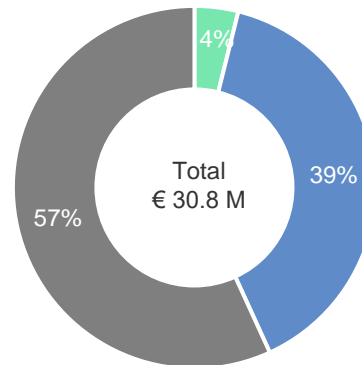
## FY 2022/23: first-time reporting of taxonomy aligned figures

Turnover



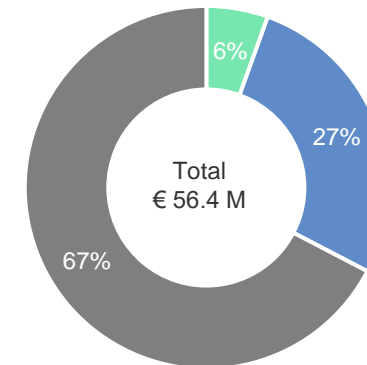
Taxonomy-aligned	€ 91.0 M
Taxonomy-eligible	€ 787.1 M
other	€ 610.2 M

Opex



Taxonomy-aligned	€ 1.2 M
Taxonomy-eligible	€ 12.1 M
other	€ 17.5 M

Capex



Taxonomy-aligned	€ 3.1 M
Taxonomy-eligible	€ 15.3 M
other	€ 38.0 M

- Taxonomy-**eligible** sales mainly from the production of fuel ethanol from agricultural raw materials under environmental objective “climate change mitigation”
- Only sales from the production of **residue-based ethanol** are taxonomy-aligned

# Appendix



# Super E20 for Europe

## Higher biofuel blends needed to reach climate targets

### Super E20: a step to climate neutrality

- Special requirements for E20 are now discussed in the German standardization DIN circle
- A future E20-standard would also help to increase the possibilities for renewable fuels (E20+)

### Example Four Motors

- ✓ The special racing fuel was developed in cooperation between Shell and CropEnergies
- ✓ New fuel (2023): 60% renewable components, of which 20% ethanol, only 40% fossil fuel: ca. 40% CO<sub>2</sub> reduction and almost 103 octane

### Super E20 at public fuel station

- ✓ Planned: 1<sup>st</sup> commercial petrol station for E20 in Mannheim
- ✓ Objective: proof of easy implementation in existing infrastructure

