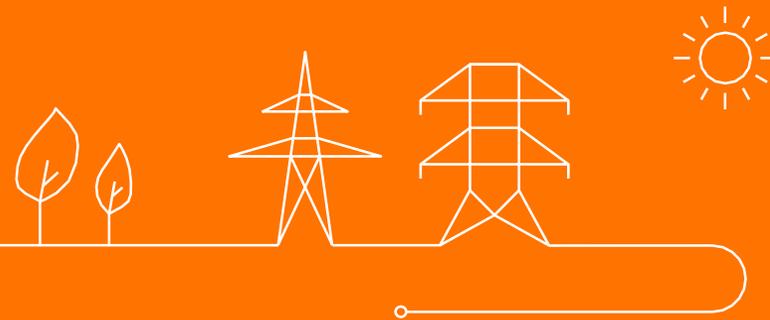


# Users' Group

## Plenary meeting of the Elia Users' Group

Monday, June 5<sup>th</sup>

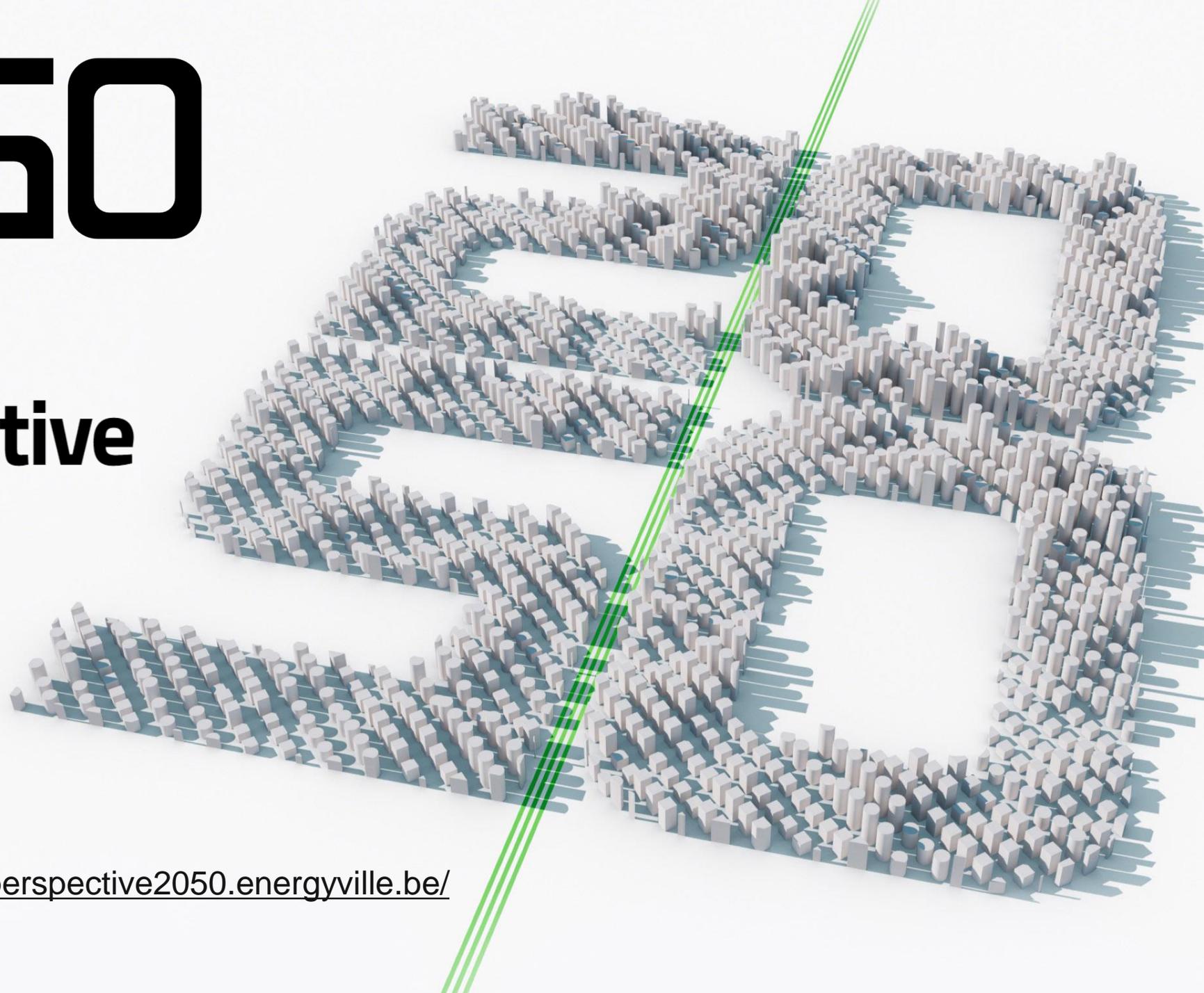


- 1. Studie Energyville/Febeliec**
- 2. UG 2.0 – voorstel hervorming**
- 3. Feedback werkgroepen**
  - 1. WG Adequacy**
  - 2. WG Balancing (incl. TF Princess Elisabeth zone)**
  - 3. WG Belgian Grid**
  - 4. WG Consumer Centric Market Design**
  - 5. WG System Operations & European Market**
- 4. Diversen**
  - 1. Plenaire meeting 13/09/2023 – 14-17u**



# PATHS 2050

## The Power of Perspective

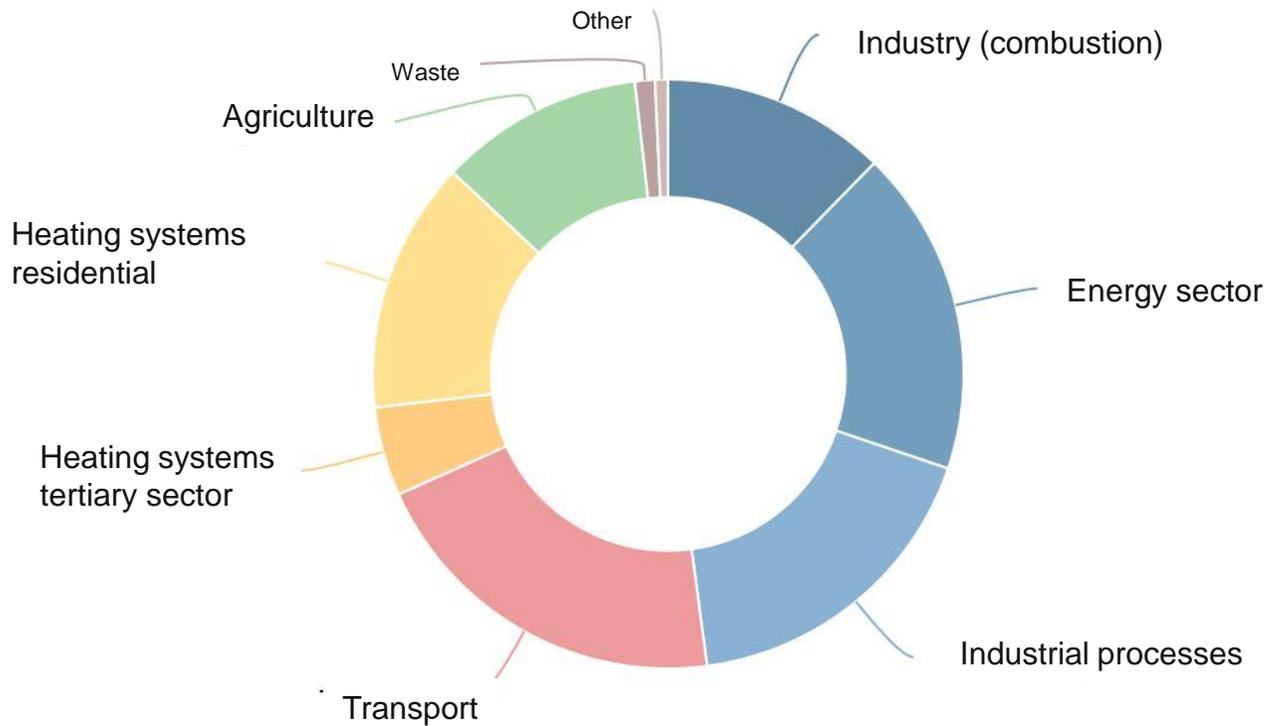


<https://perspective2050.energyville.be/>

# The challenge in Belgium and EU

Percentage of different sectors in Belgian emissions 2020 (106 Mton CO<sub>2eq</sub>)

*Not including emissions for international shipping and aviation*



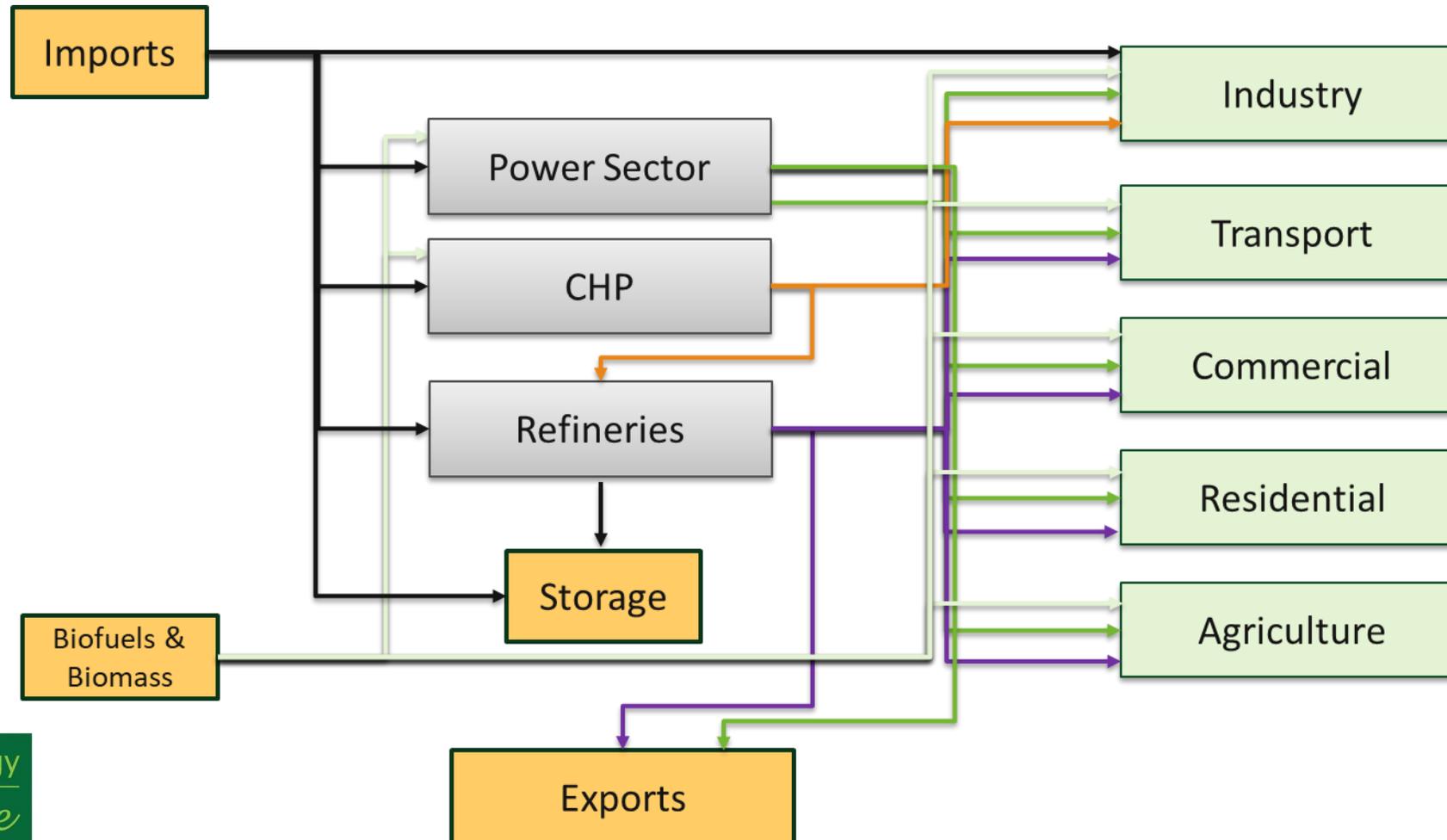
Energy balance 2019 (TWh)	EU (TWh)	BE (TWh)
Gross available energy	~17000	~750
Energy supply	~16000	~640
Final energy consumption	~11000	~420
Final non-energy consumption	~1000	~84
Final electricity consumption	~2500	~82

klimaat.be



# TIMES-BE model - simplistic

One large techno-economic **optimization** including all technologies, energy carriers and processes

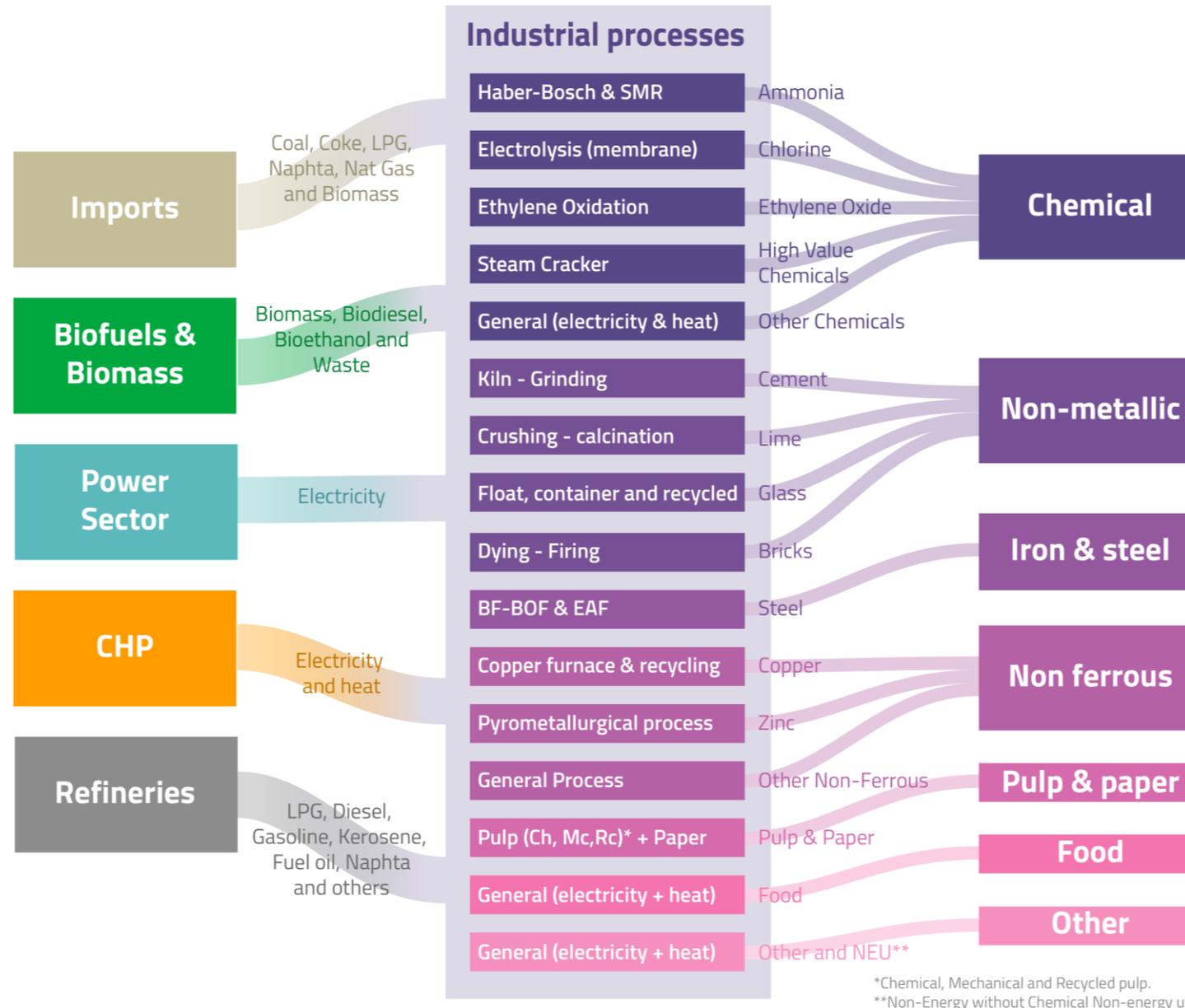


# The EnergyVille TIMES Be model

- Setting a new benchmark
- Most detailed, full system optimization model of the Belgian energy system, to date
  - Cross-vector: covering energy use (fossil fuels, renewables, clean molecules and electricity), feedstock
  - Cross-sector: covering all supply (refineries, power sector) and end-use demand sectors (industry, residential, commercial, transport, agriculture)
  - Cross-border: projected and timesliced import/export cost curves for electricity from other EU countries included, possible import of clean molecules included
- Cost optimization from now to 2050: gives insights into pathways to 2050 with intermediate 2030 milestones
- Reporting on combustion and process scope 1 CO<sub>2</sub> emissions = 85% of Belgian GHG emissions today
  - Scope 2 emissions from imported electricity included but not reported in this project.
  - Bunker fuels for international maritime and aviation sector not included
  - No agricultural CH<sub>4</sub> or N<sub>2</sub>O emissions

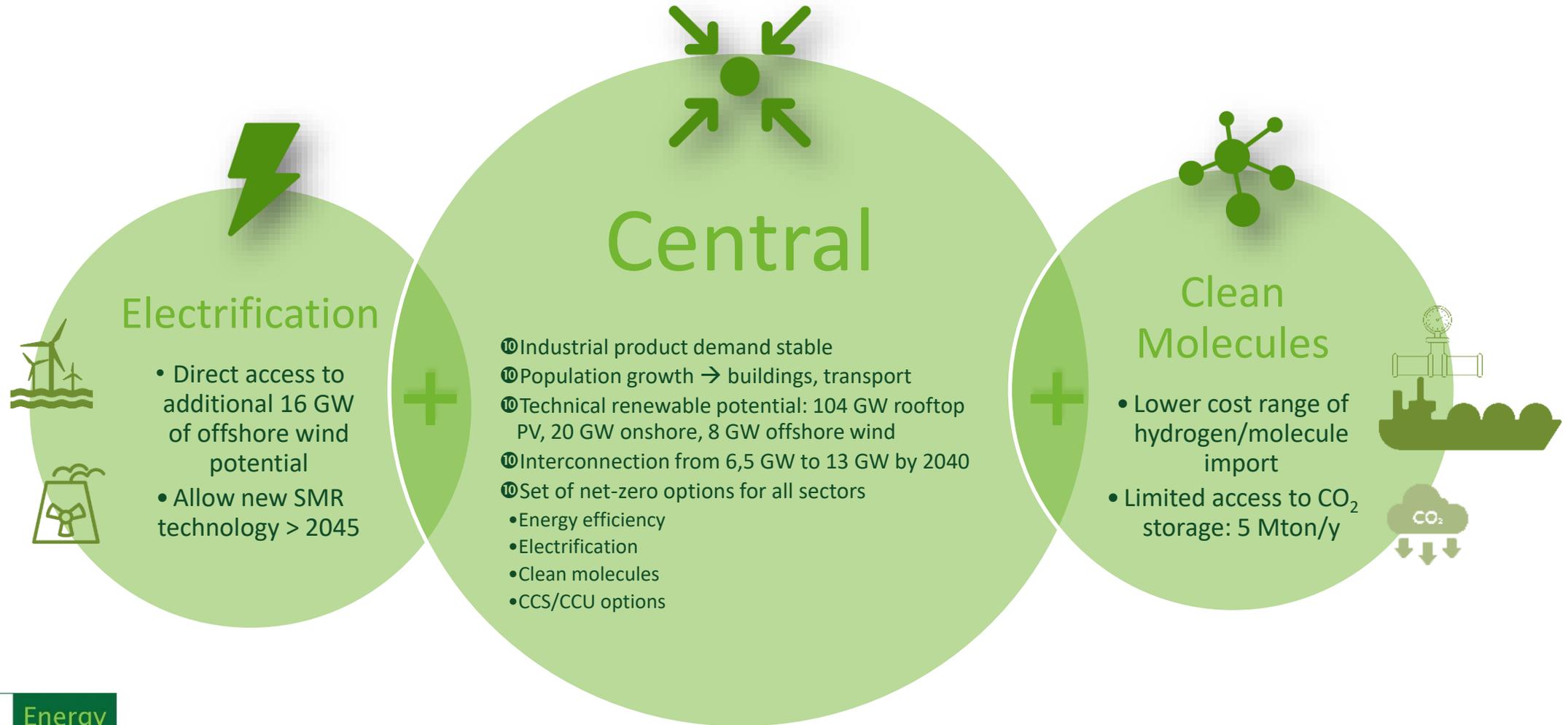


# TIMES-BE model: Industrial sector representation



\*Chemical, Mechanical and Recycled pulp.  
 \*\*Non-Energy without Chemical Non-energy use

