



1 February 2024

Towards net-zero emission of T&D grids



Climate action integral part of
the Elia Group Strategy

READY FOR
50%
INCREASE
BY 2032



Who are we?



This is Elia Group

From European key player to valuable global partner to drive the energy transition

- Leading TSO in Europe
- Operating at the heart of Europe with access to North and Baltic Seas
- Regulated Asset Base of €10.9 billion (CAGR of ~ 14% 2023-2027)
- Publicly listed company

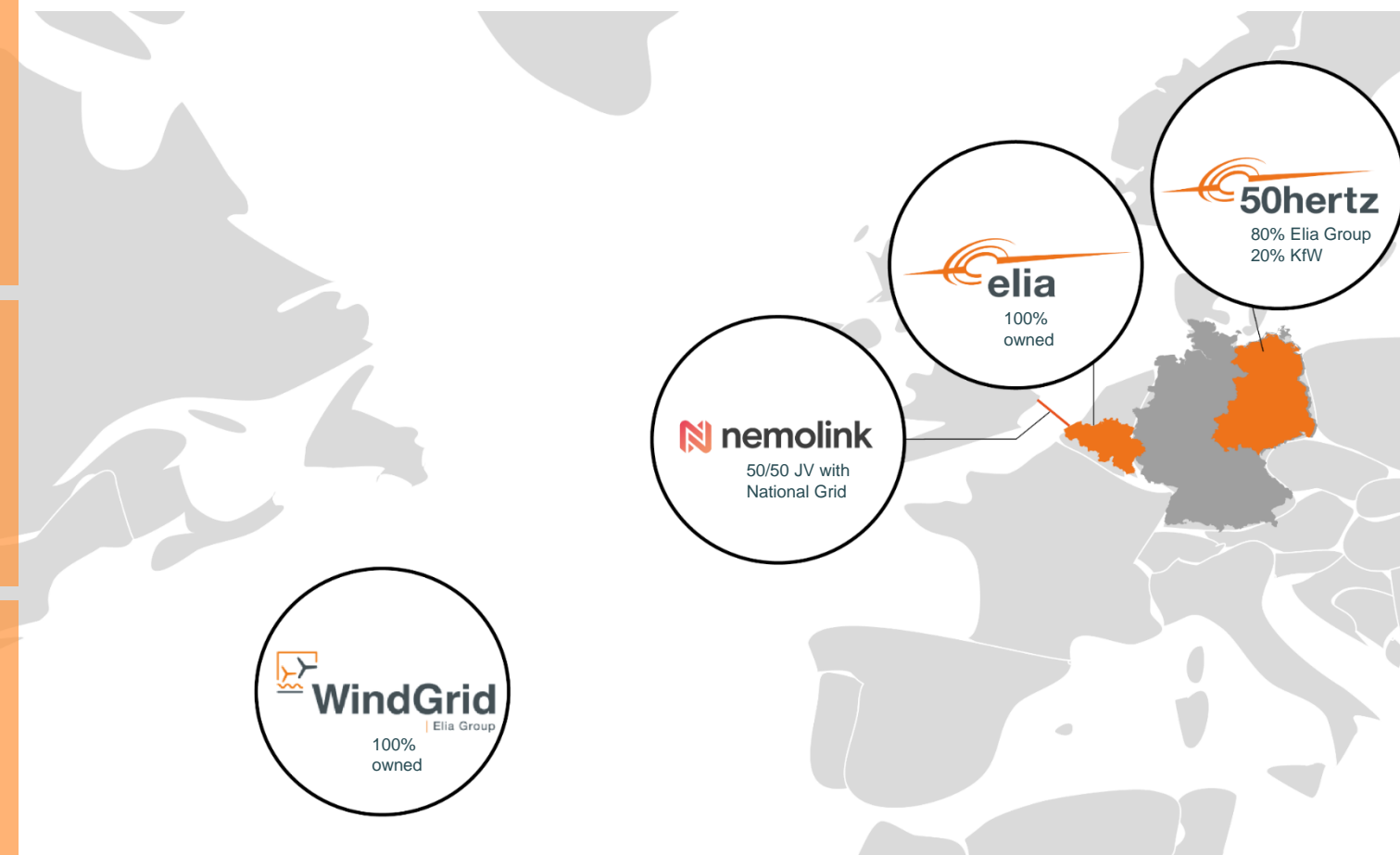
Regulated utility building & operating on-and offshore transmission infrastructure

- Monopolistic position in Belgium and Northeast Germany
- Diversified regulatory risk
- Very high network reliability (> 99%)



Activities to shape growth opportunities that increase our societal relevance

- International offshore transmission
- Consumer-centric market design
- International energy market consultancy and engineering services



Sustainability fully integrated into
corporate strategy



From our strategic pillars of growth to ActNow

Our vision

“A successful energy transition for a **sustainable** world”

Our mission

“In the interest of society, we make the **energy transition** happen to **decarbonise Europe** by delivering the needed power infrastructure and shaping the European markets.

We **keep the lights on** by operating a reliable and **sustainable** system and innovate to **meet evolving consumers’ needs** in an efficient way and to protect people’s safety. We create further **value for society** in the changing energy landscape.”