Position

### Standardization of E20-fuel

Petrol with 15% to 20% (v/v) ethanol



© Four Motors

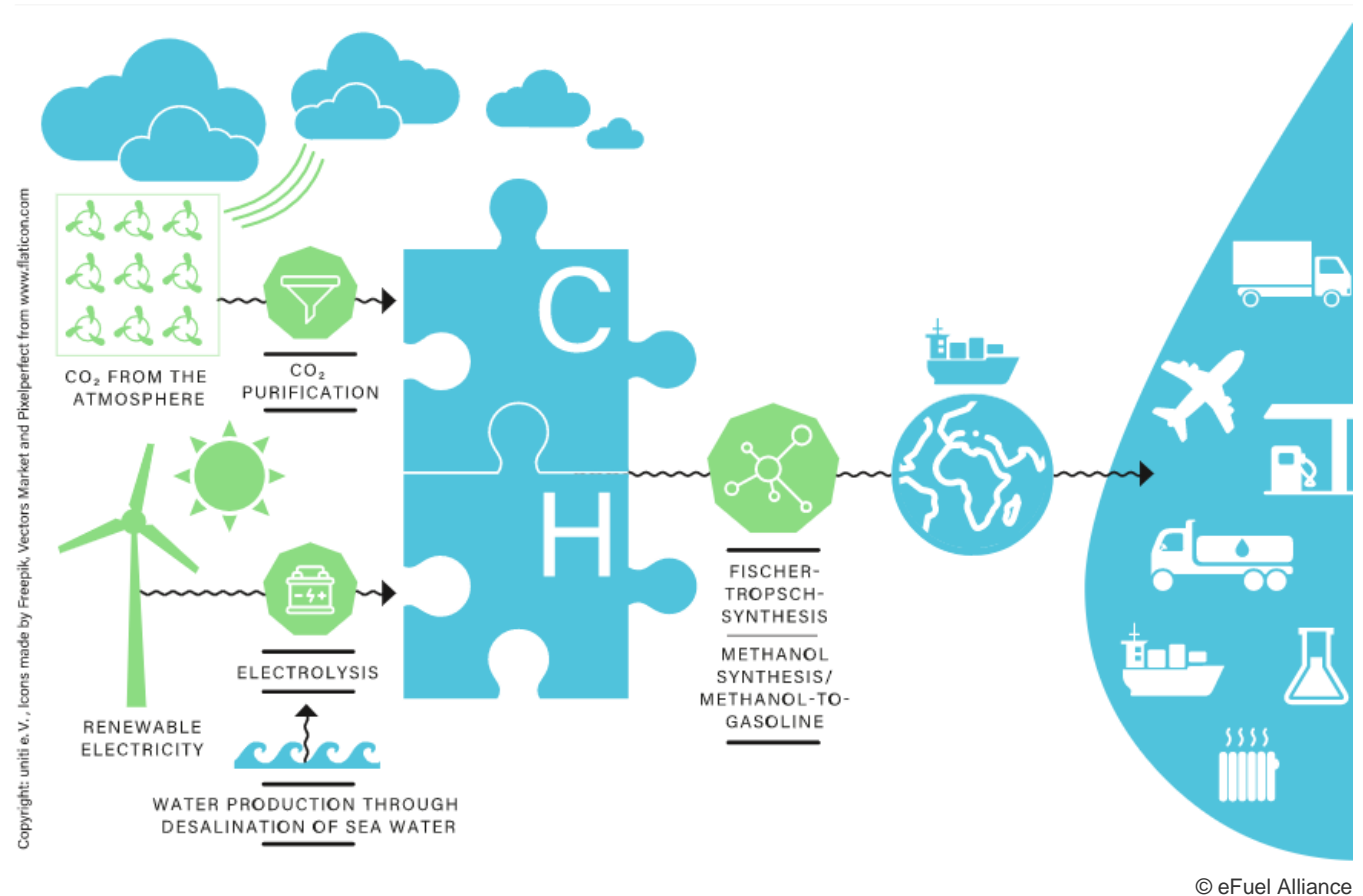
# Ethanol & eFuels – the perfect match

## Ethanol as “octane booster”

eFuels need ethanol to increase performance

### eFuels

- Manufactured using captured carbon dioxide together with hydrogen obtained from sustainable electricity sources such as wind and solar
- Climate-friendly but energy intense
- Ethanol is the perfect match to upgrade eFuels: high octane number, available and economically viable





# Revision “Renewable Energy Directive”

Provisional agreement between Council and Parliament on 30 March 2023



## OVERALL BINDING TARGET BY 2030 (ART 3)

42.5% + Endeavour to  
increase to 45% (but  
not mandatory)



## TRANSPORT TARGET (ART 25)

- 14,5 % GHG intensity reduction or
- 29% RES consumption



## ADVANCED & RFNBOs (ART 25)

- 5.5% of RE supplied to the transport sector.
- As part of this target, 1% must be RFNBO by 2030.
- MS are encouraged to set differentiated targets at national level



## CROP-CAP & ANNEX IX- B

- 2020 share in transport +1% with 7% limit per MS
- Annex IX-B: limited to 1.7%; MS may modify that limit subject to approval by EC



## CALCULATION FOR RE IN TRANSPORT (ART 27)

- Annex IX & RFNBOs: x2
- RE electricity: x4 to road & x1,5 to rail



## ECCR (ANNEX V-C)

The possibility for  
biorefineries to claim CCR  
credits is maintained,  
however, only until 31  
December 2035.



## WASTE HIERARCHY AND CASCADING PRINCIPLE (ART 3)

- MS shall take into account the waste hierarchy.
- Derogation allowed to ensure security of energy supply
- No direct financial support for the use of saw logs, veneer logs, industrial grade roundwood, stumps and roots to produce energy.



## CULTIVATION EMISSIONS OF WASTE & RESIDUES

All wastes and residues to  
be considered zero-  
emission up to their point  
of collection, regardless if  
they are included in Annex  
IX and fit for use in the  
food or feed market, as in  
RED II.