# The 3 storylines



# Final energy demand Belgium

Final energy demand  
decreases by a

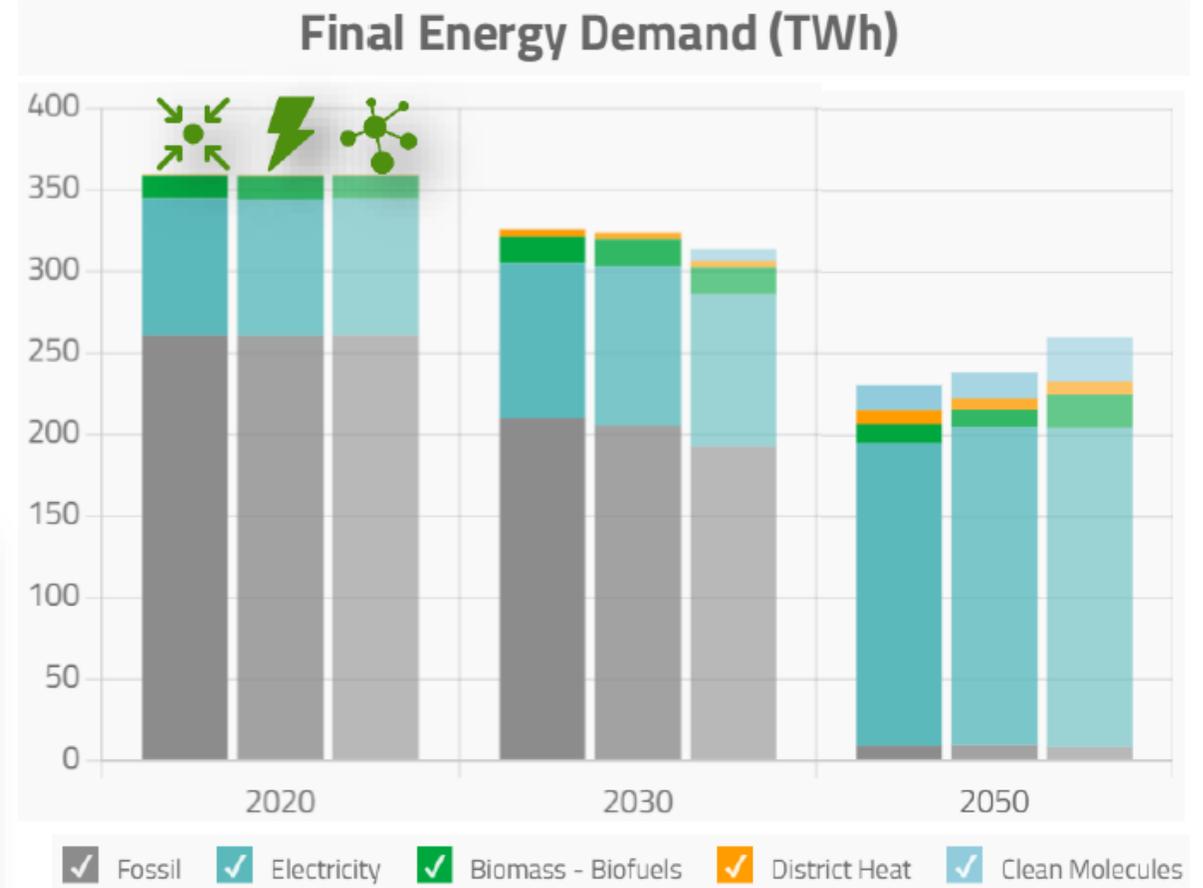
**third**

regardless of the scenario.

Electricity demand  
more than

**doubles**

in the 3 scenarios.



# Residential & commercial Renovation & electrification

By 2030, renovation, insulation and

## fuel oil phaseout

realise 50% CO<sub>2</sub> reduction

By 2030, heat pumps are installed in

## 1,5 million

residential homes and  
commercial buildings.

By 2050, district heating (8TWh)  
fulfills the demand of at least

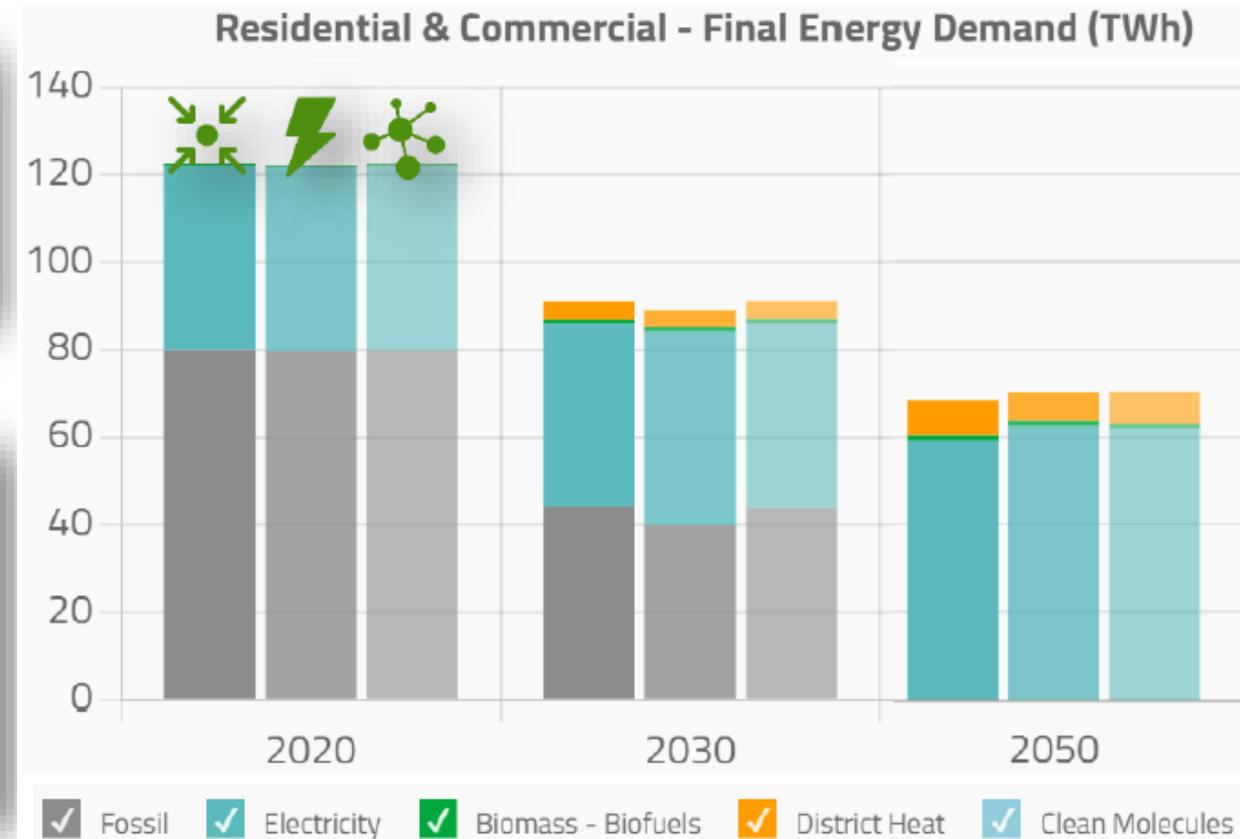
## 800.000 homes

based on geothermal and  
waste heat.

By 2050, heat pumps with water  
buffers and electric water heaters  
provide

## flexibility

to a highly renewable electricity  
system.



# Where to build heating grids?

- Public data for Flanders
- Very location-dependent
- Urban Energy Pathfinder

<https://www.energyville.be/en/research/urban-energy-pathfinder>

<https://www.energyville.be/en/research/pathopt>



Publicly available at [geopunt.be](https://geopunt.be)

**Aangeklikte locatie** ×

DICHTSTBIJZIJNDE ADRES  
📍 Meulestedekaai 81, 9000 Gent

[Website van Gent](#)

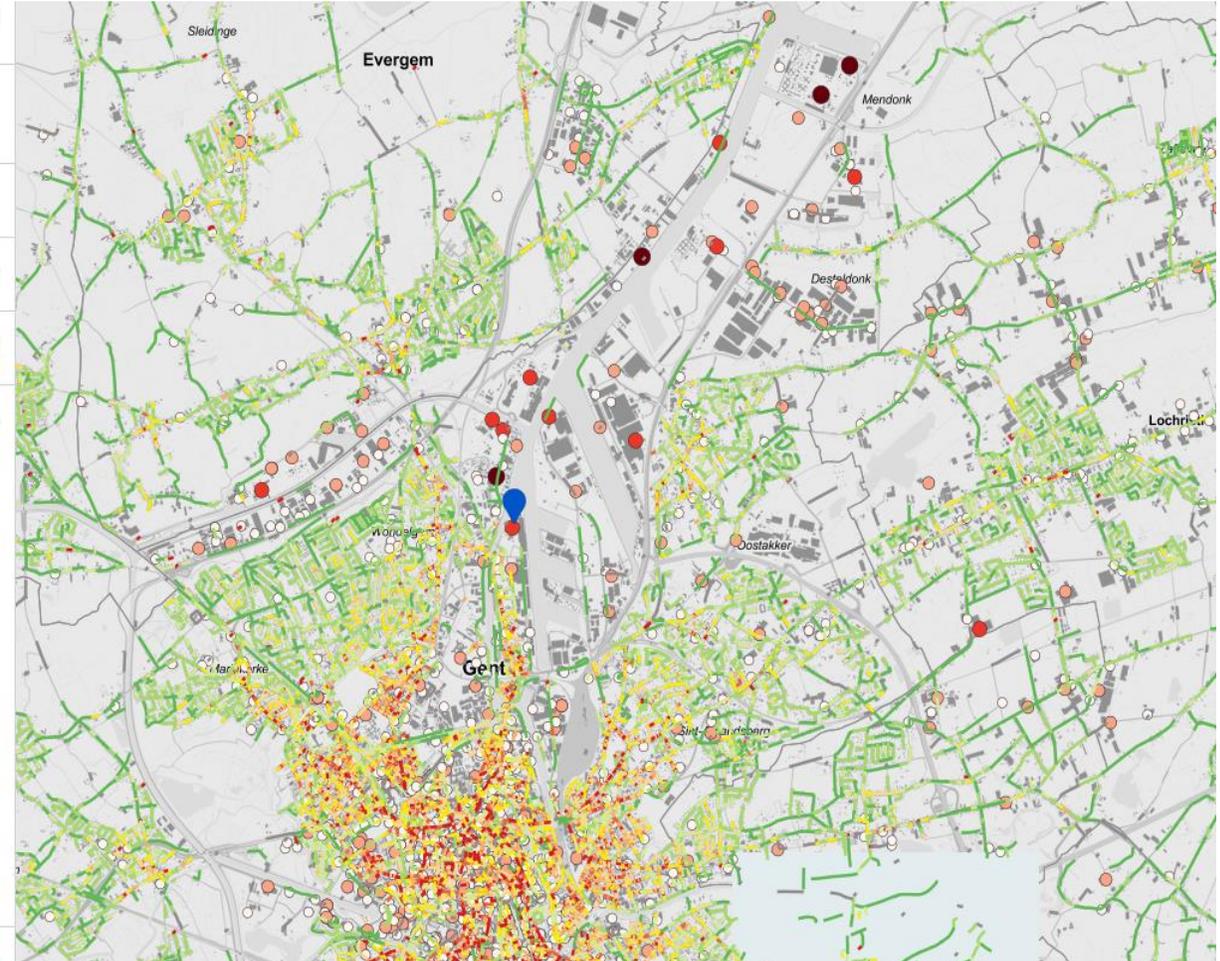
[Kadastrale informatie](#) ▾

[Coördinaten](#) ▾

**Warmtekaart 2019 - Warmtevraag grootverbruikers** ▴

id	L1368
naam	ROUSSELOT
sector_sub	INDUSTRIE/CHEMIE
categorie	20 - 200 GWh/jaar
ean_ele	
ean_gas	
pv_vlag	
gemeente	GENT
postcode	9000
straat	PORT ARTHURLAAN
nummer	173
bron	IMJV

[Warmtekaart 2019 -](#) ▾



# Transport

By 2030, investing in more than

## 2 million

electric person vehicles would be cost effective and puts us on track to net-zero 2050.

By 2050 our road transport is

## fully electrified

By 2050, electrification leads to an efficiency improvement of

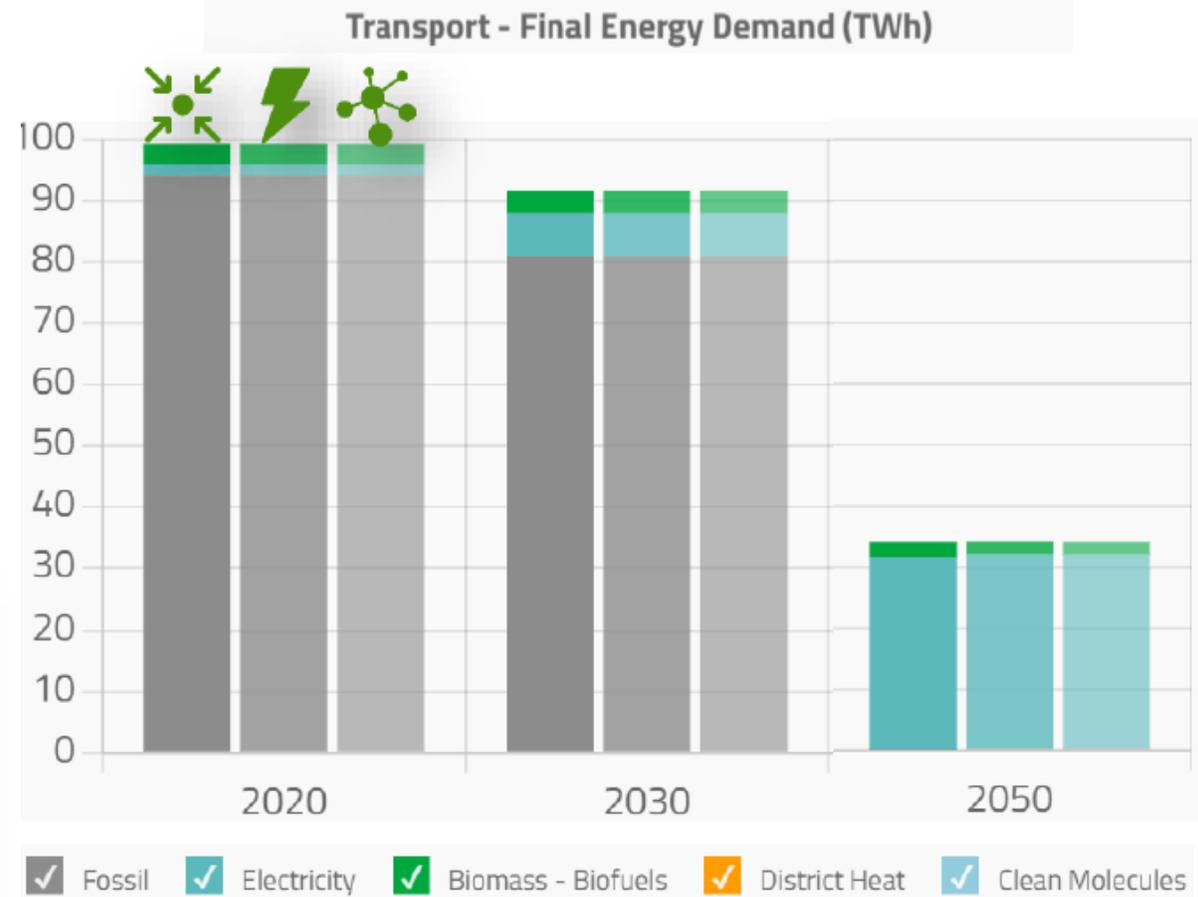
## 76%

Total energy demand decreases from 100 TWh today to 34 TWh.

By 2050, at least

## 1,1 million

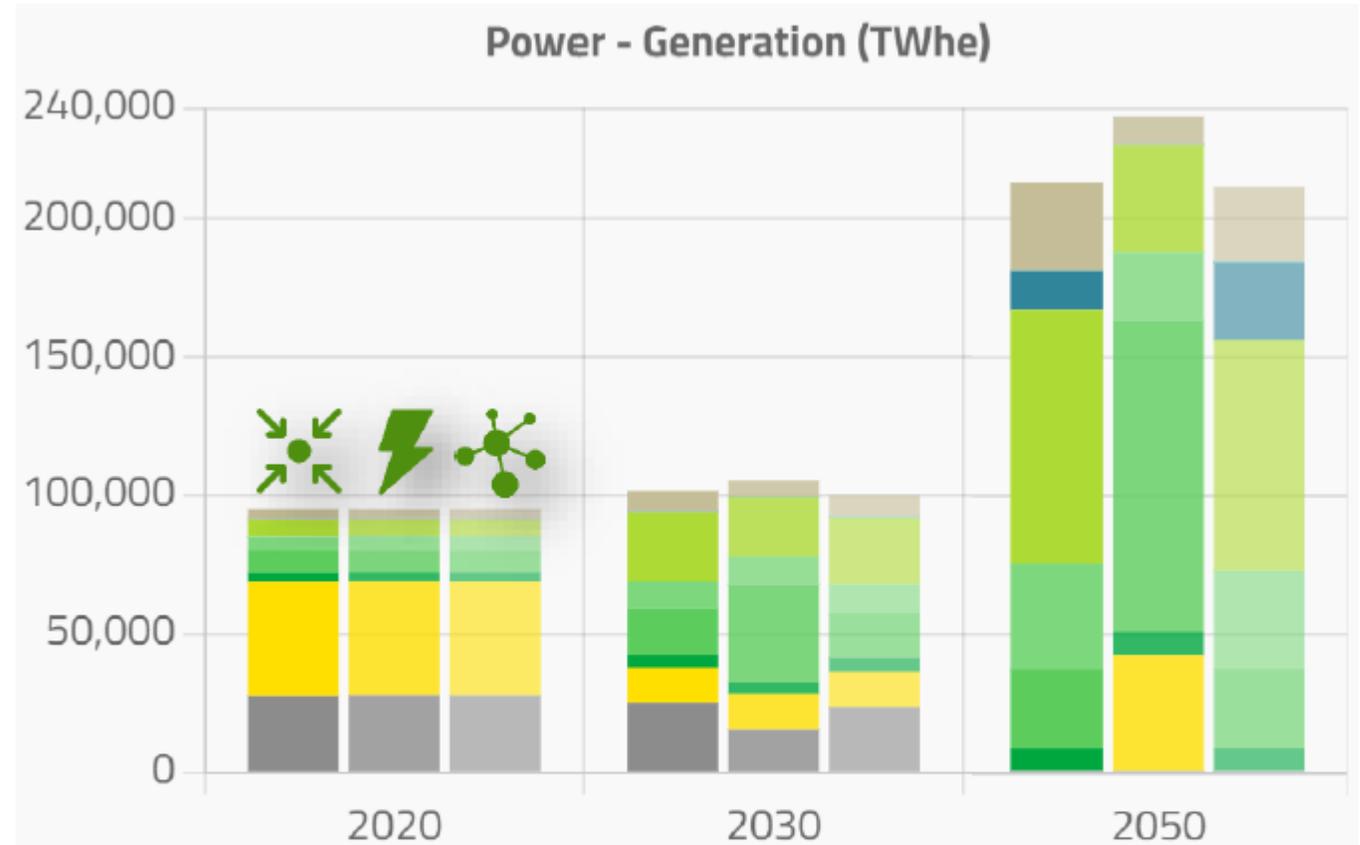
smart charging stations (average 7,5 kW peak) are needed to provide demand flexibility.