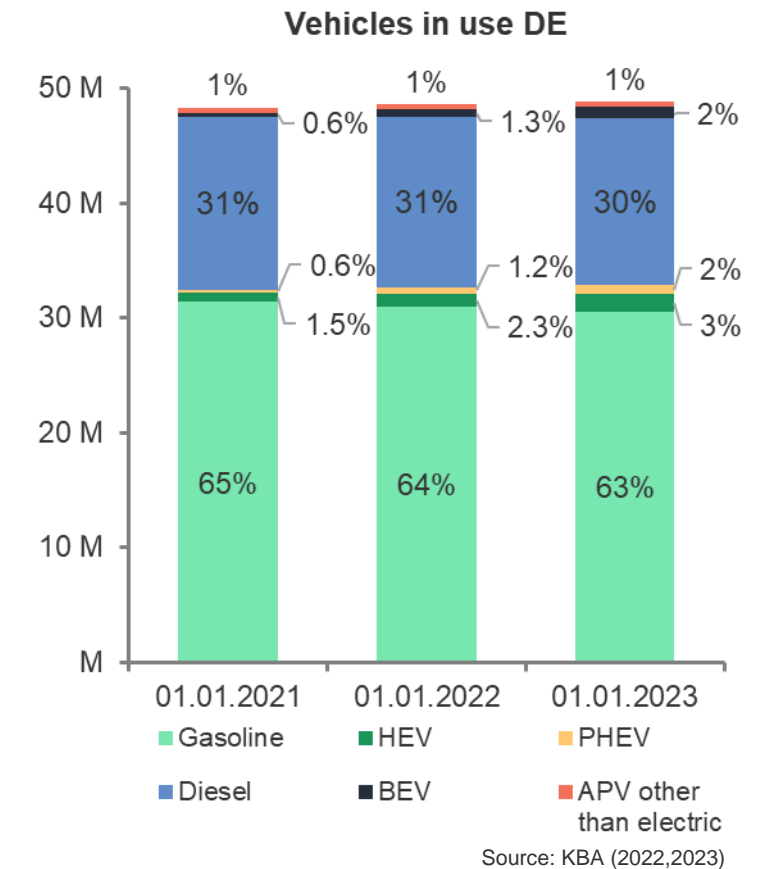
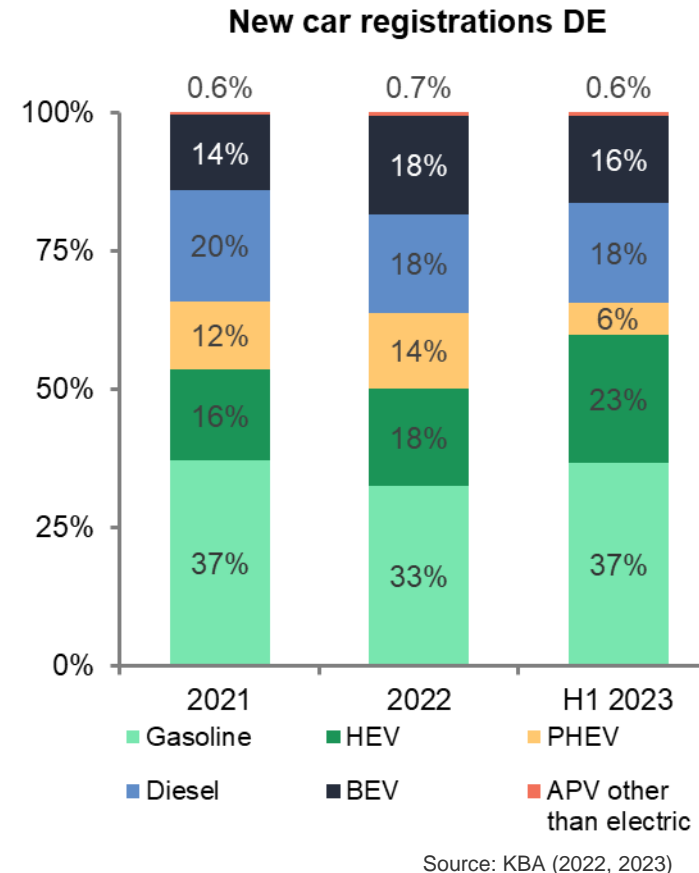
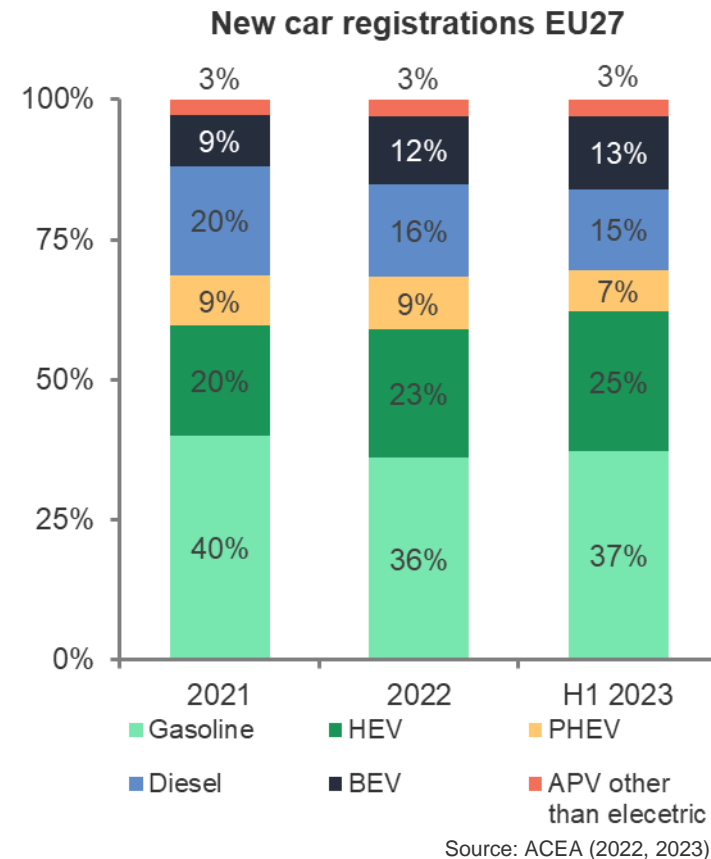


## NUTS 2 CULTIVATION VALUES (ANNEX V-C)

Possibility for operators to  
use NUTS2 values is  
maintained

# Climate-friendly liquid fuels will be essential

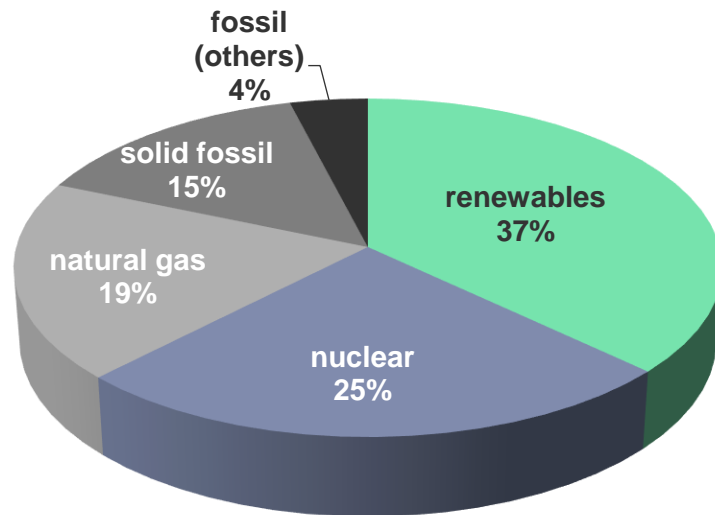
## Development of car registrations and vehicles in use