# Power sector - Generation

From 2040 onwards the need for **flexibility of demand**

grows drastically: smart charging, heat pump with buffers, battery storage, hydrogen electrolyzers.

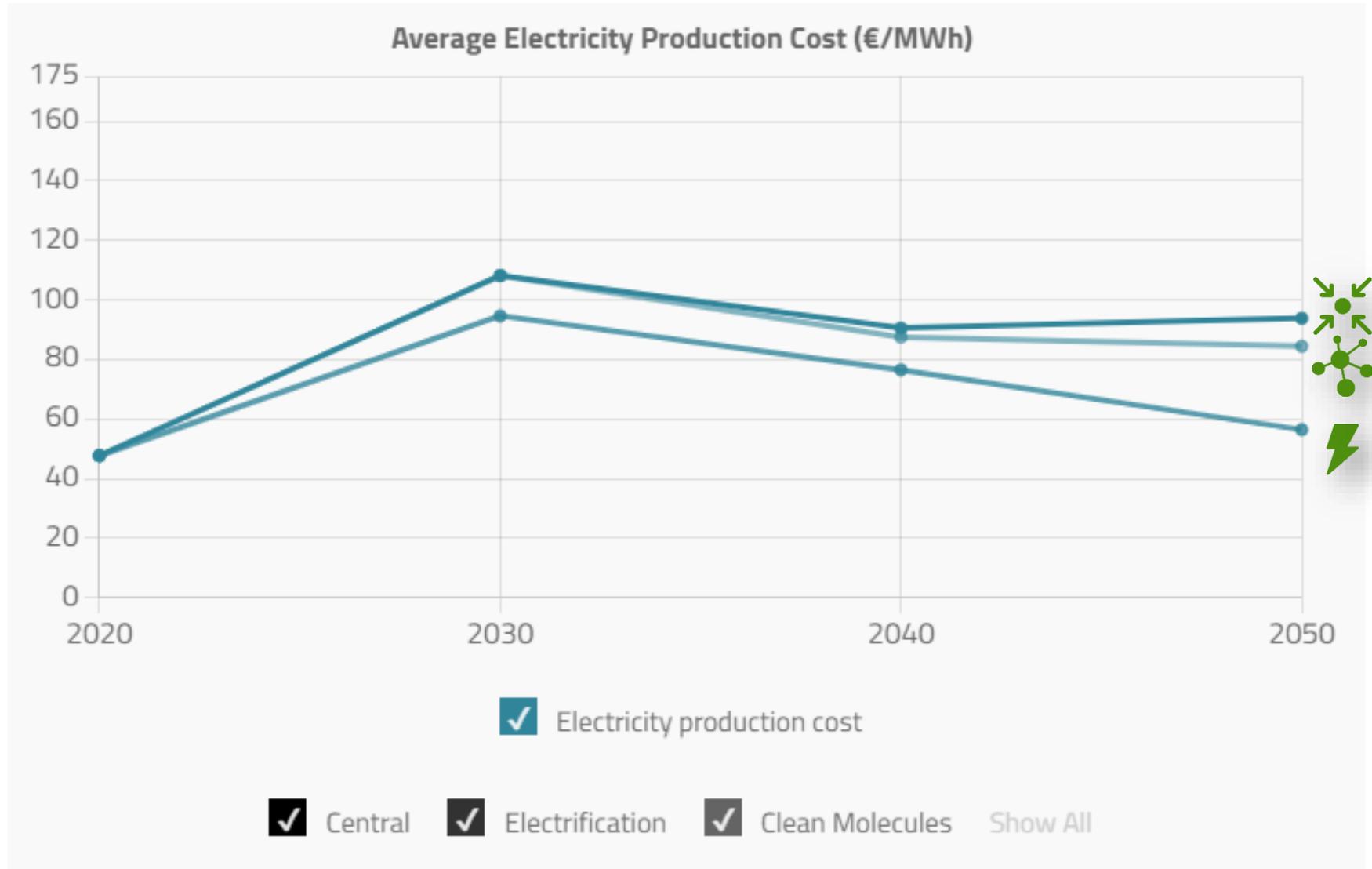


- Fossil
- Nuclear
- Biomass
- Wind Offshore
- Wind Onshore
- Solar PV
- Hydrogen
- Hydro
- Transmission



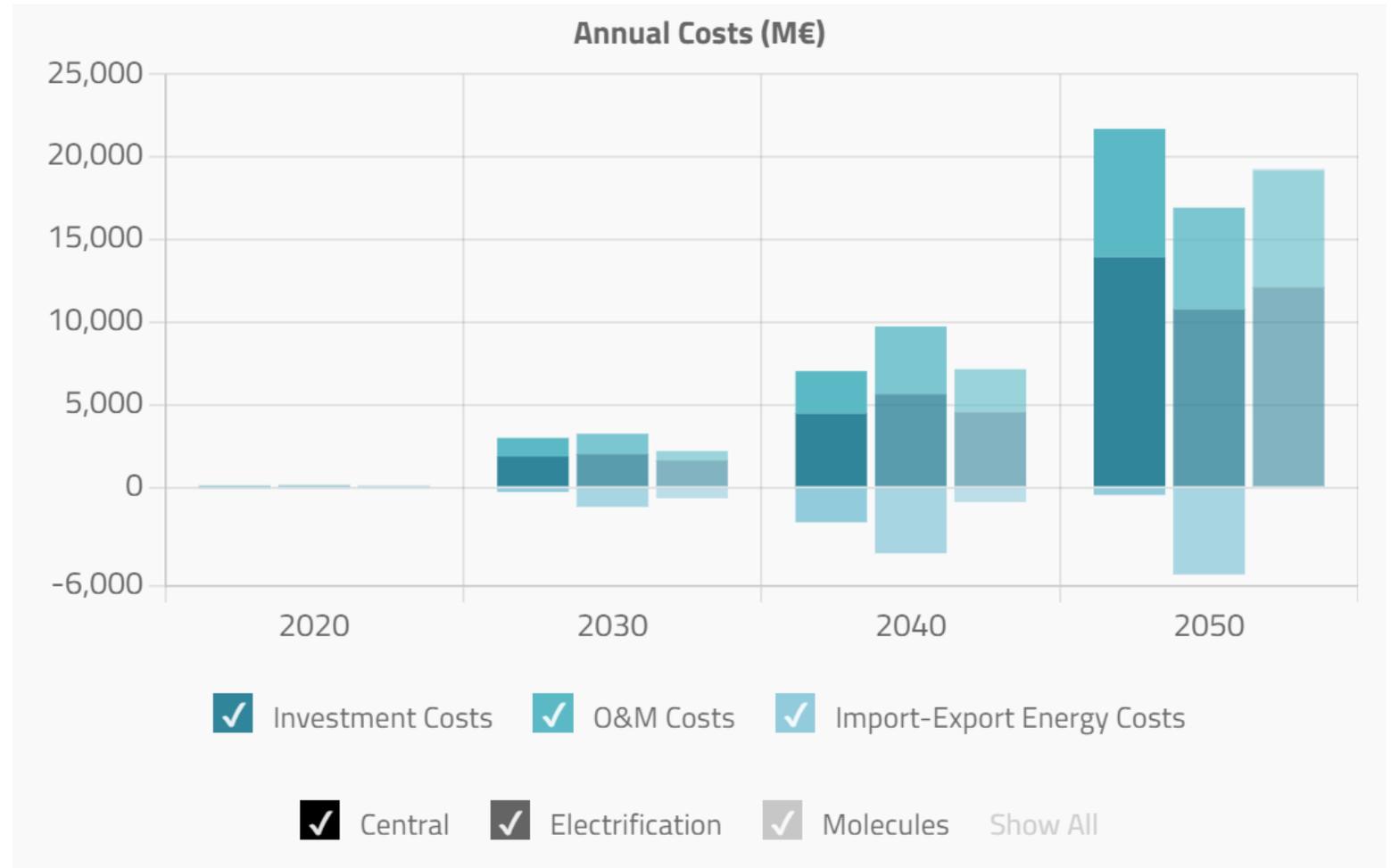
# Wholesale price proxy

Access to offshore  
wind is key!



# Annual Belgian energy system costs

- Extra cost wrt 50EUR/ton scenario
- 1 to 2-4% of current GDP



# Industry – final energy use

Until at least 2030, fossil fuels remain

## dominant

in the industry as final energy demand.

By 2050, electrification of industrial processes leads to an increase of

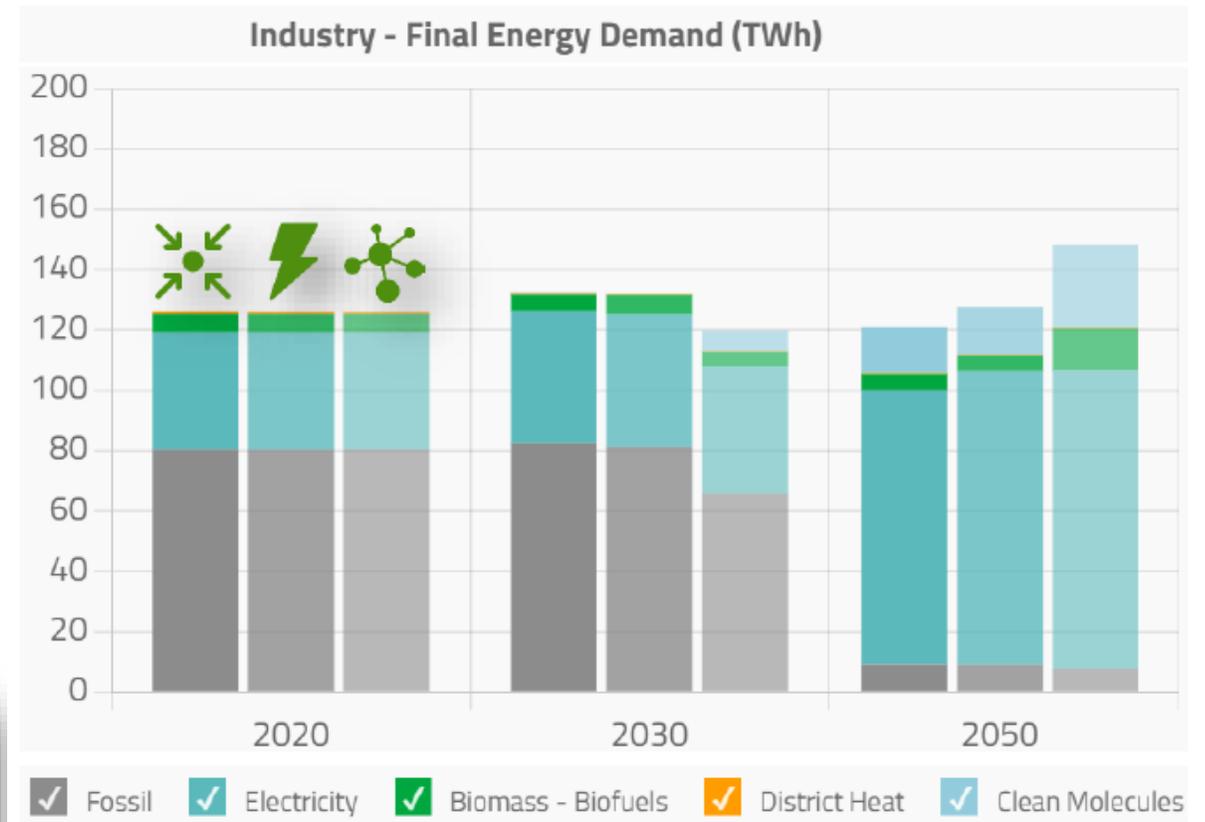
## x 2

the current electricity demand in all scenarios.

By 2050, clean molecules amount to

## 21-25 %

of the final energy demand in industry.



# Industry – CO<sub>2</sub> emissions

By 2030, Carbon Capture and Storage (CCS) removes

## 20 Mton

of CO<sub>2</sub> emissions from the atmosphere

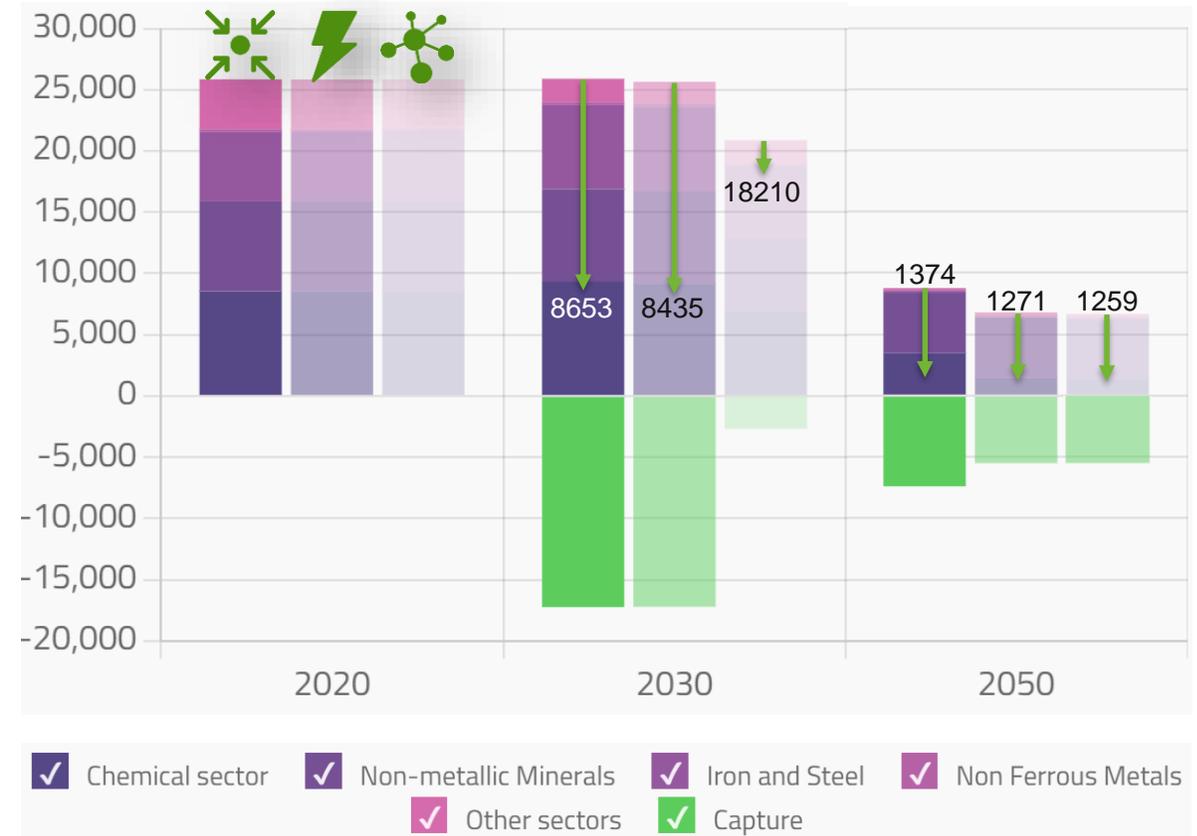
By 2050, CCS is limited to

## 9,4 Mton

and applied in cement, lime, high value chemicals and supply sector.

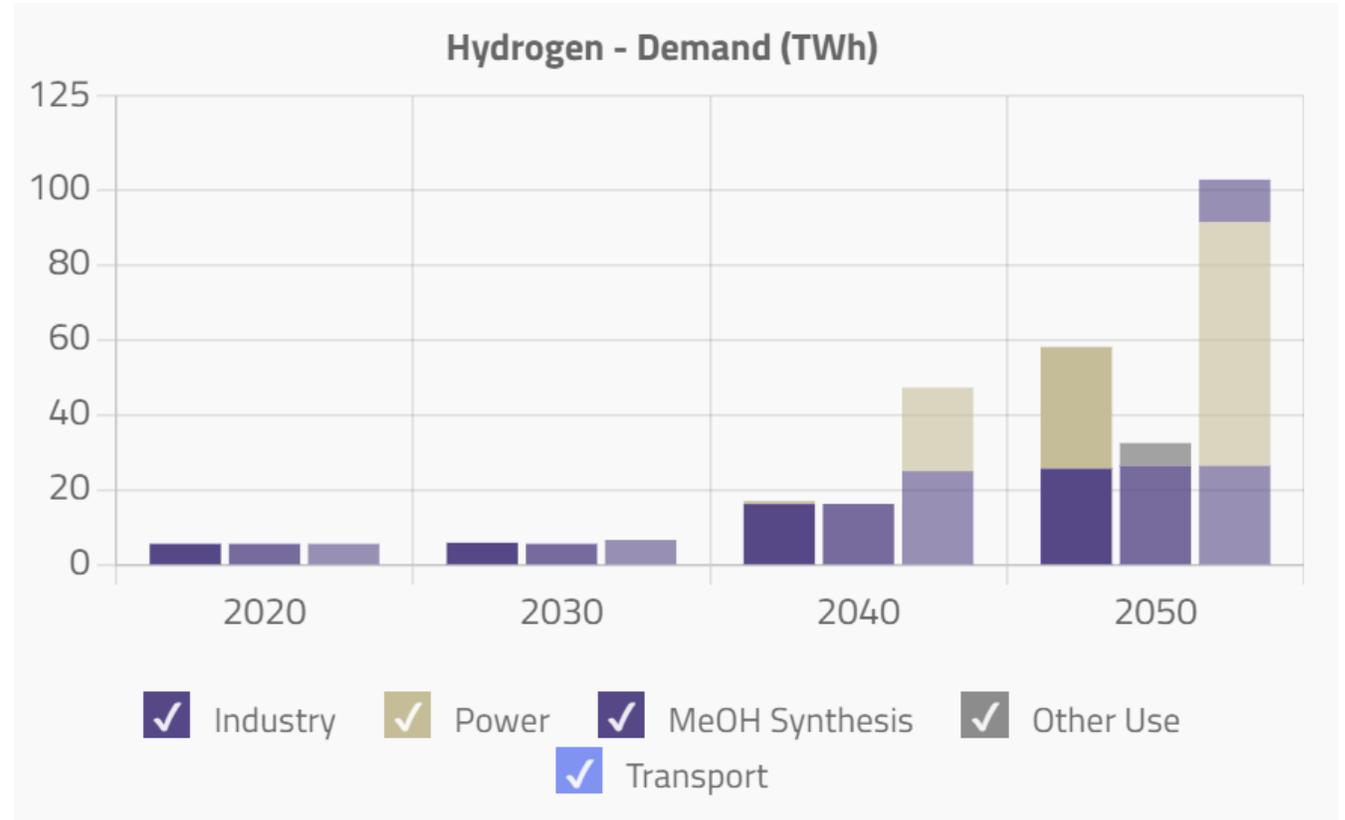


Industry - CO<sub>2</sub> Emissions (kton)