# Gross electricity generation in the EU27

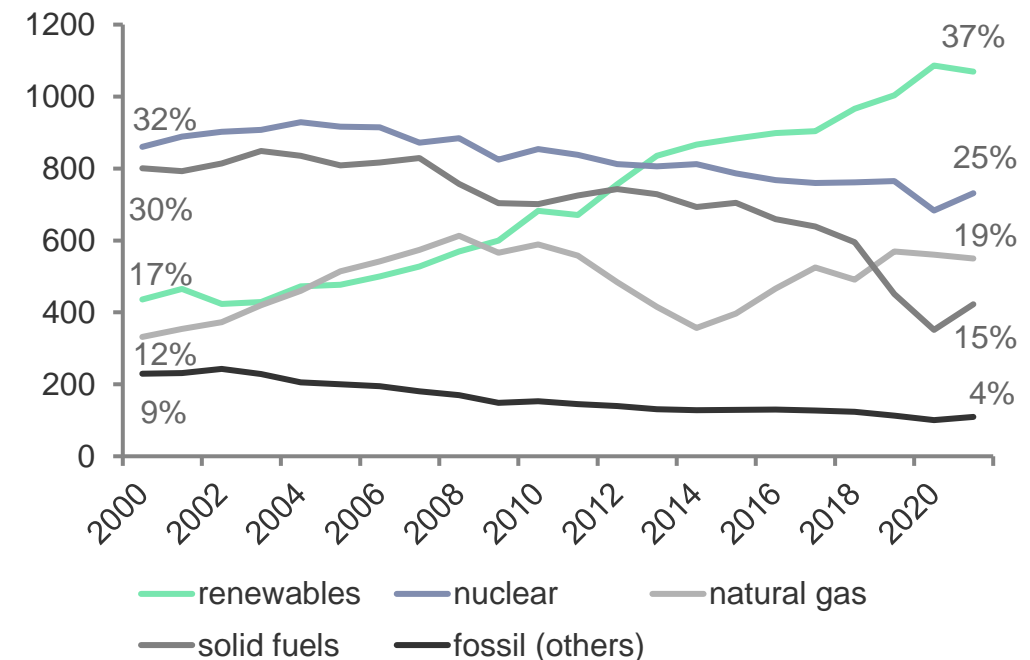
Total: 2,880 TWh

Gross electricity generation in the EU27 in 2021\*  
Total: 2,880 TWh



Source: Eurostat (2022)  
\* Preliminary data

Development of electricity generation in the EU27 [TWh]

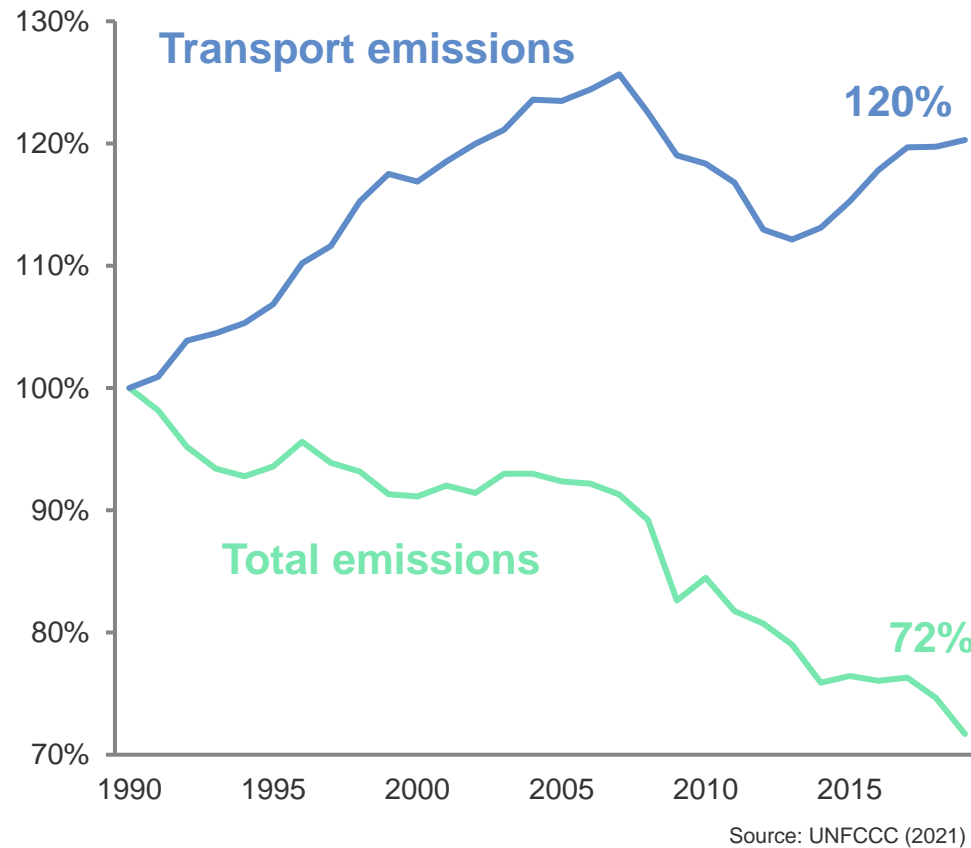


Source: Eurostat (2022), 2021 data is preliminary

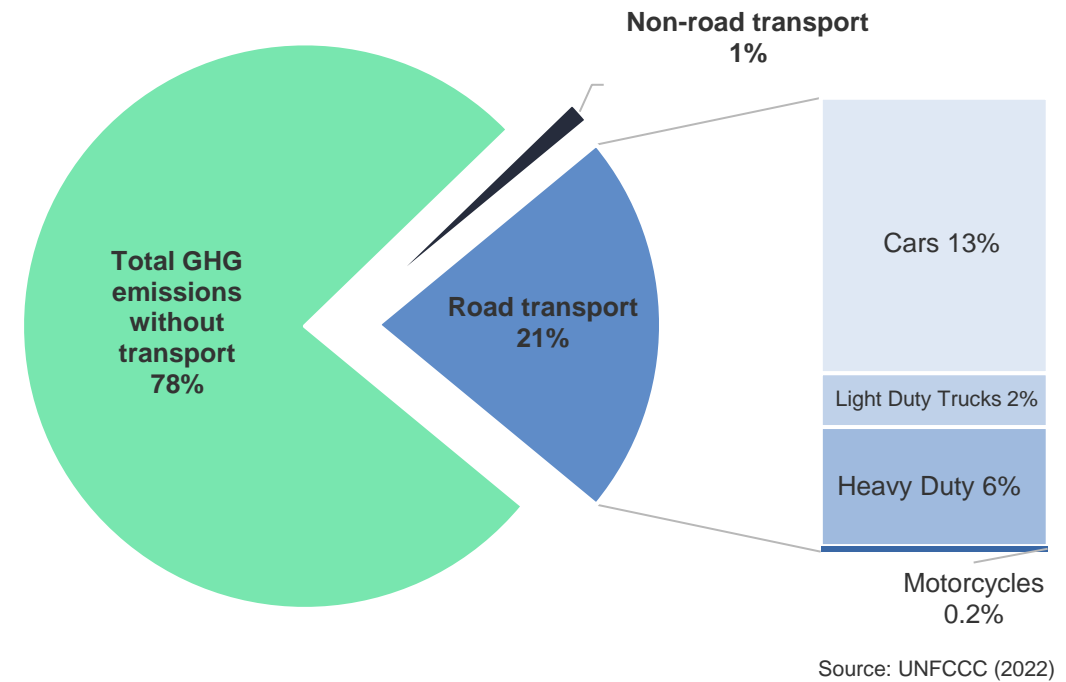
# Transport emissions

Still the EU's GHG problem child

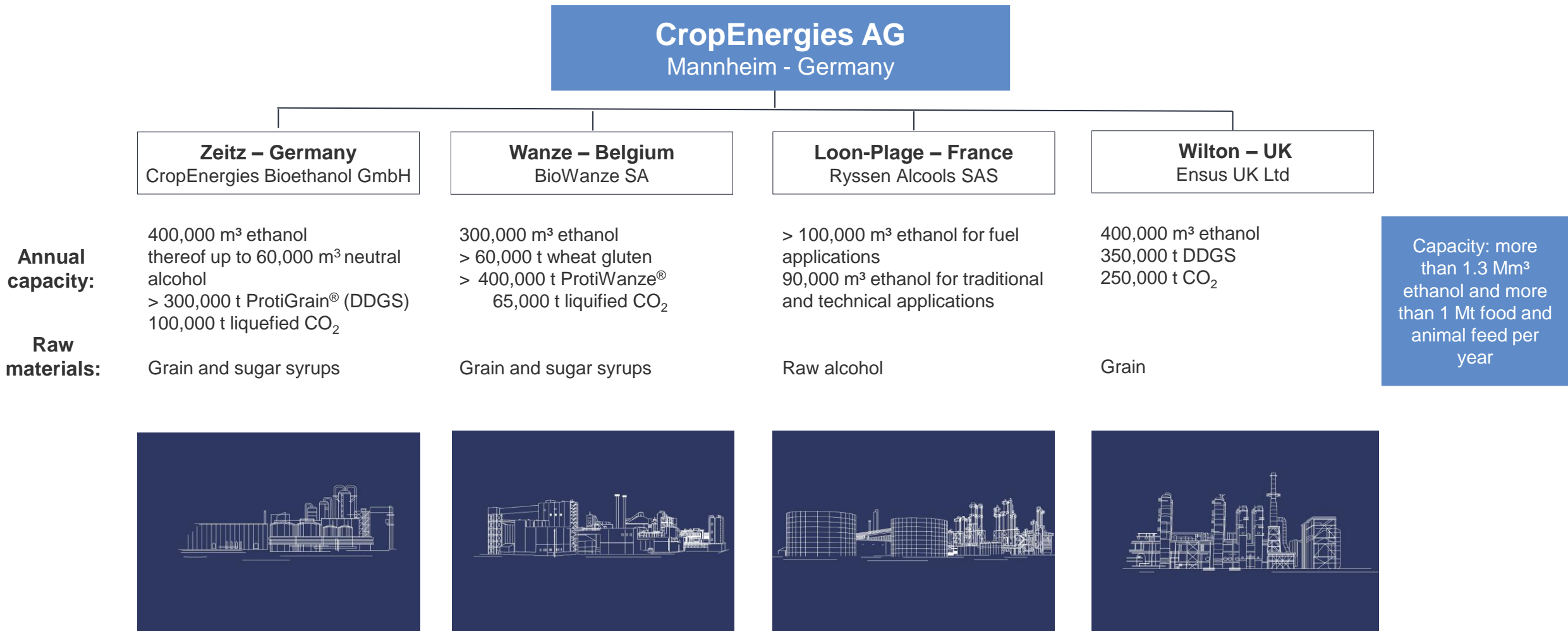
## EU transport emissions still rising



## Importance of road transport emissions

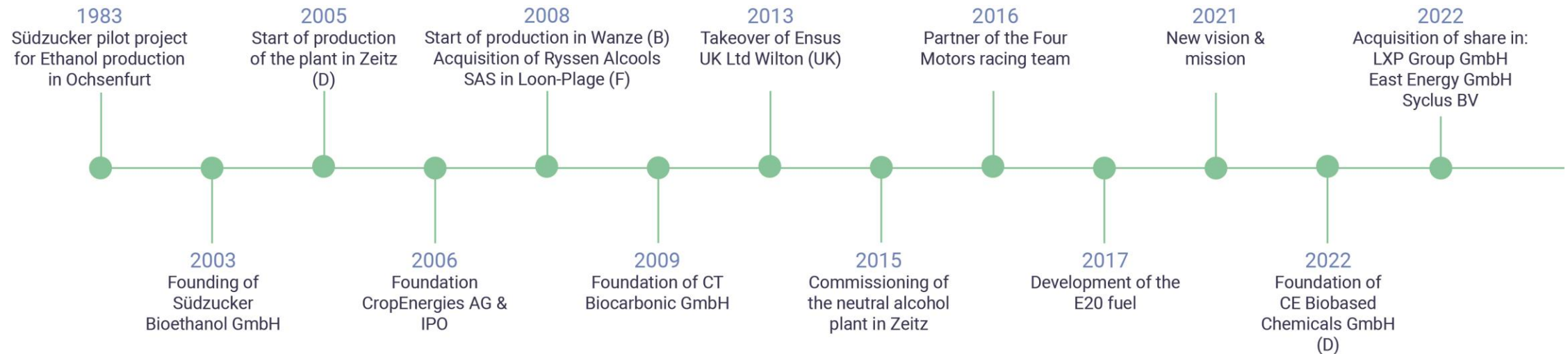


# Production sites of CropEnergies



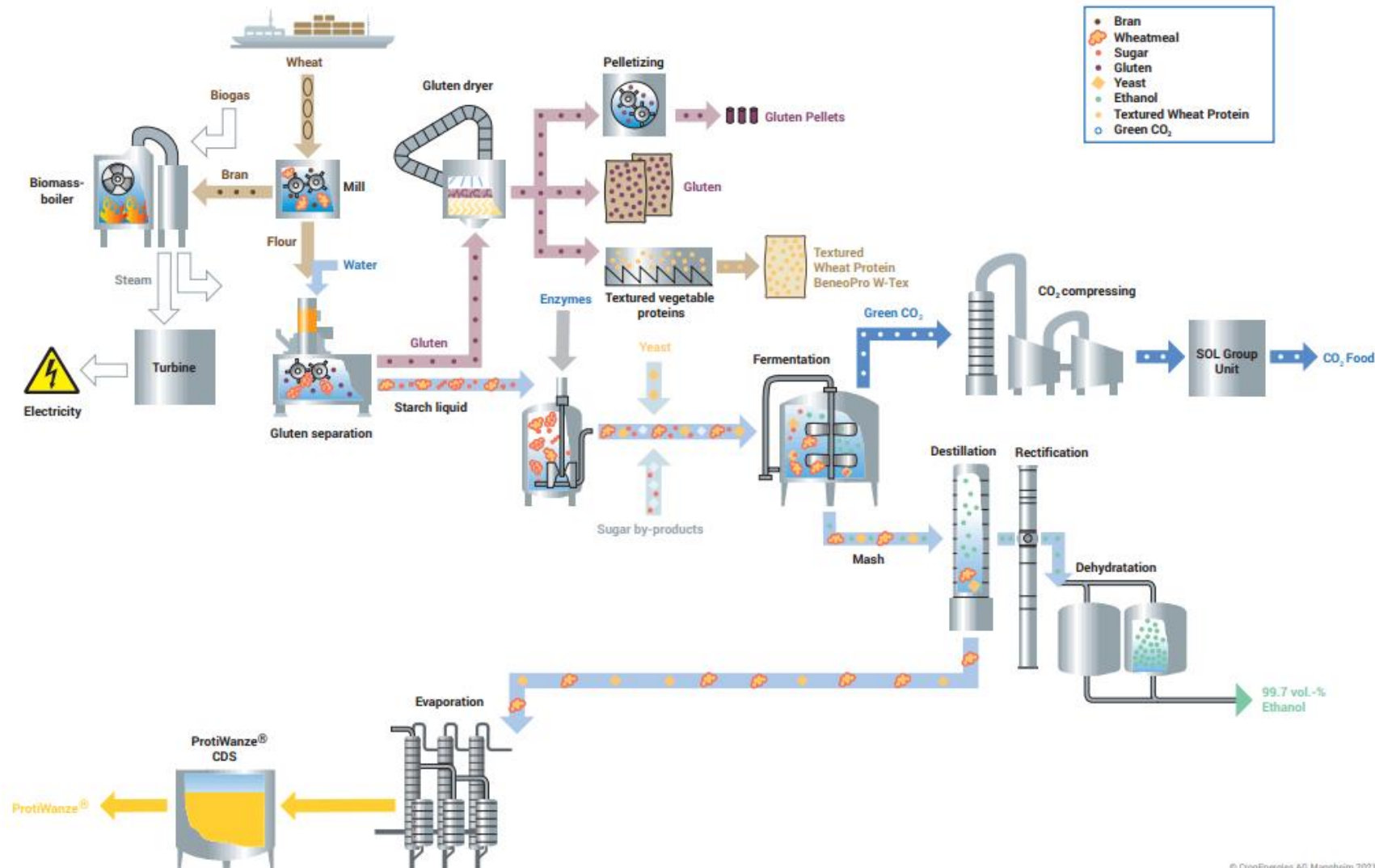
# Corporate history

## With roots in the Südzucker AG





## Schematic Diagramm of the Production Process in BioWanze



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### Financial Calender

11 October 2023:	Report for the 1 <sup>st</sup> half of 2023/24
10 January 2024:	Statement for the 3 <sup>rd</sup> quarter 2023/24
15 May 2024:	Annual report and press and analysts' conference FY 2023/24
10 July 2024	Statement for the 1 <sup>st</sup> quarter of 2024/25

### Stock Information

ISIN:	DE000A0LAUP1
Symbol:	CE2
Bloomberg / Reuters:	CE2 GY / CE2G.DE
Transparency standard:	Prime Standard

### **Disclaimer**

This presentation contains forward looking statements. The statements are based on current assumptions and estimates made by the executive board and information currently available to its members. The forward looking statements are not to be viewed as guarantees of the future developments and results presented therein. Future developments and results are in fact dependent on a variety of factors and are subject to various risks and imponderables. They are based on assumptions that could in fact prove to be invalid. The risk management report in the current annual report presents an overview of the risks. We assume no obligation to update the forward-looking statements made in this presentation. In addition, all disclaimers published on the CropEnergies website apply. This presentation includes percentage and number rounding. Typing and printing errors reserved. Written and visual value statements are standardized as follows:

± 1% - stable	± 1 – 4% - slight
± 4 – 10% - moderate	> ± 10% - significant

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