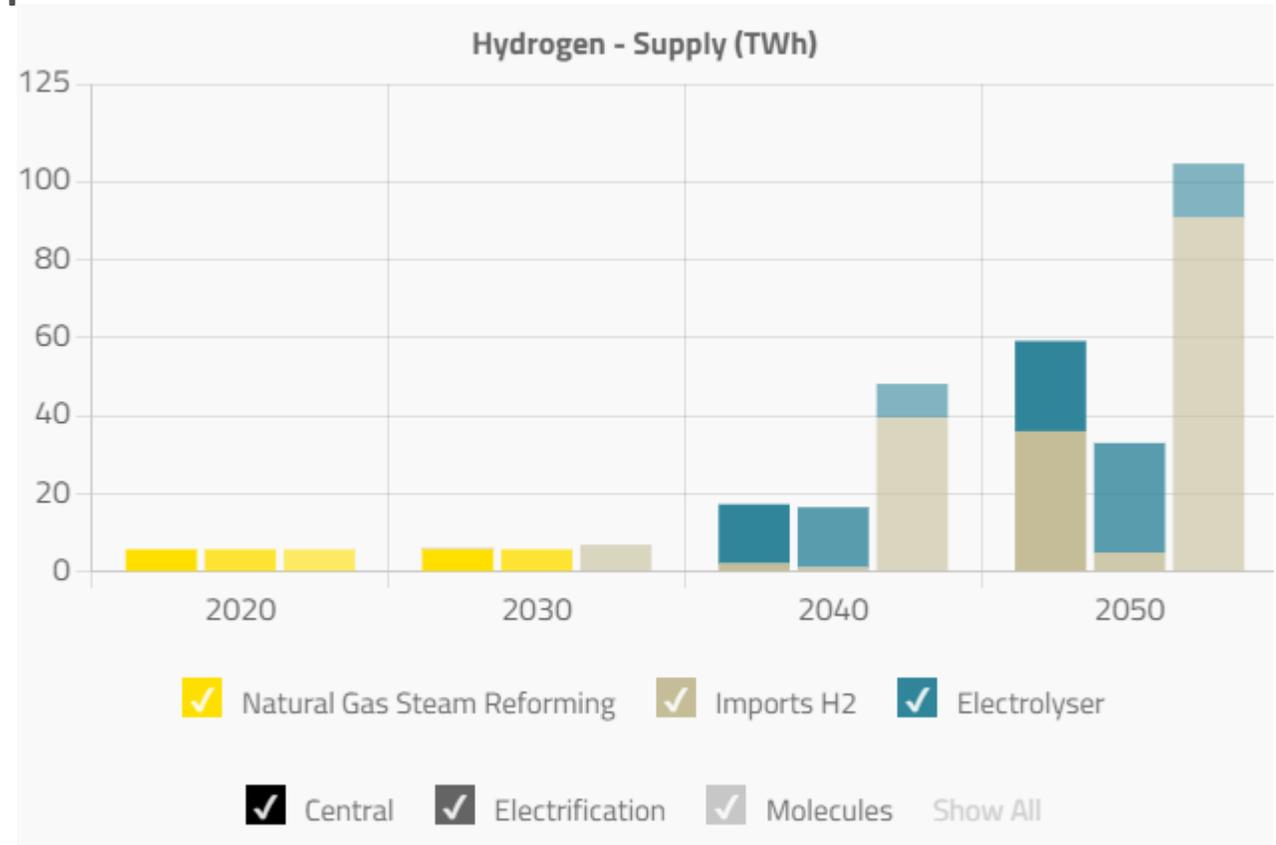
# Paths2050: The hydrogen balance

- Industry and power system
- Synthetic fuels for aviation/maritime
- No buildings or road transport



# Paths2050: The hydrogen balance

- No upscale of green hydrogen production before 2030
- Blue hydrogen can be an interesting transition phase
- Import should focus on hydrogen derivatives such as ammonia



# Taking into account import – export of electricity

- Amount of hours per year with electricity generation cost <40EUR/MWh for electrolysis.

#hours of the year with cheap electricity <40€/MWh for electrolysis	2030	2033	2035	2040	2045-2050
TYNDP 2020 National Trends	1800			4300	
TYNDP 2018/2020, Distributed Generation			1500	4300	
TYNDP 2018 in Denmark (Energynet), GCA			1900	5700	
PBL KEV2021		4334*			
Agora Energiewende	1900*			1757*	1920*
Elia Adequacy and Flexibility**	400-1000				

TYNDP results are EnergyVille model based on TYNDP data

\*, \*\* it is unclear how Agora and PBL results are calculated

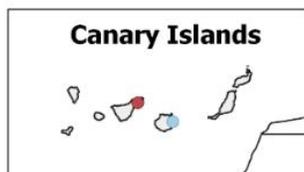


The TRILATE project: Follow-up project including Elia, Fluxys, TNO and Dechema

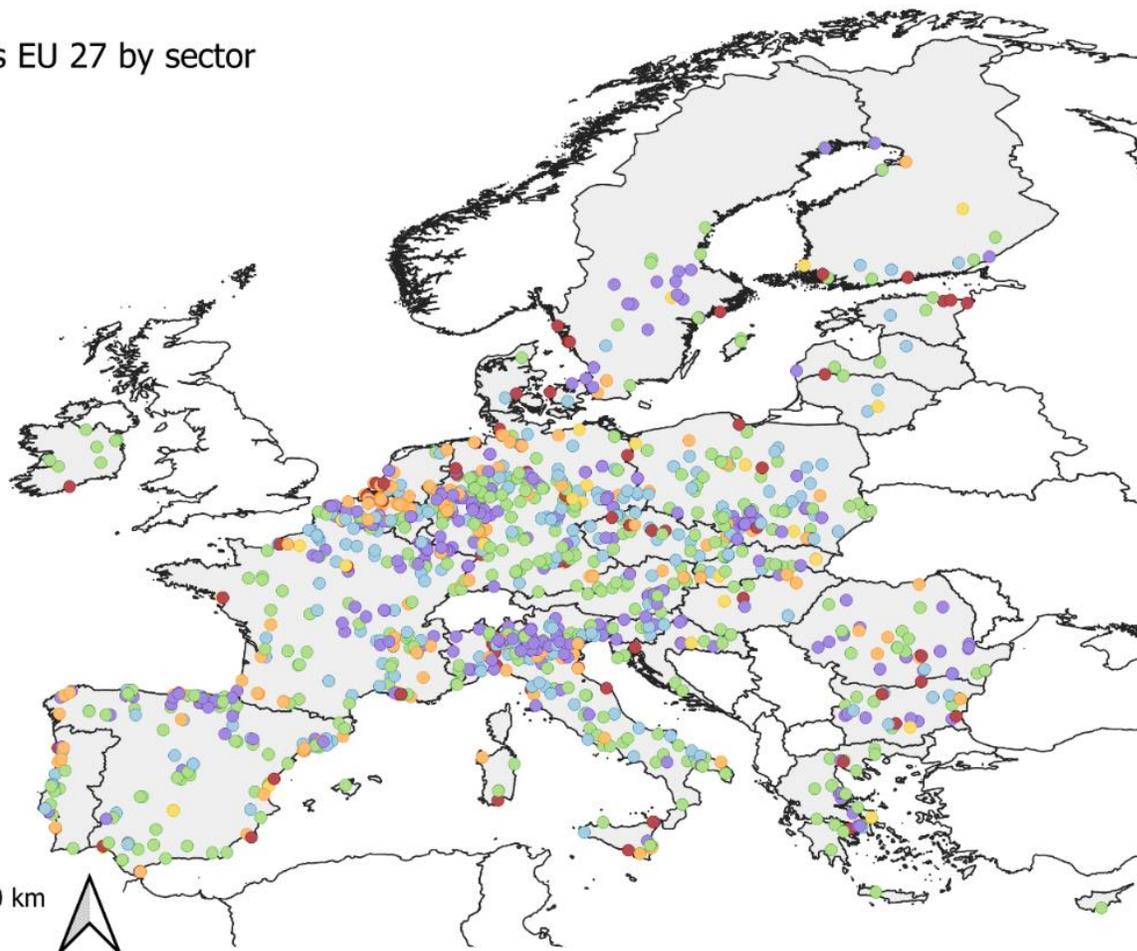
## WP2: Map industrial sites in the EU27 - RESULT

### EII's production sites EU 27 by sector

- Steel
- Cement
- Glass
- Chemical
- Fertilisers
- Refineries
- EU27



0 500 1,000 km



Sector	#Production sites
Steel	372
Refinery	112
Cement	436
Glass	319
Chemical	258
Fertilisers	39
<b>Total</b>	<b>1536</b>

A **production site** is the geographical unit that combines production installations from one sector and specific company in space. E.g., a chemical production site (BASF Ludwigshafen) can group more than 40 production installations from the chemical sector at one site.

# Fit-for-55 by 2030 ?

## Evaluation limited to CO<sub>2</sub> emissions

- This study does not present policy projection or prognosis
- Belgian CO<sub>2</sub> emissions 1990: **120 Mton CO<sub>2</sub>** emissions excluding net CO<sub>2</sub> from LULUCF
- Central scenario 2030: **52 Mton**  
→ reduction of **-57%**

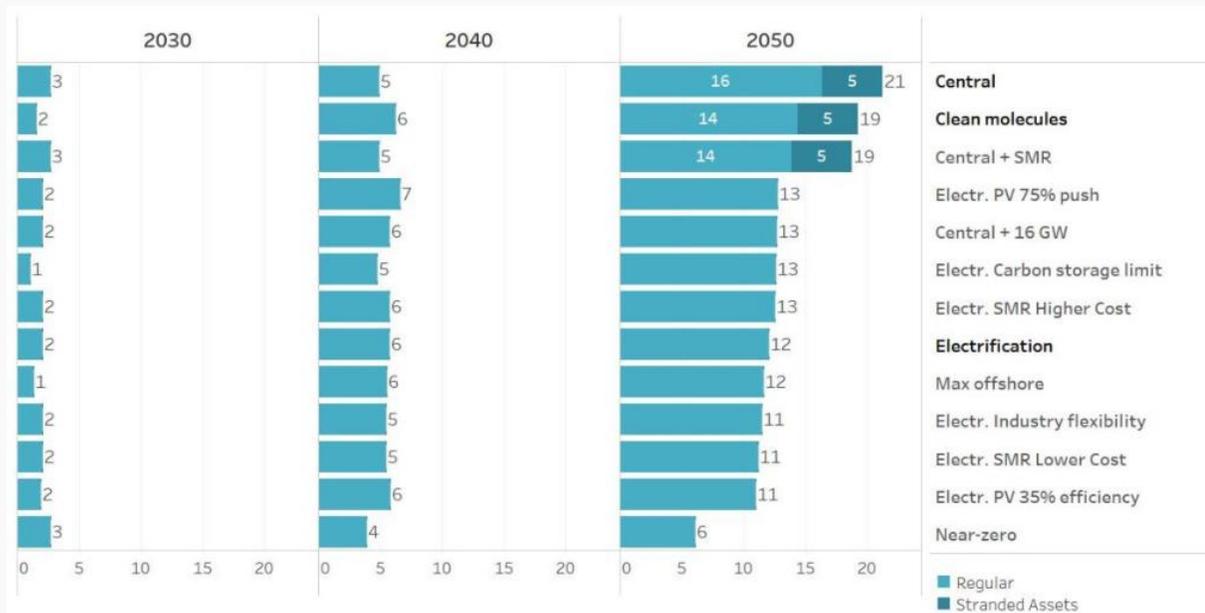


# More sensitivities at

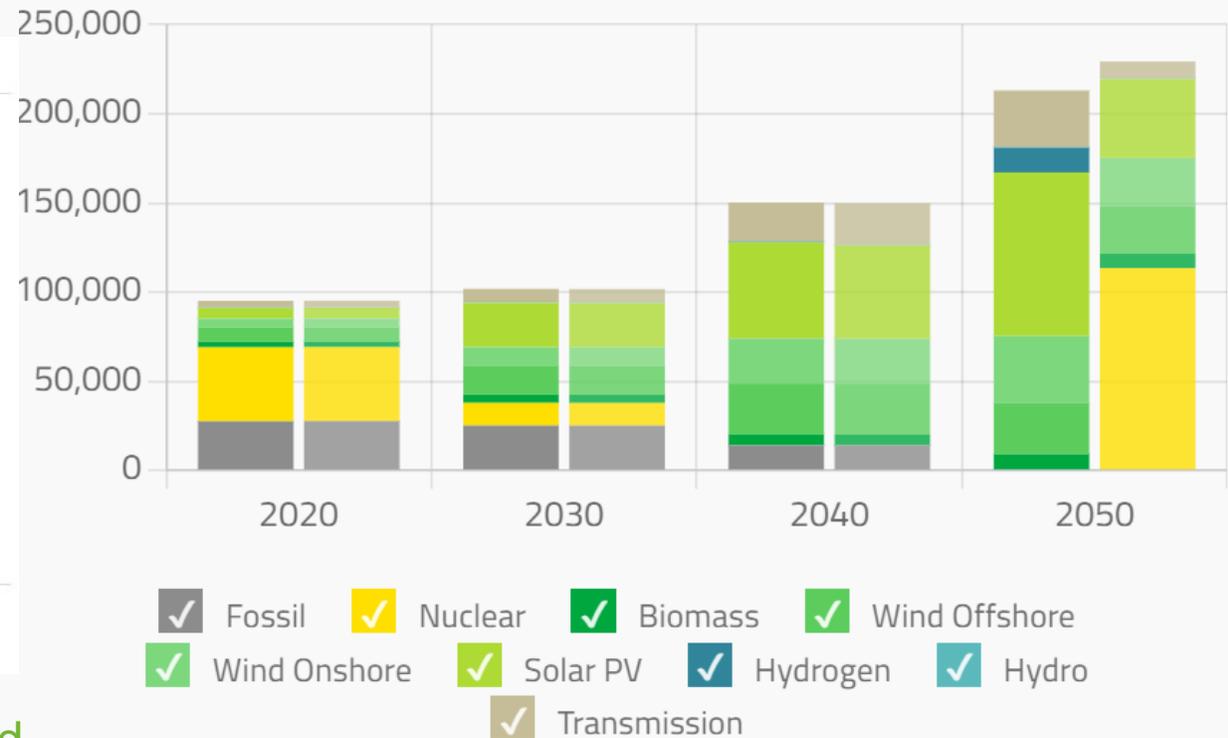
[www.perspective2050.energyville.be](http://www.perspective2050.energyville.be)

- E.g. Small modular nuclear sensitivity with no extra offshore wind available

### Annual Costs (B€)



### Power generation - Sensitivity - SMR availability (GWhe)



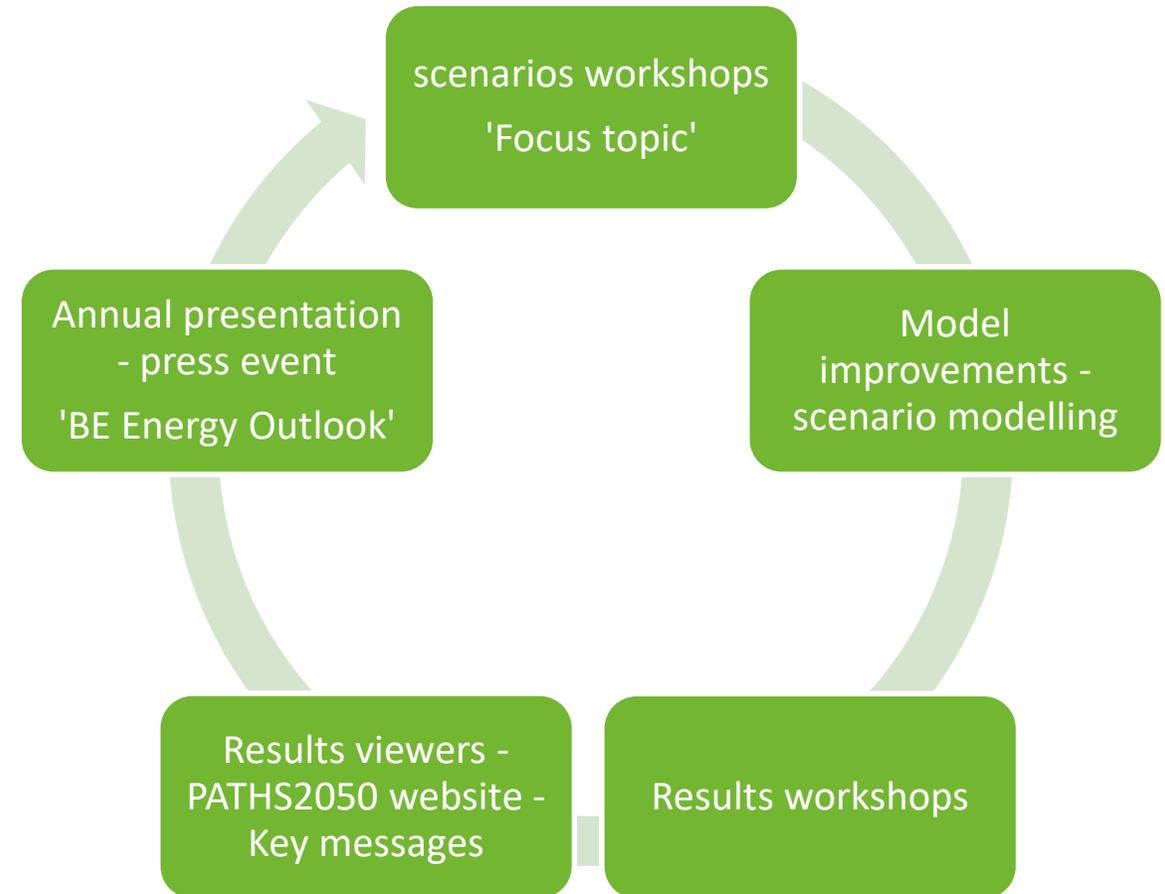
Scenarios with 8 +16GW offshore wind have a structurally lower system cost

Central
  Central + SMR
  Show All

# Next steps

## The PATHS 2050 coalition

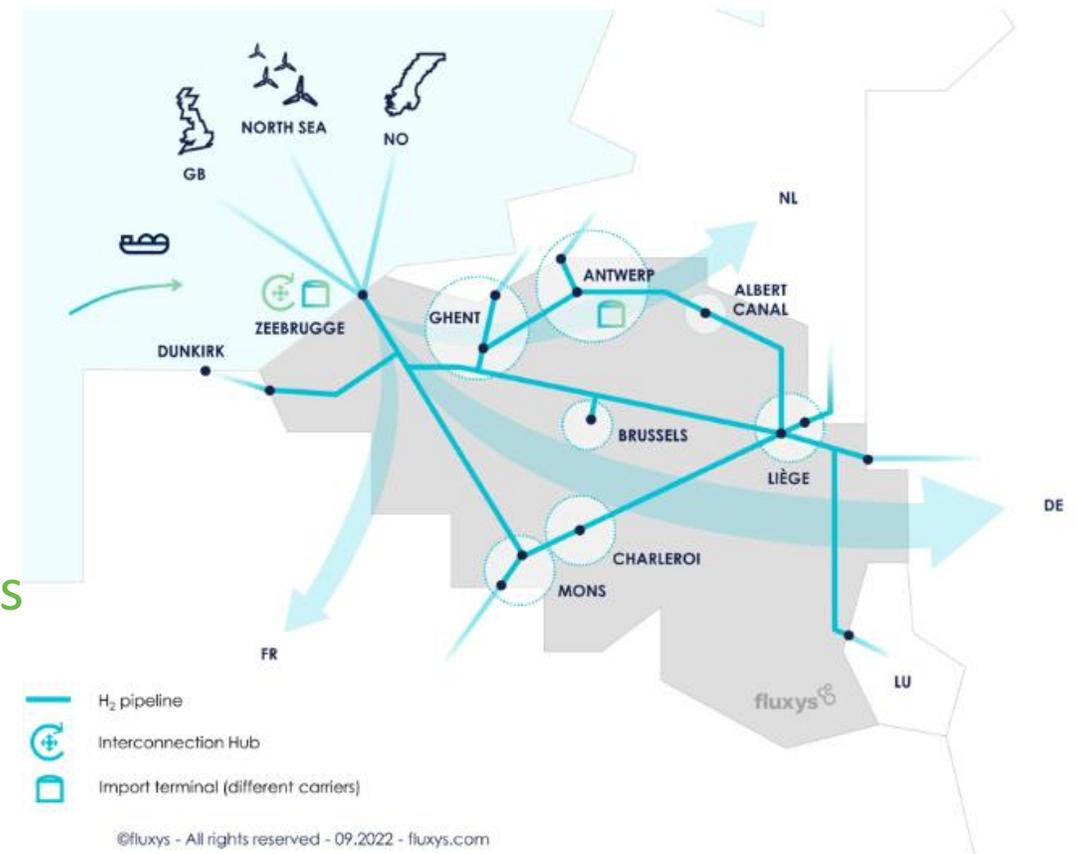
- 15-20k€/year for membership fee ~4 years
- Scenario definition of simulations
  - Technology driven
  - Impact of (European or national) policy
  - Societal cost optimization
  - ...
- Early access to simulation results
- Insight in impact EU legislative packages on cost-optimal investments
- Yearly up-to-date results



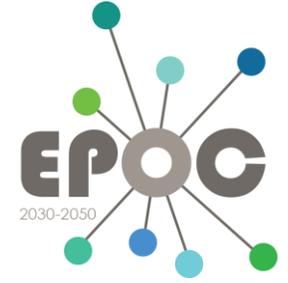
# Next steps: the Trilate project



- Energy Transition Funds
- Process modelling (Uliege)
- Industrial symbiosis (UGent)
- Elia – Fluxys: energy infrastructure needs
- Regionalization of hydrogen demand
- Link with EnergyVille cross-sectoral modelling
- Collaboration with Dutch and German partners

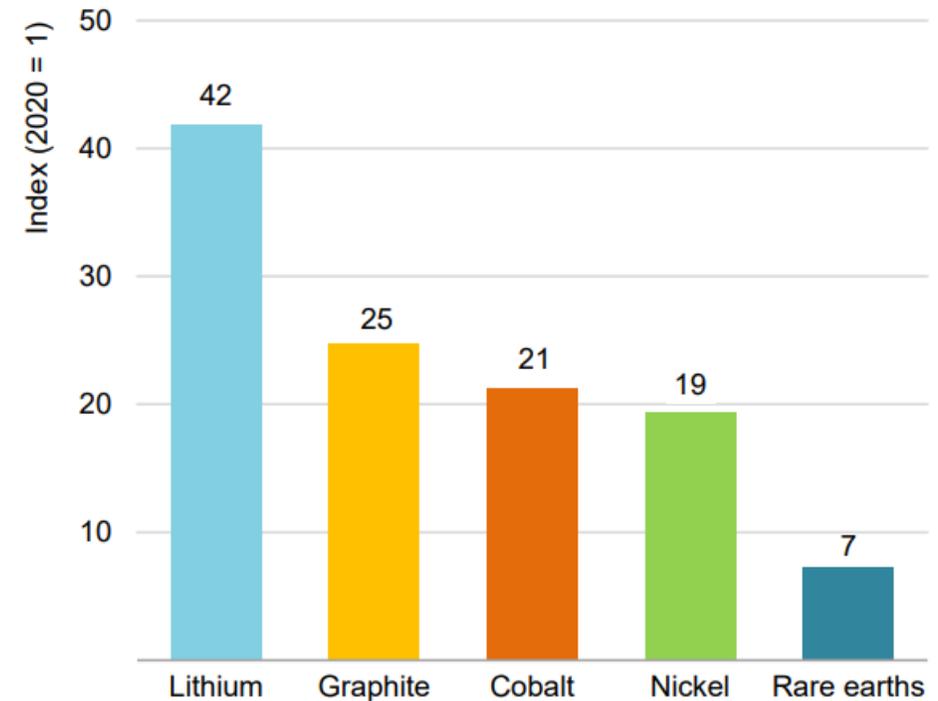


# Next steps: the Cirec project



- Ongoing energy Transition Funds
- VITO teams assess critical material supply
- Circularity of material streams for the energy transition

Growth of selected minerals in the SDS, 2040 relative to 2020



IEA. All rights reserved.



# Next steps

- Energy infrastructure: we need a fundamental re-thinking of the role of energy infrastructure
  - Follow up project Trilate for long term modelling with Elia and Fluxys
  - Follow up project Cirec on the role of materials and circularity
  - European scenarios with EERA community
- Cross-border scenarios: we need to tackle the industrial energy transition in a cross-border way and align scenarios with Dutch and German energy clusters. Investment uncertainty for industries needs to be reduced.
- We need to update scenarios constantly with new evolutions.
- We need a broad discussion on societal boundary conditions to energy system scenarios. This includes a discussion on human acceptance towards the deployment of infrastructure, and the necessity to retain certain industrial activity in the region. This Paths 2050 study should be the start of such a discussion, and not the end.





Thanks!

[Pieter.vingerhoets@energyville.be](mailto:Pieter.vingerhoets@energyville.be)

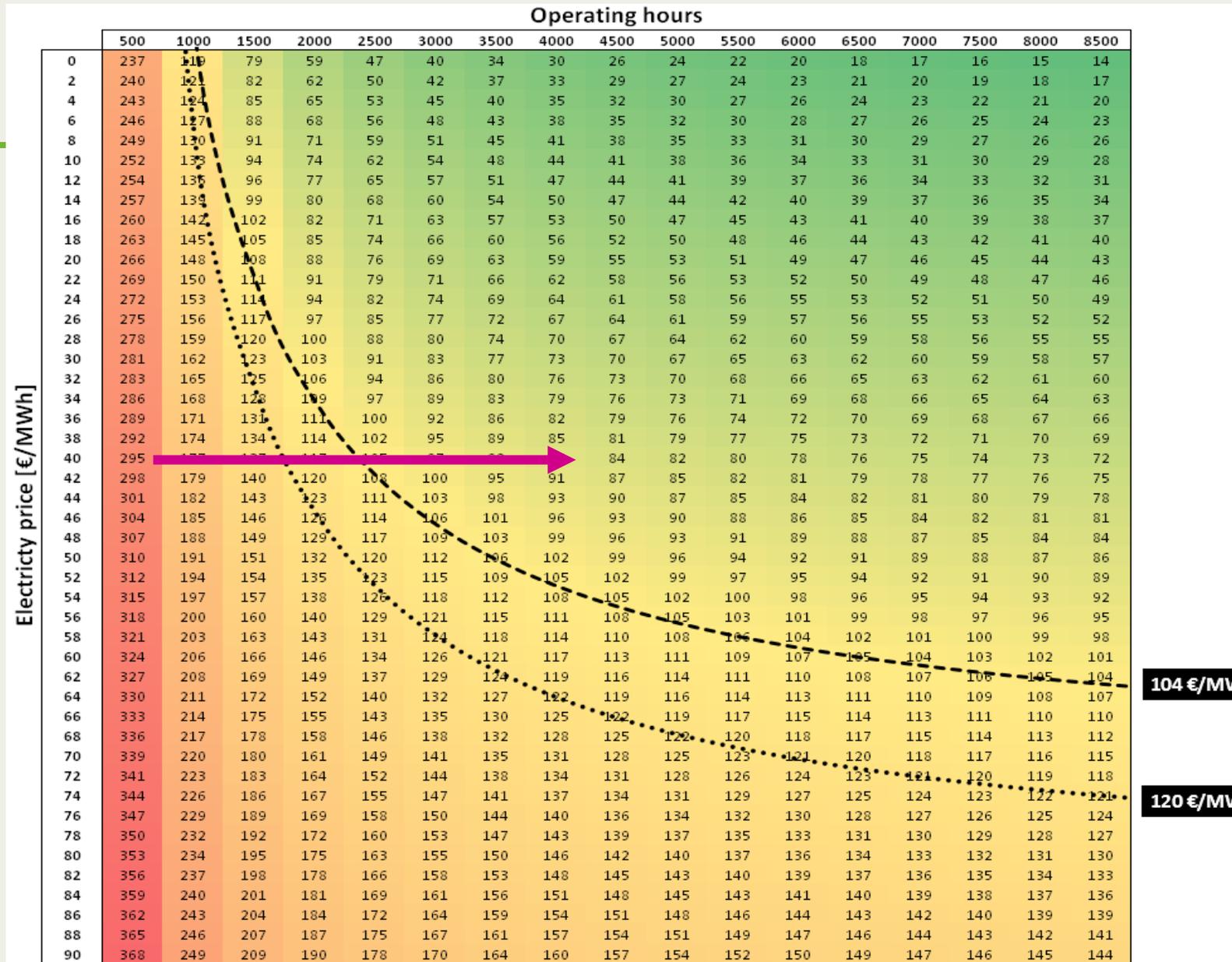
[Wouter.nijs@energyville.be](mailto:Wouter.nijs@energyville.be)

[Pieter.Lodewijks@energyville.be](mailto:Pieter.Lodewijks@energyville.be)



# Hydrogen

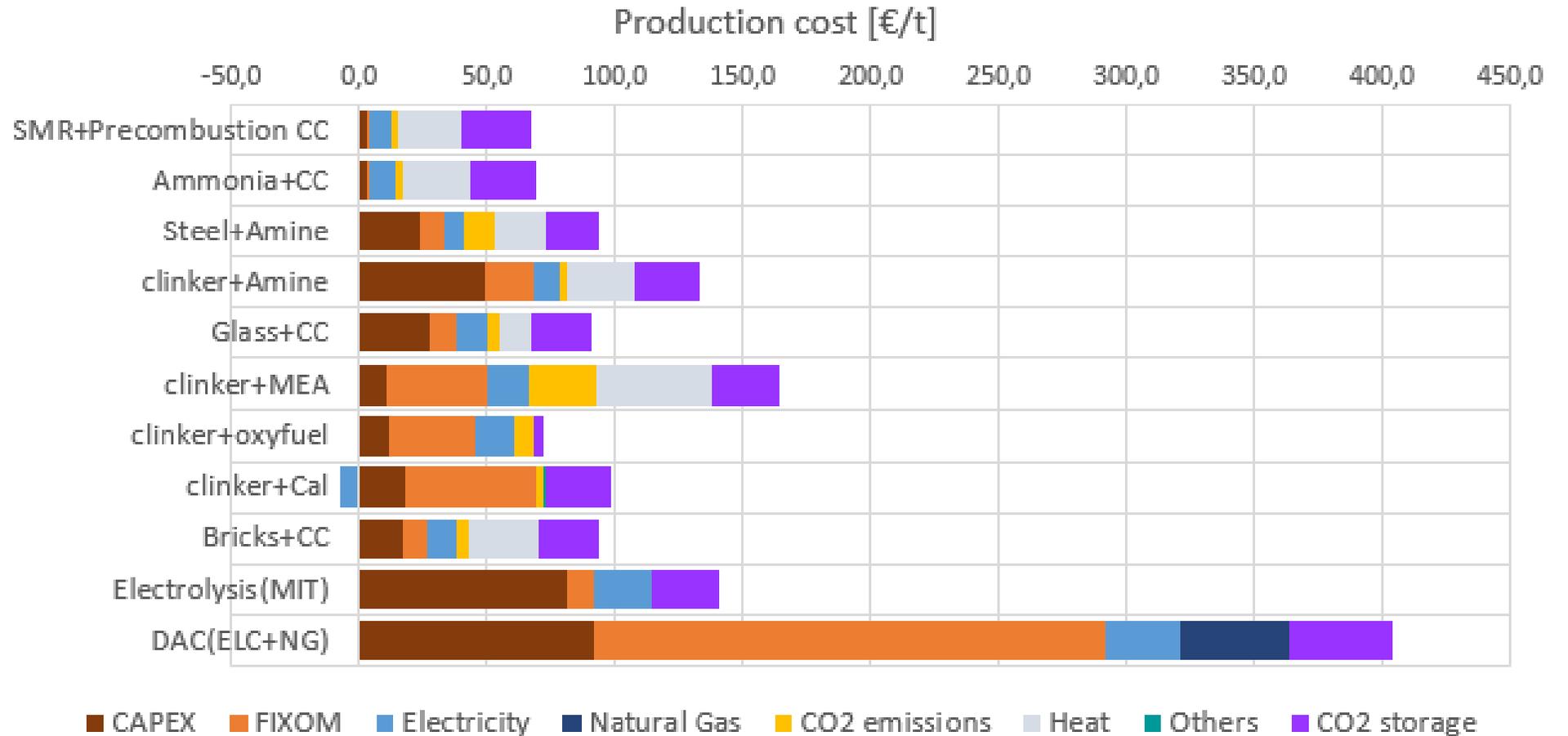
- Amendment 13 and definition of green hydrogen via PPA tips the economic balance towards local hydrogen generation, import via shipping will not be competitive.
- This may strongly interfere with the ambitions of Belgium as a transit hub for molecules and the efficiency of the energy transition as a whole.



- LCOH of hydrogen per MWh using an electrolyser at load hour X and electricity price Y. Source: Parameters from IEA Future of hydrogen. CAPEX: €700/kWe, OPEX: 1.5% excl. electricity. CAPEX, lifetime: 20 years, return rate: 8%, efficiency: 69% (IEA, 2019). X-axis shows the number of hours the electrolyser is operating at a given electricity price indicated on the Y-axis. Simulation done with an import price in 2030 of delivered hydrogen of 120 €/MWh via ammonia (Agora Energiewende, 2021) and 104 €/MWh via ship from Spain (The hydrogen Import coalition, 2020).

# Carbon capture technologies

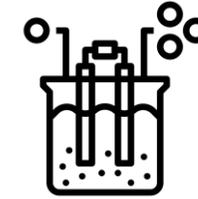
- Different literature based costs based on e.g. purity of CO2 stream



# Flexibility needs in the energy system

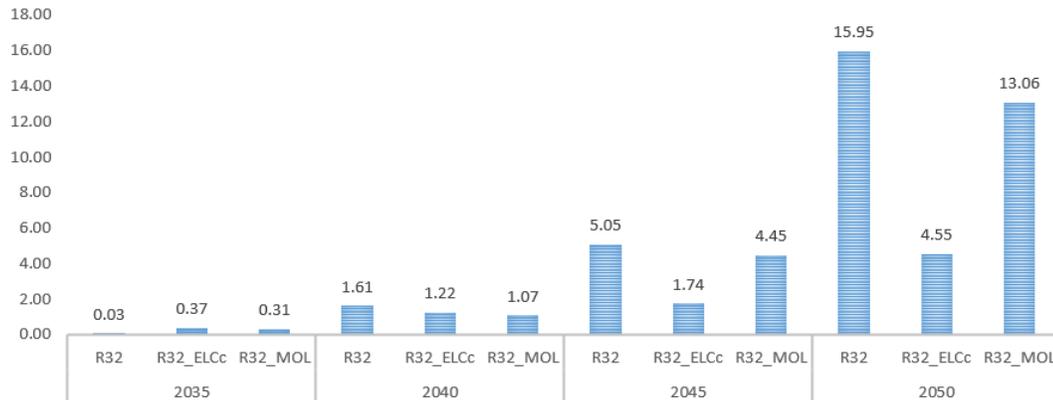


- Growing from 2040 onwards, by 2050
  - Central: 18,8 GW
  - Electrification: 5,6 GW
  - Clean Molecules: 13,5 GW

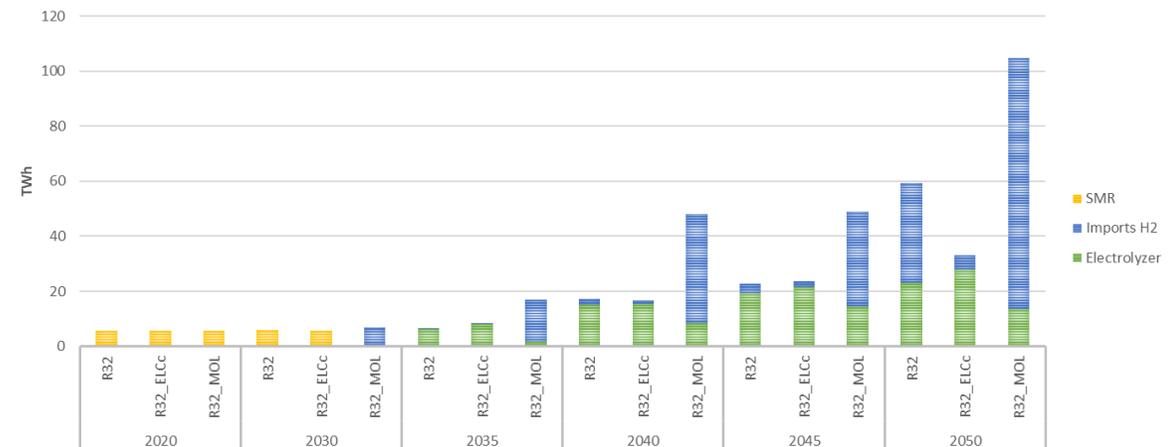


- Hydrogen production in Be remains limited
  - Central: 23 TWh Belgian production and 36 TWh import
  - Electrification: Belgian production to 22 TWh and limits the import to 5 TWh
  - Clean molecules: much higher hydrogen demand in the power sector and industry (x2) and lower Belgian production (8 TWh)

BATTERY CHARGING (TWH)



HYDROGEN SUPPLY [TWH]

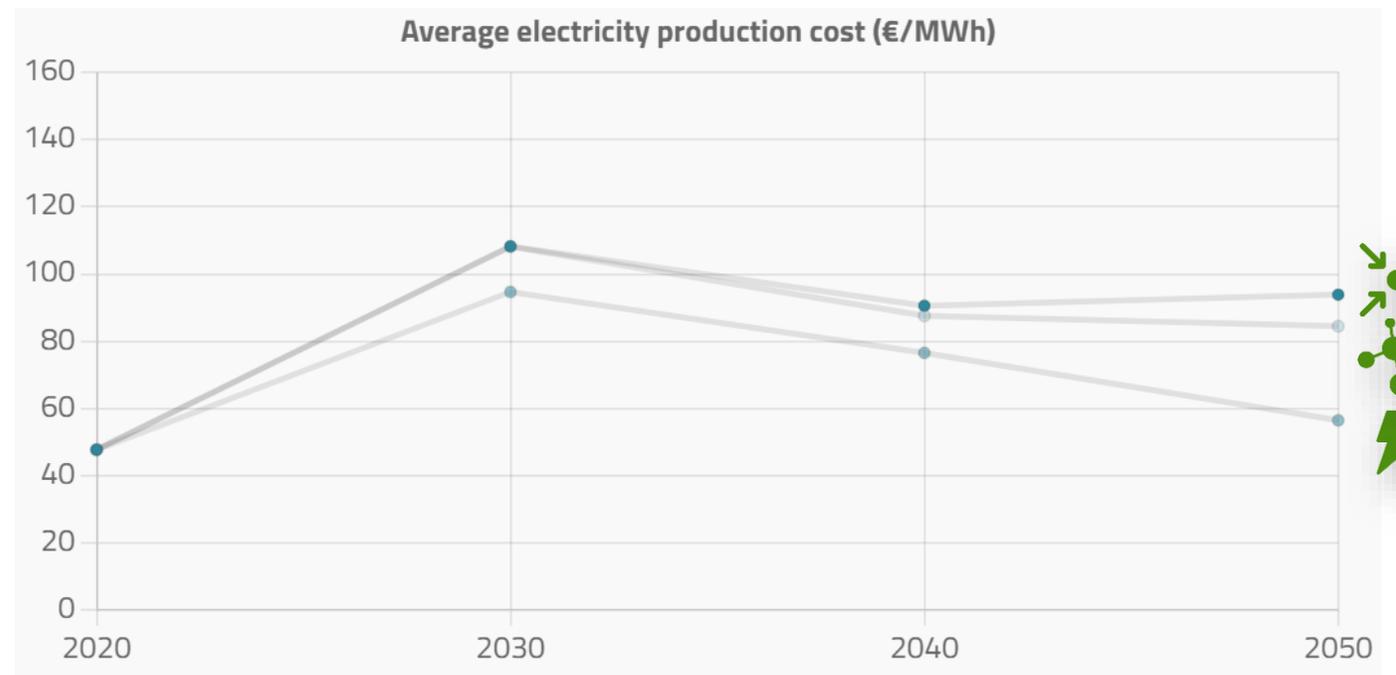


TIMES Be optimizes for the minimal amount of battery capacity needs at national level.  
 The model does not take local grid issues or short term balancing/frequency control needs into account

# Average electricity production cost

Access to more offshore wind and SMR leads to lower production costs

- Central scenario leads to average production costs of 94 €/MWh
- Electrification scenario leads to lowest production cost of 56 €/MWh, mainly realized by 16 GW of offshore wind availability
- Clean molecules scenario leads to slightly lower costs compared to Central scenario of 84 €/MWh



# Scenario overview table

	Unit	2030			2050		
							
<b>Capacity</b>	<b>GW</b>	<b>46.07</b>	<b>44.17</b>	<b>45.00</b>	<b>135.17</b>	<b>83.54</b>	<b>128.77</b>
Renewables	GW	35.53	35.37	34.95	126.30	76.69	115.67
Fossil	GW	7.86	6.10	7.39	0.15	0.17	0.19
Other	GW	2.68	2.70	2.66	8.72	6.68	12.91
Nuclear	GW	2.00	2.00	2.00	0.00	5.97	0.00
Other plants	GW	0.68	0.70	0.66	0.70	0.71	0.68
e-Fuel/H2 turbines	GW	0.00	0.00	0.00	8.02	0.00	12.23
Imports	GW	8.88	8.88	8.88	13.03	13.03	13.03
<b>Storage (pumped hydro + batteries)</b>	<b>GW</b>	<b>1.15</b>	<b>1.15</b>	<b>1.15</b>	<b>19.91</b>	<b>6.76</b>	<b>14.69</b>
<b>Emissions</b>	<b>MtCO2eq</b>	<b>12.67</b>	<b>9.61</b>	<b>12.07</b>	<b>0.39</b>	<b>0.39</b>	<b>0.39</b>
<b>Energy balance</b>	<b>TWh</b>						
Net imports	TWh	7.47	5.66	7.69	31.68	9.83	26.80
Demand	TWh	95.99	98.67	94.49	203.75	220.49	201.69
Losses and own consumption	TWh	5.84	6.83	5.69	9.33	16.29	9.76
Generation	TWh	94.36	99.84	92.48	181.40	226.95	184.64
<b>Average ELC price</b>	<b>€/MWh</b>	<b>108.24</b>	<b>94.67</b>	<b>108.15</b>	<b>93.86</b>	<b>56.49</b>	<b>84.49</b>

## 1. Studie Energyville/Febeliec

## 2. UG 2.0 – voorstel hervorming

## 3. Feedback werkgroepen

### 1. WG Adequacy

### 2. WG Balancing (incl. TF Princess Elisabeth zone)

### 3. WG Belgian Grid

### 4. WG Consumer Centric Market Design

### 5. WG System Operations & European Market

## 4. Diversen

### 1. Plenaire meeting 13/09/2023 – 14-17u





**Powering**  
the decade  
of electrification

**James Matthys-Donnadieu**  
**Chief Officer**  
**Customers, Markets and Systems**

# The Users' Group

## Elia Users' Group – current structure

### Plenary forum\*

Report back about the working groups' activities

Elia shares information about more strategic issues that are not discussed at working group meetings

#### WG Belgian Grid

Handles issues relating to the Elia grid and the associated mechanisms, services and products

#### WG Balancing

Deals with operational, technical and market-related issues and works to prepare the balancing market for future challenges

#### WG Adequacy

Discuss the development and evolution of the different mechanisms related to the adequacy topic

#### WG SO & EU MD

Deals with the operation of the high-voltage grid, capacity calculation and European electricity market integration

#### WG CCMD

Addresses questions related to the design and the implementation of an upgraded market design

TF Princess Elisabeth  
Zone

TF ICAROS

\* Legal framework – Gedragscode Boek 10  
permanente dialoog met de marktoperatoren in het kader van de in deze gedragscode behandelde onderwerpen (Artikel 237)

## Users' Group:

### Elia Users' Group – results survey\*

#### Keep

- Content: feedback from working groups (improvements on format planned)
- Membership: limitation to associations
- Governance: recommendations to policy makers

#### Improve

- Content:
  - 360° view: Integrate view other than Elia's
  - Move from business as usual: extend to mid/long term topics concerning the horizontal system
- Membership:
  - Extend to new markets
  - Enhance attendance of current members
- Governance:
  - Lack of neutral voice (currently very Elia centric)
  - Foster open discussions to capture views of all stakeholders (too unilateral at the moment)



Reorganisation  
needed

# Towards a Users' Group from and for the Users'

*proposed reforms*



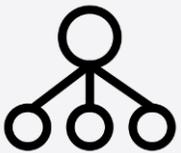
## Content

- Challenges to realize the +50% by 2032/34 roadmap
- Possible 2035-2050 horizontal electricity system evolutions
- Discussions & where appropriate recommendations



## Membership

- senior representatives, having clear mandate to represent and talk on behalf of association
- Remobilize current members
- Extend to few new associations (permanent guest)



## Governance

- Independent co-president (proposed by Elia, approved by UG):
  - Joint agenda setting
  - Leading discussions
- Input by Elia but also by members & third parties

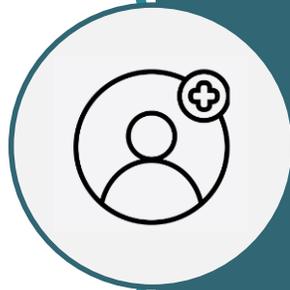
# Towards a Users' Group from and for the Users'

*proposed reforms*



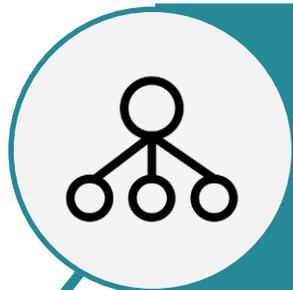
## Content

- Challenges to realize the +50% by 2032/34 roadmap
- Possible 2035-2050 horizontal electricity system evolutions
- Discussions & where appropriate recommendations



## Membership

- senior representatives, having clear mandate to represent and talk on behalf of association
- Remobilize current members
- Extend to few new associations (permanent guest)



## Governance

- Independent co-president (proposed by Elia, approved by UG):
  - Joint agenda setting
  - Leading discussions
- Input by Elia but also by members & third parties

# Ambitious european road to decarbonisation will lead to 50% electrification increase in Belgium by 2032



Energy and climate targets

**Decarbonisation**  
55% less GHG emissions by 2030 compared to 1990 levels

**Energy efficiency**  
From 9% to 13% reduction of energy consumption by 2030

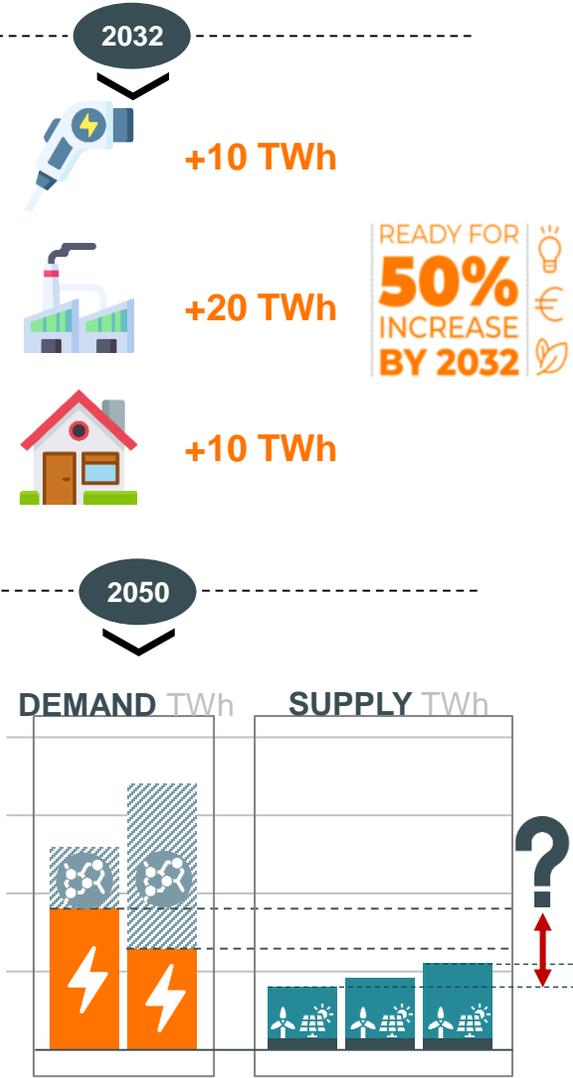
**Renewable energy**  
From 40% to 45% share of energy from renewable sources by 2030

**Offshore Wind**  
111GW by 2030 and towards 317GW in 2050 (12GW in 2020)

**Ambitious electrification**

POWERING INDUSTRY TOWARDS NET ZERO

Which will require still unidentified green electron sources



For the next 10 years priorities are clear...

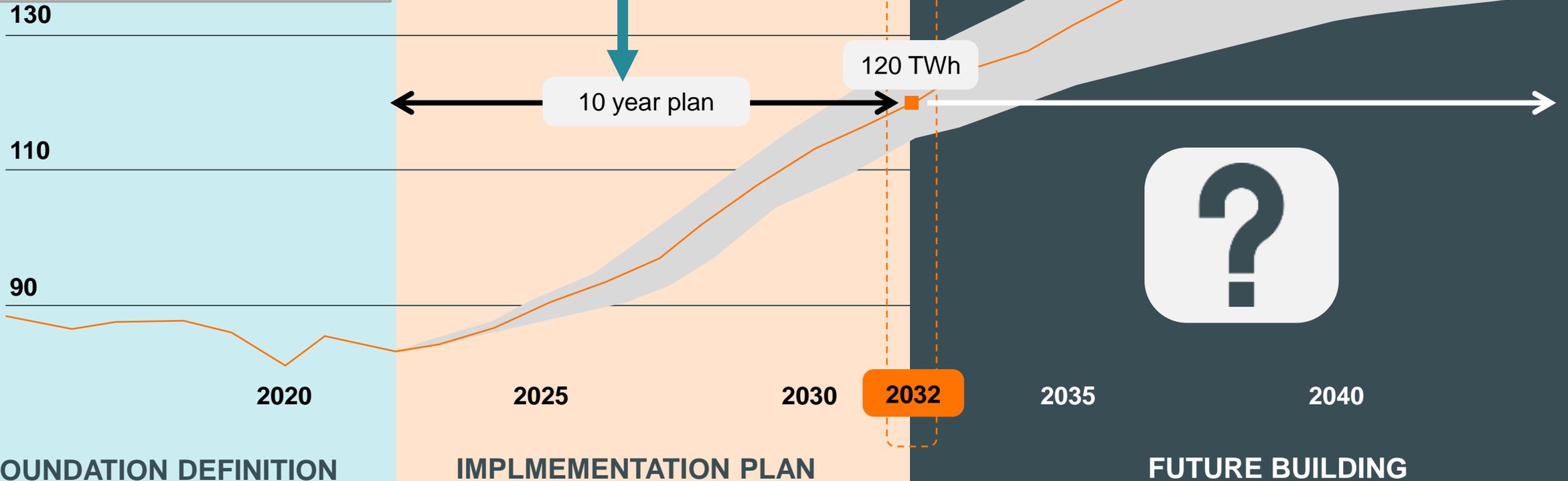
... and challenging implementation is ahead ...

... beyond this horizon a lot still needs to be shaped

**1** Deliver infrastructure on time for electrification

**2** Strengthen Security of supply - Adequacy

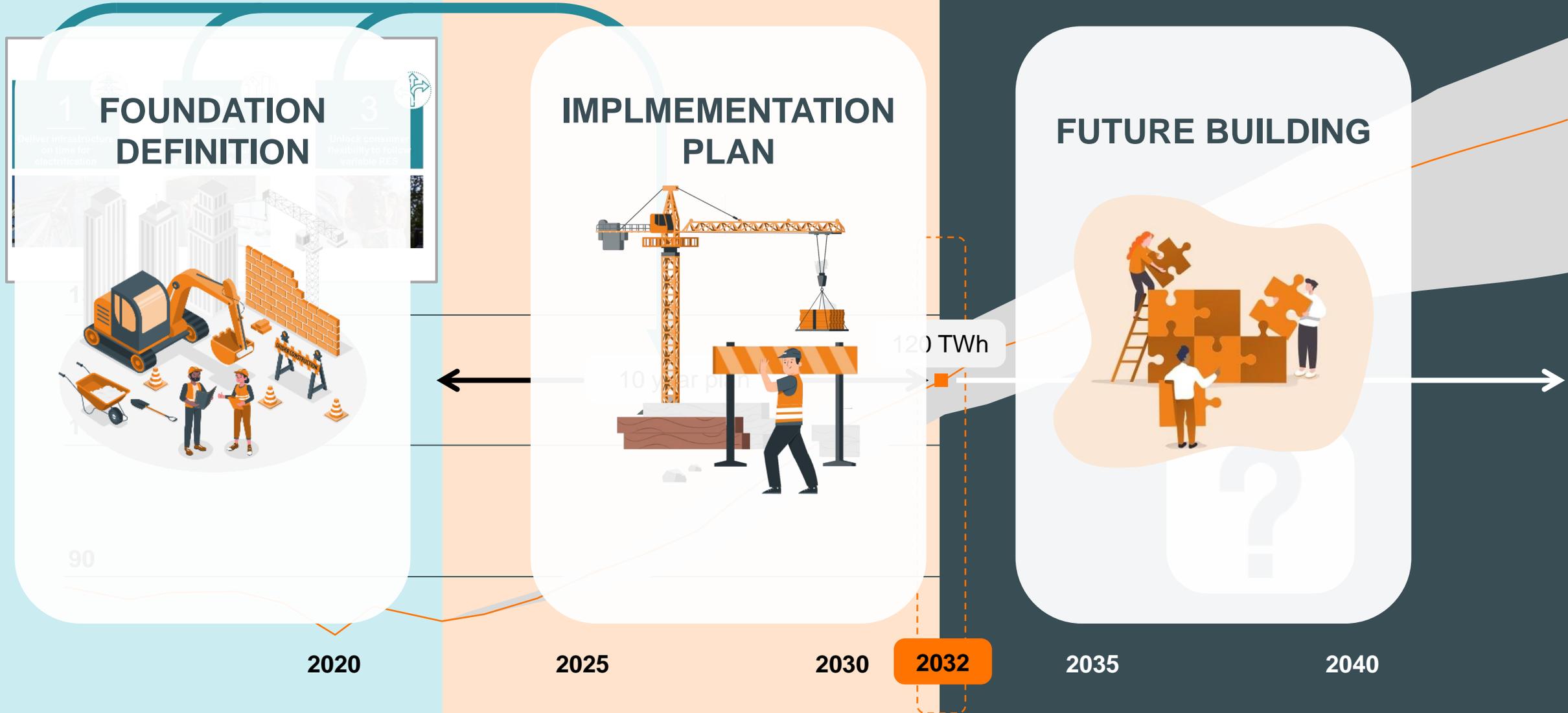
**3** Unlock consumer flexibility to follow variable RES



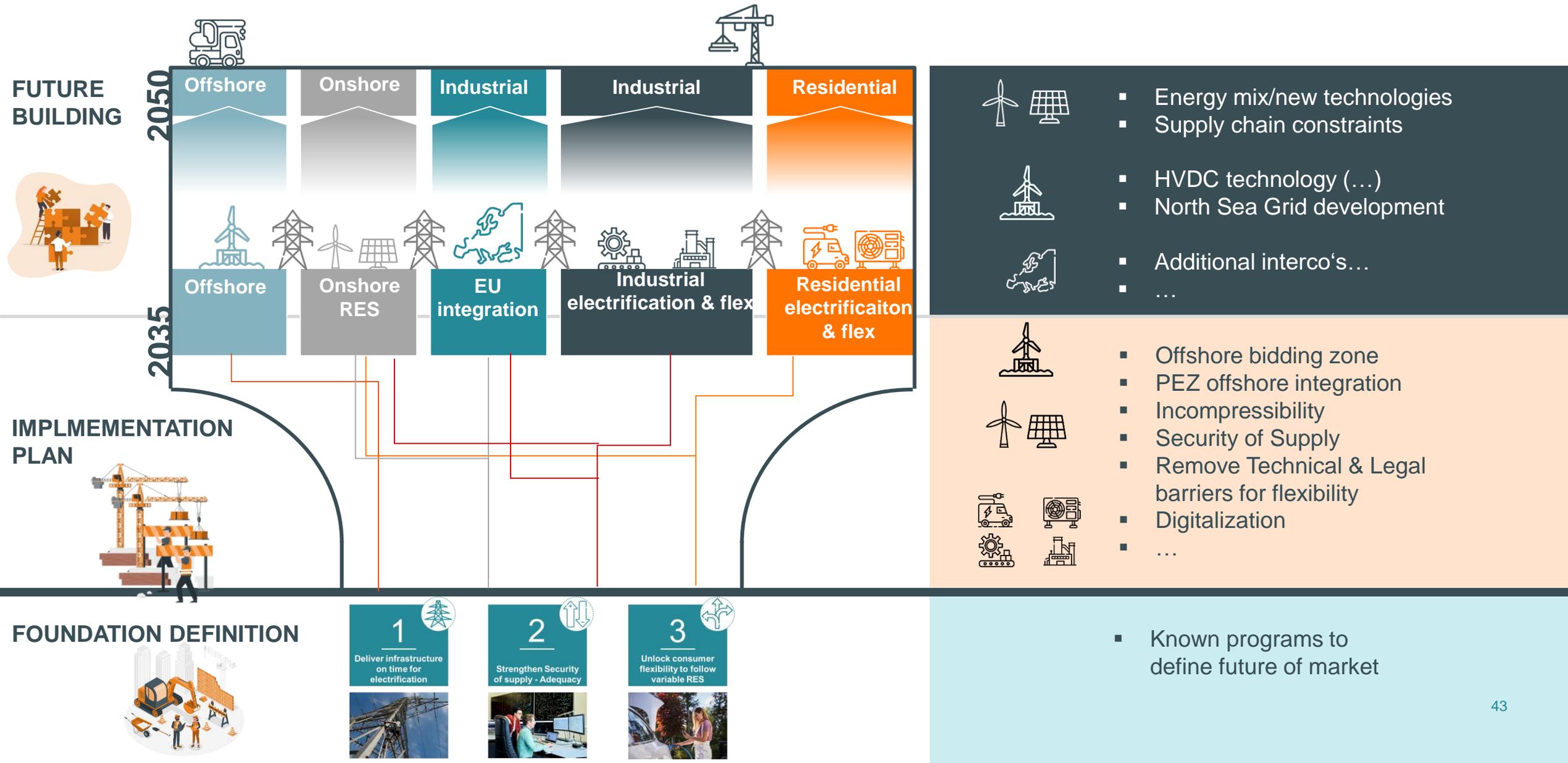
For the next 10 years priorities are clear...

... and challenging implementation is ahead ...

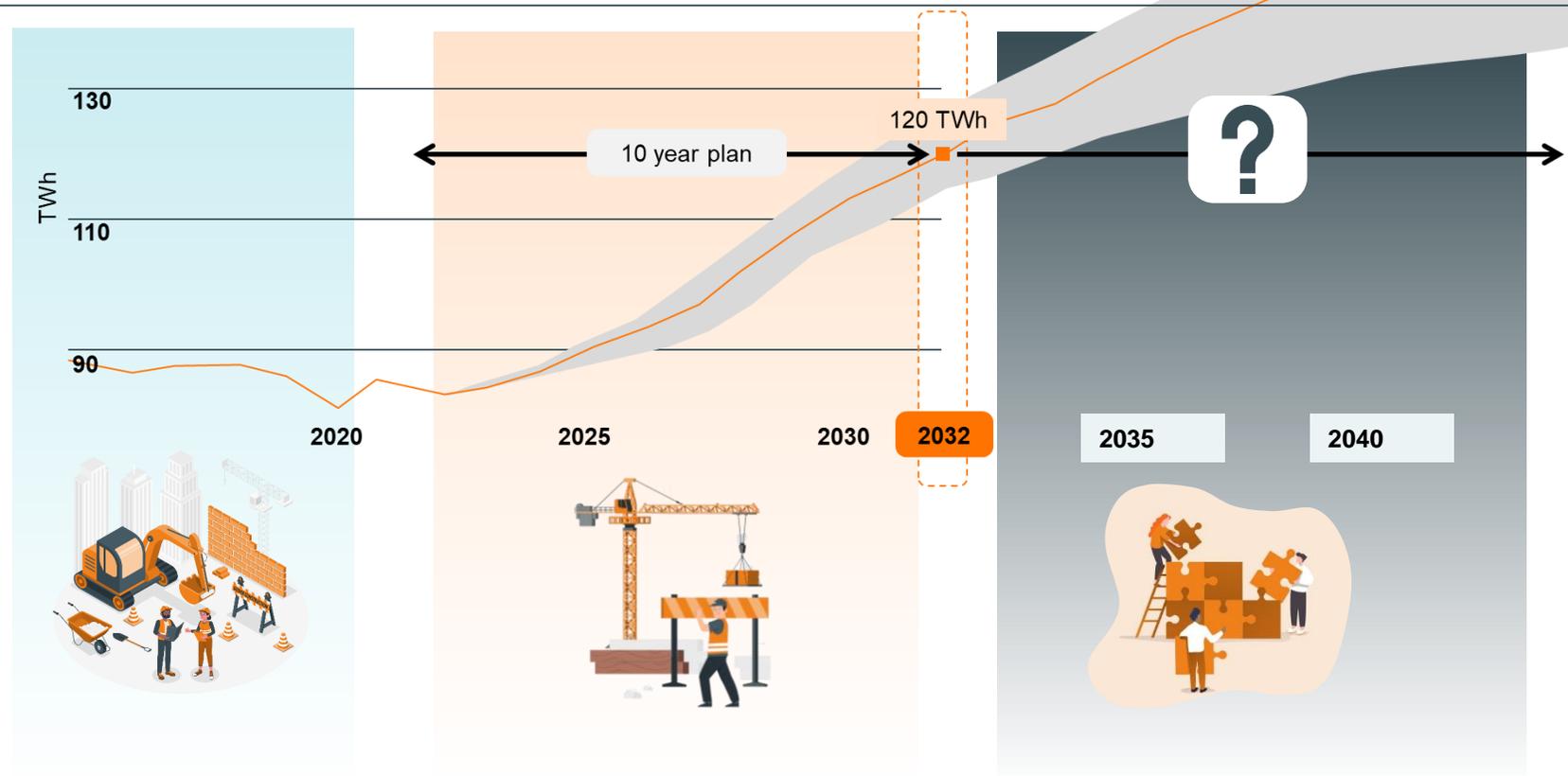
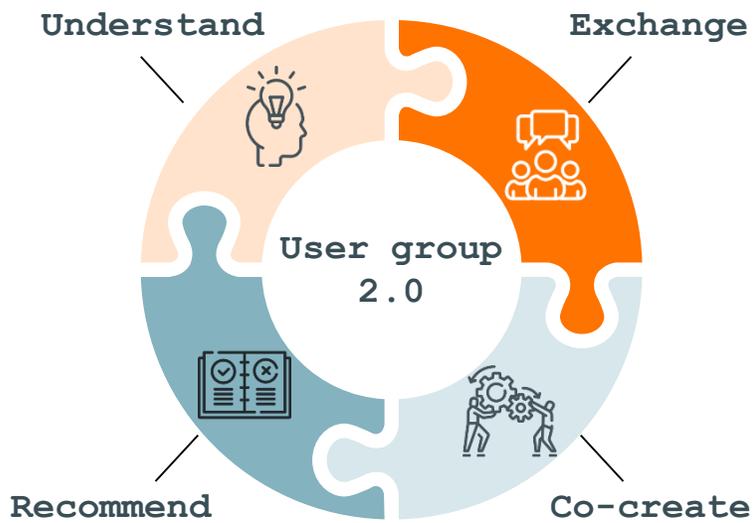
... beyond this horizon a lot still needs to be shaped



# Even if current programs are the foundation of our transition, the paths to achieve the ambition will require intens interaction



# Goal of the Users' Group 2,0: create (mutual) understand, exchange, co-create, recommend..... concerning the evolutions of the horizontal electricity system



# Towards a Users' Group from and for the Users'

*proposed reforms*



## Content

- Challenges to realize the +50% by 2032/34 roadmap
- Possible 2035-2050 horizontal electricity system evolutions
- Discussions & where appropriate recommendations



## Membership

- senior representatives, having clear mandate to represent and talk on behalf of association
- Remobilize current members
- Extend to few new associations (permanent guest)



## Governance

- Independent co-president (proposed by Elia, approved by UG):
  - Joint agenda setting
  - Leading discussions
- Input by Elia but also by members & third parties

## Elia User's Group: current members



Unions



INFRABEL

Large users



Production

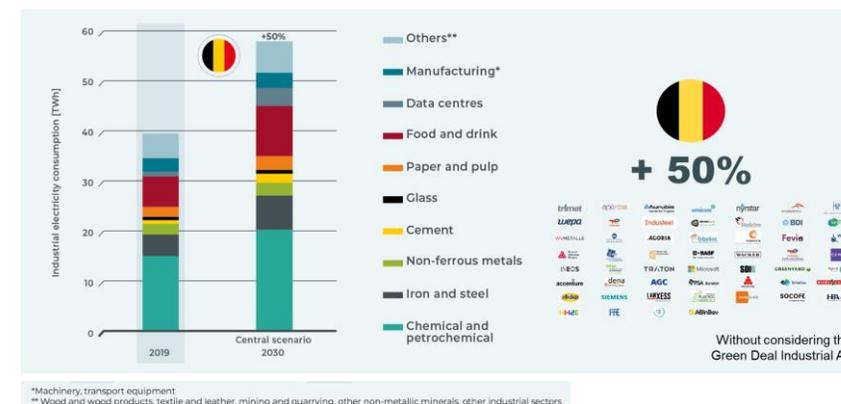
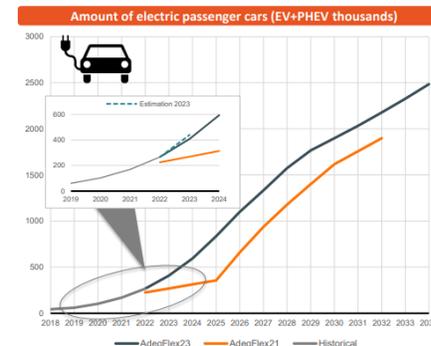


Aggregator  
Grid Operator

# Gathering additional relevant insights

## Proposed “permanent guest”\*

- EV Belgium  
representing complete value chain concerning zero emission mobility  
=> Important source of load increase & flex potential
  - Fevia  
Federation of the food industry  
=> Important source of load increase & potential flex provider
  - Fluxys
- => Other associations may be invited as guest on more ad hoc basis depending on the topic**



# Towards a Users' Group from and for the Users'

*proposed reforms*



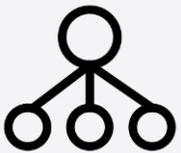
## Content

- Challenges to realize the +50% by 2032/34 roadmap
- Possible 2035-2050 horizontal electricity system evolutions
- Discussions & where appropriate recommendations



## Membership

- senior representatives, having clear mandate to represent and talk on behalf of association
- Remobilize current members
- Extend to few new associations (permanent guest)



## Governance

- Independent co-president (proposed by Elia, approved by UG):
  - Joint agenda setting
  - Leading discussions
- Input by Elia but also by members & third parties

## Introducing an independent Co-chair

- Independent, neutral co-chair
- Role:
  - Moderating discussions
  - Joint agenda determination with Elia Co-chair
- Appointment:
  - Elia proposes, UG members approve
- Term:
  - 2 year mandate
  - Re-appointment possible
- Remuneration:
  - No (only travel expenses, if any)

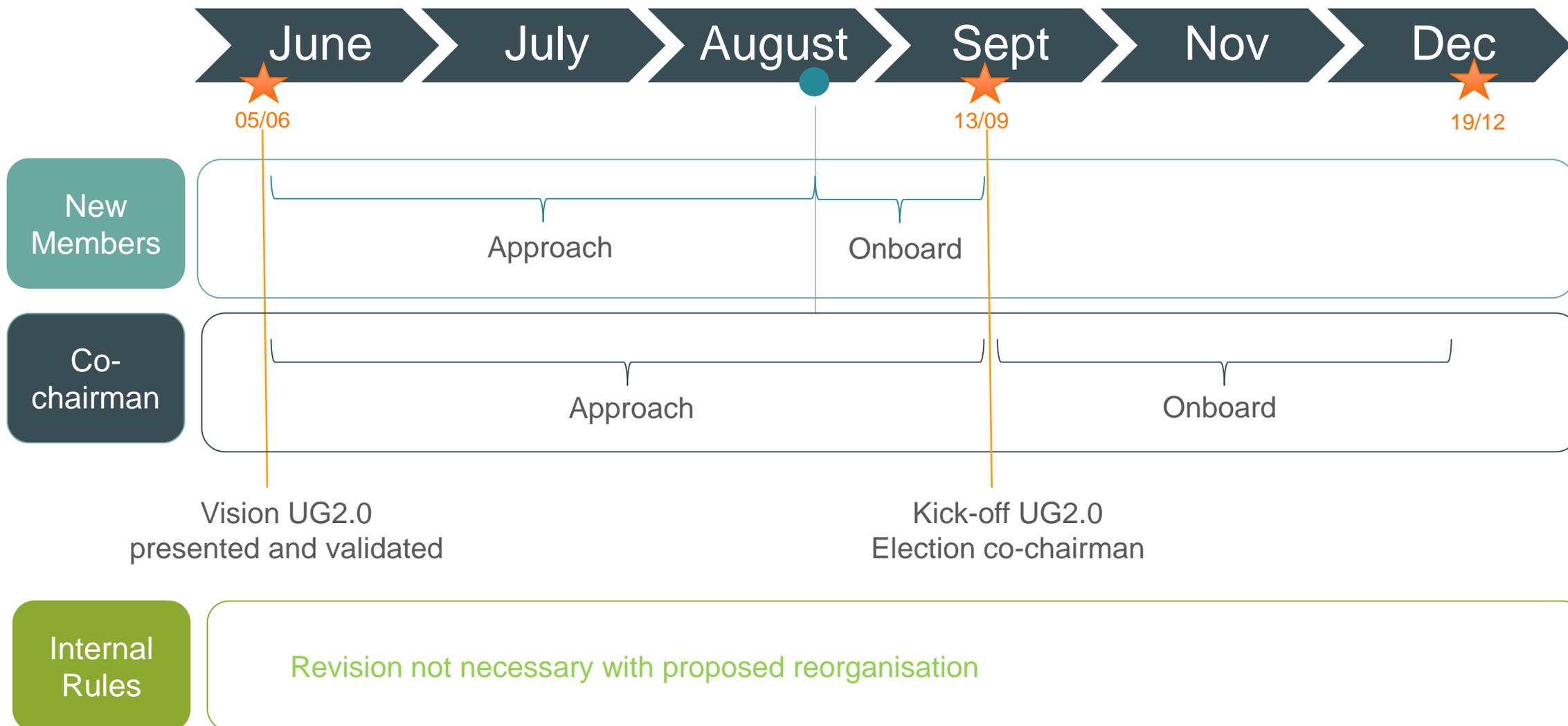


Physical meetings, no hybrid (to foster interaction)

Do you agree with these principles?



## Elia User's Group – A Users' Group from and for the Users – What is next?



Questions?



- 1. Studie Energyville/Febeliec**

- 2. UG 2.0 – voorstel hervorming**

- 3. Feedback werkgroepen**

- 1. WG Adequacy**

- 2. WG Balancing (incl. TF Princess Elisabeth zone)**

- 3. WG Belgian Grid**

- 4. WG Consumer Centric Market Design**

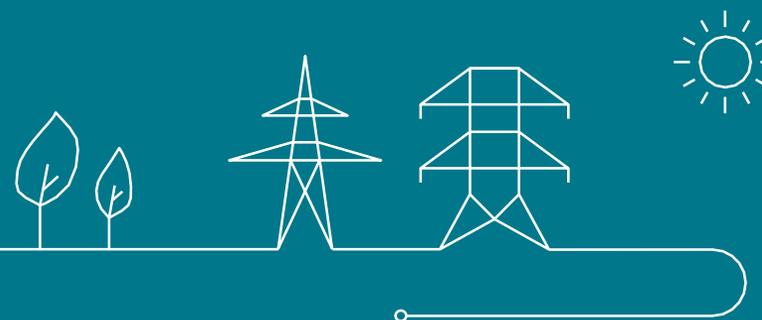
- 5. WG System Operations & European Market**

- 4. Diversen**

- 1. Plenaire meeting 13/09/2023 – 14-17u**



# WG Adequacy



# WG Adequacy – Overview of last Meetings

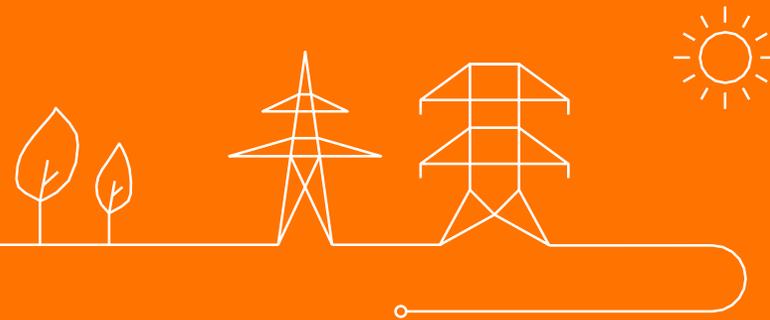


\*LCT: Low-Carbon Tender

\*\*CRM: Capacity Remuneration Mechanism



# Main Topics from the last meetings



## Main Topics

- Public consultation on the Capacity Remuneration Mechanism (CRM) and Low Carbon Tender (LCT) Capacity Contract (06/02/2023 to 06/03/2023)
  - Elia presented and answered the feedback received from external parties
- Differentiation between LCT and CRM
  - Elia presented the differences between the latter with concrete examples with regards to treatment of capacities in the different mechanisms
- Public consultation on the Functioning Rules (13/01/2023 to 10/02/2023)
  - Elia presented and answered the feedback received from external parties
  - Furthermore, Elia had proposed changes based on the feedback received

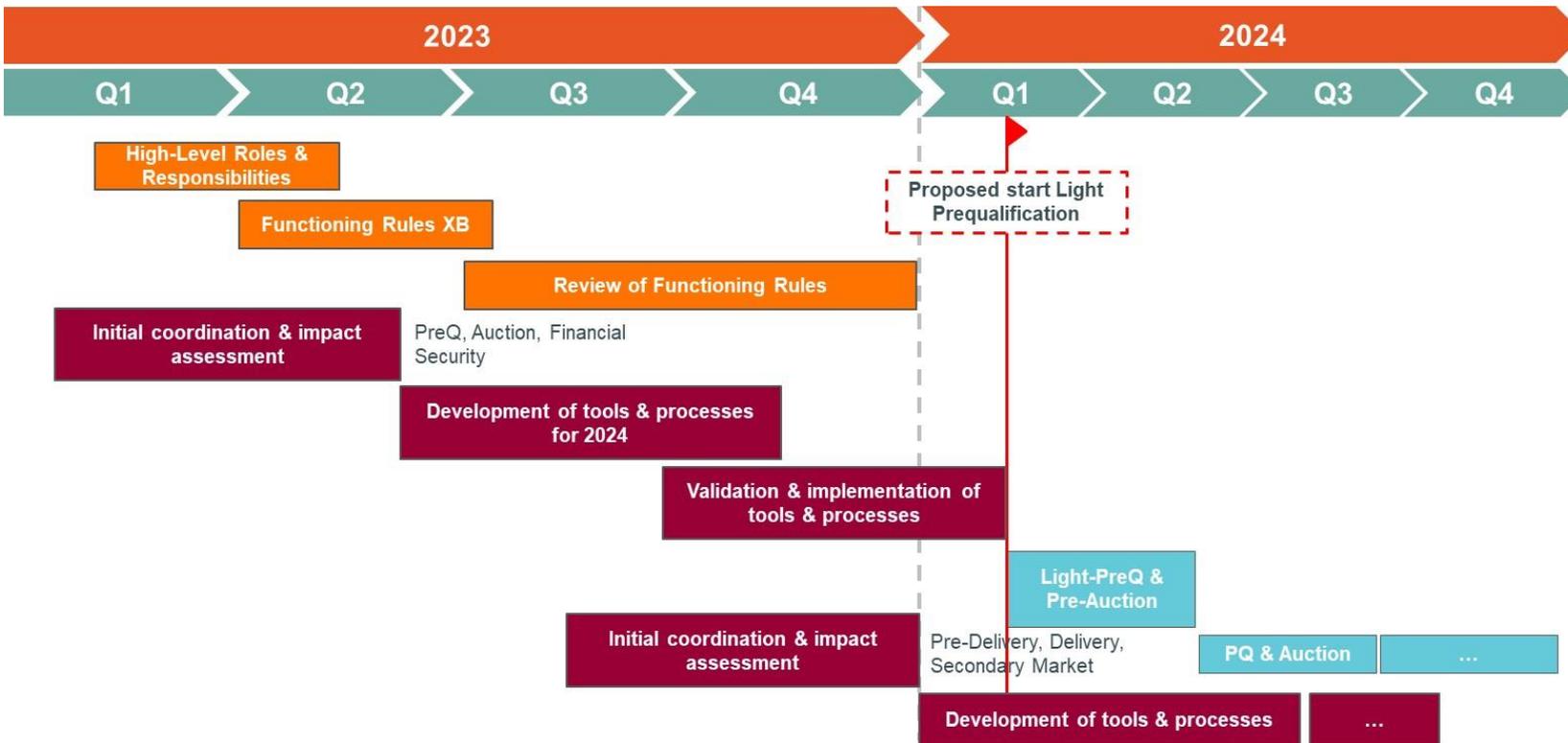


## Main Topics

- CRM proposal on the scenarios, input data and sensitivities
  - Elia presented how the scenarios and sensitivities encompassing the CRM have been constructed
- Elia conducted an adequacy assessment for delivery year 2024-2025 to assess the need to organise a Low Carbon Tender (LCT)
  - The results showed that the tender was not needed
  - A decision was taken to stop the implementation of the LCT
- Publication of the CRM Functioning Rules v3
  - Based on the law, Elia published the CRM Functioning Rules on its website (in NL & in FR)
  - The Functioning Rules can be found on Elia's Working Group Adequacy page



# Main Topics

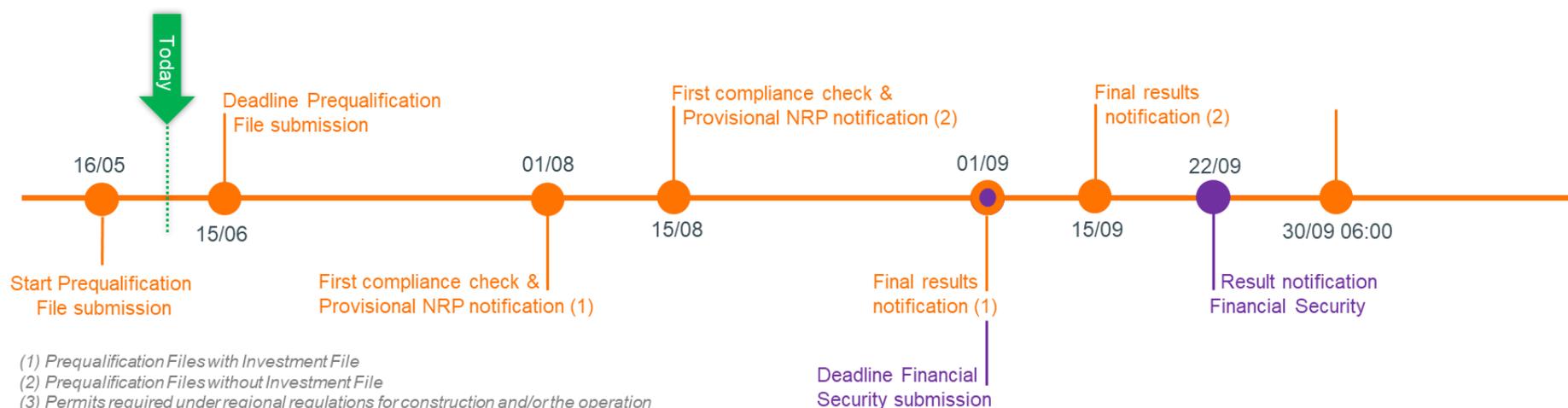


- Based on a EU decree, every CRM should allow for Cross-Border participation
  - Elia is working on the Cross-Border CRM with neighbouring countries – France, Germany & the Netherlands
  - First Cross-Border participation in the Belgian CRM in Delivery Period 2025-26
  - The proposed timeline is as displayed



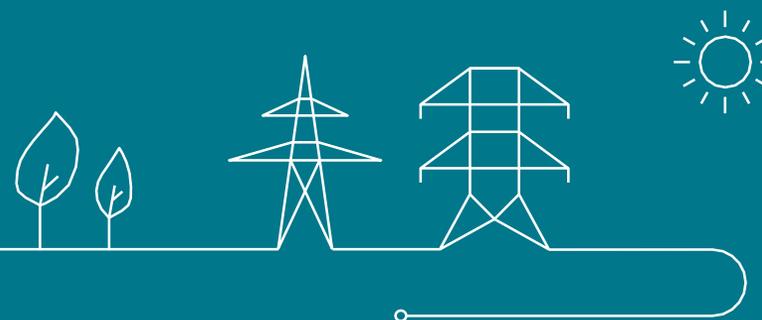
## Main Topics

- External studies are ongoing
  - The cost of capacity study will be kicked off soon
  - A study about the assessment of net balancing revenues is in preparation
- Launch of 2023 CRM Auction Operations
  - The Ademar platform has been opened for 2023 Auction operations (Prequalification & Financial Security modules)
  - More information, documents & template are on the CRM page Elia's website



# WG Balancing

(incl. TF Princess Elisabeth Zone)



## WG Balancing 22/03/2023

### — Public Consultation of Market Suspension Rules

- As required by the law, Elia must develop a proposal for rules concerning the suspension and restoration of market activities, in addition to a restoration tariff. A first proposal was submitted in 12/2018, which had been rejected by CREG
- Elia adapted its proposal, considering CREG's remarks and clarifying the scope of the rules. In WG BAL of 22/03/2023, Elia explained what market activities may be suspended by Elia, as well as a proposal for restoration tariff and 2 options for its invoice
- Follow-up: Elia organized a PC that ended on 08/05 so that the proposal may be submitted to CREG by the end of 06/2023. Entry into force 30 days after CREG approval (but not before 01/01/2024 and the new tariff period 2024-2027)

### — Public Consultation on T&C and Procurement Process for Restoration Services

- Elia reminded in WG BAL of 22/03/2023 the ongoing PC (ended on 10/04), which consisted in a minor revision of the T&Cs to create a separate regulated document for the bidding instructions and to align the references with the Code of Conduct. A workshop also occurred on 30/03
- Follow-up: The tendering procedure will start in mid-June.



## WG Balancing 16/05/2023 (1)

### – Overview of the 2022 Balancing Volumes & Costs

- Elia shared in WG BAL of 16/05/2023 a high-level overview of the 2022 balancing volumes & costs, consisting mainly in the evolution of the volumes and costs of the balancing products (FCR, aFRR, mFRR), the evolution of SI, and imbalance price
- General trend is an increase in costs mainly due to the general energy market prices increase in 2022, and a limited increase of activated balancing energy

### – EU & BE Balancing Program Update: implementation of MARI & iCAROS

- Overview of roadmap timings and reminder to send the implementation plans to Elia

### – T&C BRP / Imbalance Price

- On 19/7 CREG approved Elia's proposal on imbalance tariff for Picasso in the Balancing Rules, but requested to move the imbalance price components and alpha to the T&C BRP, and to remove the cap/floor and the deadband. In the meantime, the decisions of 03/10 and 19/07 of CREG were cancelled by Court.
- In WG BAL of 16/05, Elia shared its proposal for the imbalance price formula after connection to both EU balancing platforms.
- Follow-up: Elia will organize a PC for modifications of the T&C BRP to describe the evolutions of the imbalance price components for MARI and Picasso.



## WG Balancing 16/05/2023 (2)

### — Incompressibility

- Elia presented in WG BAL of 16/05 a few cases of incompressibility ( $SI > 0$ ) that occurred in March-April, highlighting the root causes (low demand, significant DA solar forecast error, similar situation in neighboring countries...)
- To mitigate such events, both short-term and longer-term measures were discussed in WG BAL.

### — Winter Plan 2023/2024 – Balancing Capacity Increase & Bidding Obligation

- Elia reminded in WG BAL of 16/05 the measures that were proposed last winter to deal with the risk of unavailability of its reserve sharing agreement during tight market conditions in Western Europe. Elia proposes to introduce a more robust, general framework as from 01/11/2023.

# Task Force Princess Elisabeth Zone (TF PEZ)



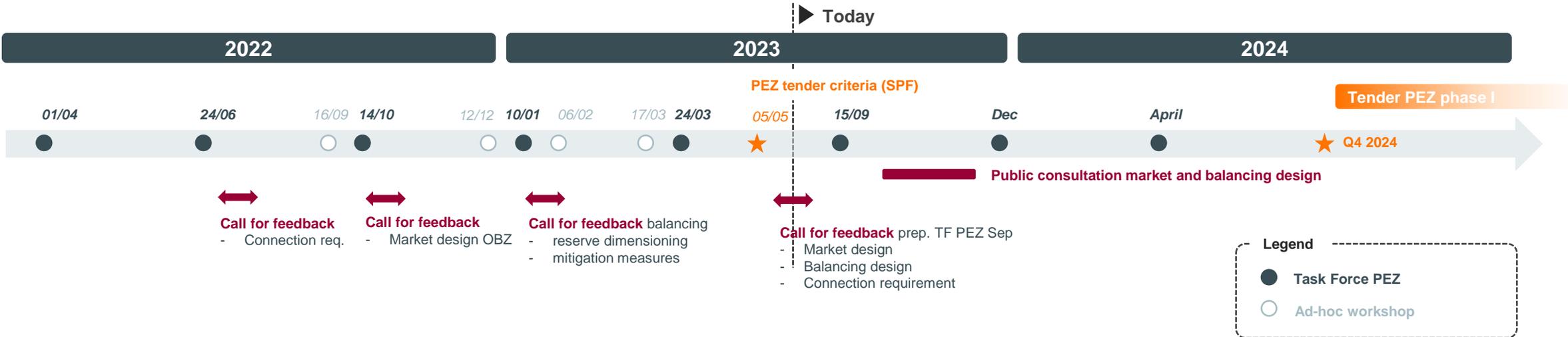
## Context and scope

- **Inform and consult market players** on all relevant aspects related to the **Princess Elisabeth Energy Island** particularly with regard to:
  - System and balancing integration;
  - Market integration;
  - Connection requirements (voltage management, protection philosophy, ...)
  
- **Ad-hoc workshop** are organized to discuss **content and technical aspects**

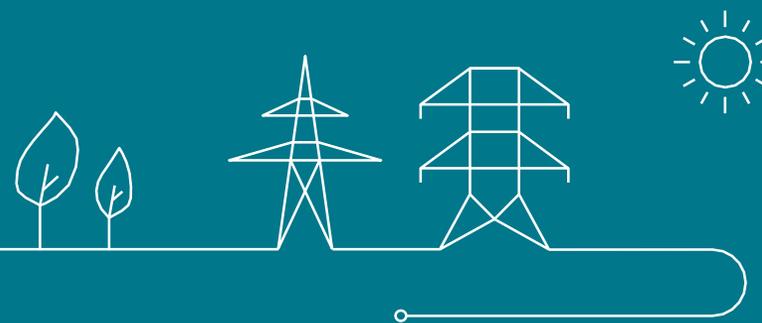
**Link webpage**  
<https://www.elia.be/en/users-group/task-force-princess-elisabeth-zone>



## Overview of interactions



# WG Belgian Grid



# WG Belgian Grid

Since last plenary meeting: **one meeting 17/05**

- **Tariff proposal 2024-2027:** results of public consultation
- **Access contract:** main modifications
- **Connection contract:** main modifications
- **Incentives:**
  - Hosting capacity maps
  - MVAR
  - Cost benefit analysis requirements for generators applicable on existing and new generating units

Next meeting: **05/09 – 14-17h**

Ad-hoc meetings:

- Webinar Netverliezen: 26/06 – 11-12:30u
- Workshop MVAR-incentive: 28/06 – 13:30u – 18u

# WG Belgian Grid - Tariff proposal 2024-2027

## Results of public consultation “Beslissende elementen inzake de voorziene ontwikkelingen in het tariefdossier 2024-2027”

- Periode publieke consultatie: 14 februari tot 20 maart '23
- Consultatie rapport + reacties stakeholder:

[Beslissende elementen inzake de voorziene ontwikkelingen in het tariefvoorstel 2024-2027 \(elia.be\)](https://www.elia.be/consultatie/beslissende-elementen-inzake-de-voorzien-ontwikkelingen-in-het-tariefvoorstel-2024-2027)

### 11 (niet-confidentiële) reacties:

- BOP
- BSTOR
- Essenscia
- ABVV, ACV, BV-OEVO (gezamenlijke reactie)
- FEBEG
- FEBELIEC
- Fluvius
- Infrabel
- Nystar
- VREG
- Vyria

# WG Belgian Grid - contracts

## Access contract

- Modifications following Regulator's advice
- Harmonize definitions
- Include Multiple BRP
- Alignment with the Code of Conduct

### ⇒ Informal consultation from 8 May to 2 June

- Feedback from regulators and market parties expected June 2<sup>nd</sup>

### ⇒ Next steps:

- Public Consultation to start around June 19th

## Connection contract

- Parts A & B have been revised and submitted based on:

- Regulator's feedback
- Legislative evolution
- Technical reality (mainly part B)
- Digitalization
- Evolutions of other contracts
- Annexes have been updated
- iCAROS has been included

### ⇒ Informal consultation from 8 May to 7 June

### ⇒ Next steps:

- Public Consultation planned for Q4 2023

# WG Belgian Grid - incentives

## Roadmap to publication of Hosting Capacity Maps

- Planning and milestones
- Recap of Stakeholder comments received
- Proposed hosting capacity map
  - ⇒ an interactive tool
  - ⇒ assumptions & methodology
  - ⇒ disclaimers
- Conclusion & next steps
  - ⇒ Elia will **continue the development** of the hosting capacity map
  - ⇒ The hosting capacity map will be **presented & published** during the WG Belgian Grid of **07/12/2023**
  - ⇒ A **feedback session** will be organized in **2024** in the WG Belgian Grid to **identify improvements** for the next yearly publication

## Voltage service – incentive MVAR

- Review and recommendations for design optimizations
  - Continuous activation control
  - Penalties
  - Simplification ~ communication requirements
  - Dynamic vs static remuneration
  - Remuneration of the service
  - Communication with Elia
  - Need for MVAR service
  - Price setting
  - Participation on units on an industrial site
  - Introduce the option to send a zero setpoint to units that are below the Pmin
- ⇒ Planning:
  - **June 28th**: 2<sup>nd</sup> WS with market parties about proposal of improvements
  - **December**: submission of the study to the CREG

# WG Belgian Grid - incentives

## Incentive CBA

**Cost benefit analysis** on Requirements for Generators applicable on existing and new generating units between 1 and 25 MW

- **Objectives of the incentive**

- ⇒ Identify the differences between the prescriptions applicable to existing and new PGMs between 1 and 25 MW (not included) and connected to Elia grid

- ⇒ Cost-benefit analysis

- ⇒ The outcomes of the CBA useful

- **High level methodology**

- **Planning and mile stones 2023**

- ⇒ Phase 1 (February – April): preparation of work

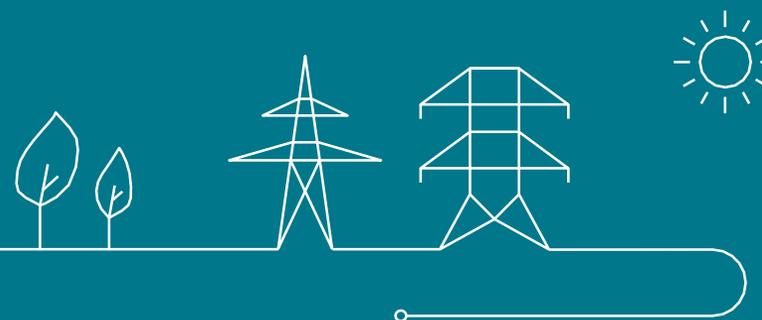
- ⇒ Phase 2 (May – September): evaluation with market parties

- ⇒ Phase 3 (May – September): data collection and CBA

- ⇒ Phase 4 (October): public consultation

- ⇒ Phase 5 (November – December): report and conclusions

# WG Consumer Centric Market Design

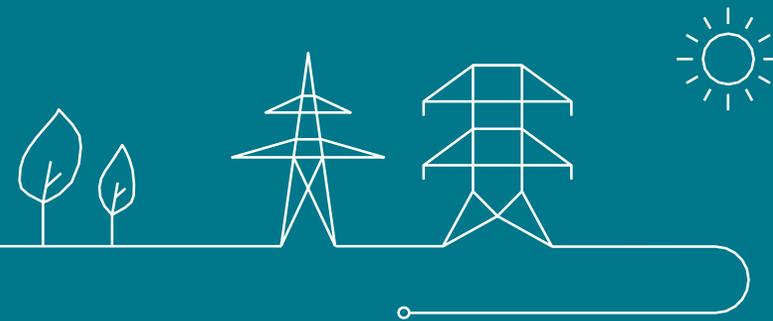


# WG Consumer Centric Market Design

No meetings organized between last plenary session and today

Next meeting planned: 23/06/2023 – 9:30u

# WG System Operations & European Market



# Highlights WG EMD-SO (Q2 2023)

## European Market Design

### 1. Feedback Market coupling event 19/04

- Insights in the (local) issues in the capacity calculation process

### 2. Core Intraday Capacity Calculation project

- Info on the regulatory escalation leading to postponement of go-live
- Presentation of recent results of parallel run and the implications for BE bidding zone borders
- Presentation by CREG on important points for BE & open discussion with market parties
  - Follow up with a dedicated technical workshop at BE level

### 3. Intraday go live 96 gates on BE-NL & BE-DE border FB DA: status

- Info and first insights on the successful go live of 96 gates of 15' in intraday timeframe

### 4. EU structural market design: Elia Group's view & recommendations

- Presented Elia Group's view

### 5. Prioritization EU projects

- Feedback to BE market parties on ongoing exercise with ACER for future (CACM) project prioritization

# Highlights WG EMD-SO (Q2 2023)

## System Operations

### 1. Winter review & Summer outlook

- Elia highlighted the risks for incompressibility in the summer period
- Stressed the importance of demand response in such situations

### 2. Emergency & restauration

- Overview on status and planning of the System Defense & Restoration Plan (including LFDD) for 2023

## Calendar

- WG EMD-SO meeting held on 15/05/2023
- Next WG EMD SO meeting is will be scheduled in September (date to be defined)

- 1. Studie Energyville/Febeliec**
- 2. UG 2.0 – voorstel hervorming**
- 3. Feedback werkgroepen**
  - 1. WG Adequacy**
  - 2. WG Balancing (incl. TF Princess Elisabeth zone)**
  - 3. WG Belgian Grid**
  - 4. WG Consumer Centric Market Design**
  - 5. WG System Operations & European Market**

## **4. Diversen**

- 1. Plenaire meeting 13/09/2023 – 14-17u**



## Users' Group 2.0:

- het voorstel wordt als dusdanig niet goedgekeurd
- Na discussie stelt de Users' Group volgende voor
  - Nood om materiaal WG'en vroeger te versturen + meer ruimte voor discussie
  - Nood tot verbeteren van reporting vanuit de WG naar de Users' Group
  - Oprichting van een “reflectiekamer midden en langer termijn ontwikkelingen elektriciteitssysteem” niet binnen de Users' group maar naast de Users' Group teneinde geen beperking te hebben op aantal aanwezigen
    - Leden UG + andere geïnteresseerden (cf policy WG'en)
    - Co voorzitterschap
  - Het huishoudelijk reglement dient bijgevolg niet aangepast te worden (wel update contactgegevens ledenlijst)