Grow beyond current perimeter to deliver **societal value**

Develop new services creating value for **customers** in the energy system

Deliver the infrastructure of the future and develop and operate a **sustainable power system**



Connect strategy with sustainability ambitions



The ActNow Program

Setting our sustainability ambitions along five dimensions



- Enabling decarbonisation of the power sector
- Carbon neutrality in system operations by 2040
- Carbon neutrality in our own activities by 2030
- Transition to a carbon neutral value chain for new assets and construction works
- Increase climate resilience



- Preserve and strengthen ecosystems and biodiversity
- Embed circularity in our core business processes
- Ensure compliance with environment performance standards



- Going for zero accidents
- Build our safety culture
- We are all safety leaders
- We strive for health and wellbeing of our staff



- Inclusive leadership across the organization and engaging all staff
- Inclusive recruitment and selection practices in hiring processes
- Equal opportunities for all staff
- Open and inclusive company culture and healthy work-life balance
- Recognition of societal DEI role



- Governance: Accountable rules & processes
- Ethics: Sustainable mindset & behaviors
- Compliance: Conformity with external & internal rules
- Transparency: Openness & meaningful stakeholder dialogue

Sustainability at the core of our business



ActNow as an integral part of the Elia Group Strategy and its implementation via Business Roadmaps & Business Planning



① Climate Action

②

③

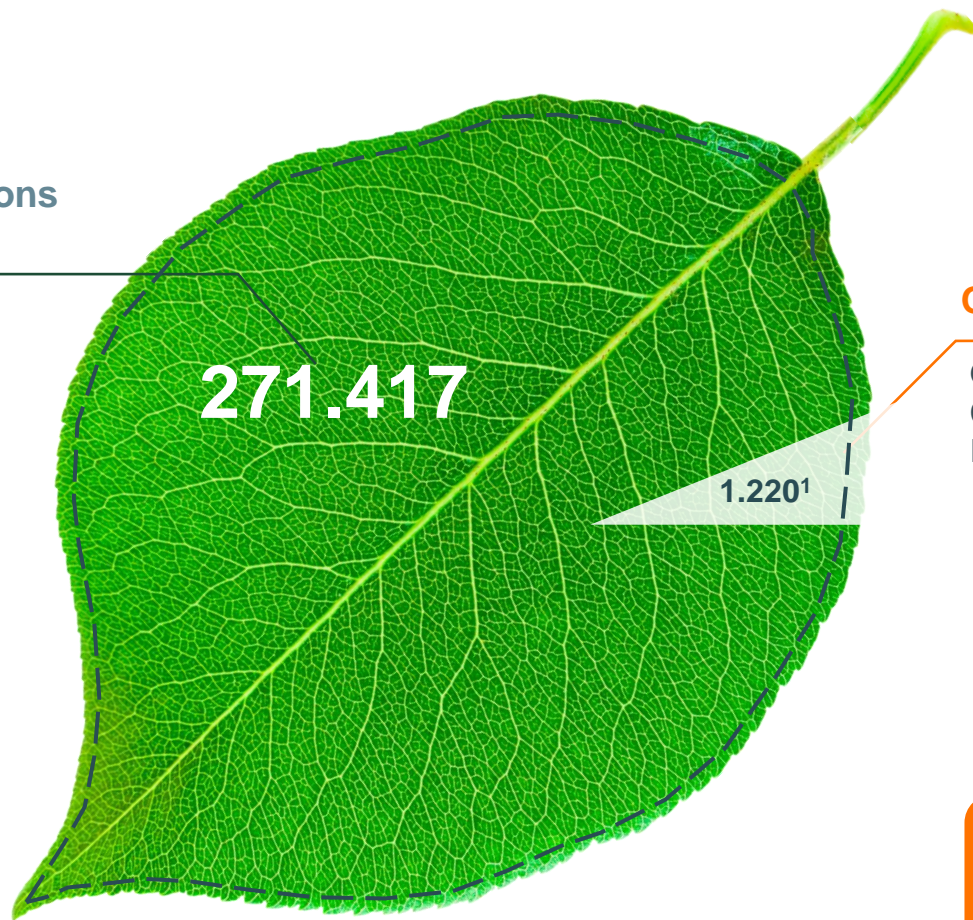
④

⑤

While we recognize our biggest impact is decarbonizing the power sector, we decided to go one step further

Power sector emissions (BE/DE)

OUR SOCIETAL CHALLENGE



Own emissions

OUR CORPORATE CHALLENGE IN LINE WITH SBTi

Elia Group as a proponent of Electrification

- ✓ Most efficient & cheapest way to meet energy demand on the road to **net zero in 2050**
- ✓ Allows more **renewable electricity sources** onto the grid
- ✓ Increases potential **flexibility sources**, such as EVs, assisting Elia in managing the grid

ktCO₂eq

How do we decarbonize the power grid?

- Grid development
- Market development & system operations
- Electrification

¹ 2022 own emissions includes scope 1 and scope 2 (location-based) for ETB and 50Hertz; Scope 3 not included. Scope 3 data maturity being improved to reach 60% physical data by 2023.



Our 5 climate action objectives

Climate Change Mitigation

Climate Change Adaptation

Our societal challenge

271,417 ktCO₂eq

OBJECTIVE 1

Speed-up decarbonization of the power sector

- Grid development
- Market development & system operations
- Electrification

Our corporate challenge

963 ktCO₂eq*

OBJECTIVE 2

Reach carbon neutrality in system operation by 2040

- **Grid losses:** 28% reduction by '30
- **Balancing & redispatch:** implement solutions for greening/ decarbonization

76 ktCO₂eq

OBJECTIVE 3

Reach carbon neutrality in own activities by 2030

- 50% share of SF6-free in new assets by '30
- improve **SF6 leakage** mgt to remain << 0.25%
- 90% emission reduction from mobility by 2030
- **Carbon-free fleet** by '30
- **Energy efficiency**★ of existing (substation) buildings

646 ktCO₂eq

OBJECTIVE 4

Towards a carbon neutral value chain for new assets & construction works

- Fully integrate **Internal Carbon Price** in our business processes by 2023
- **Mature scope 3 data**★ 60% based on supplier data by 2023

new



OBJECTIVE 5

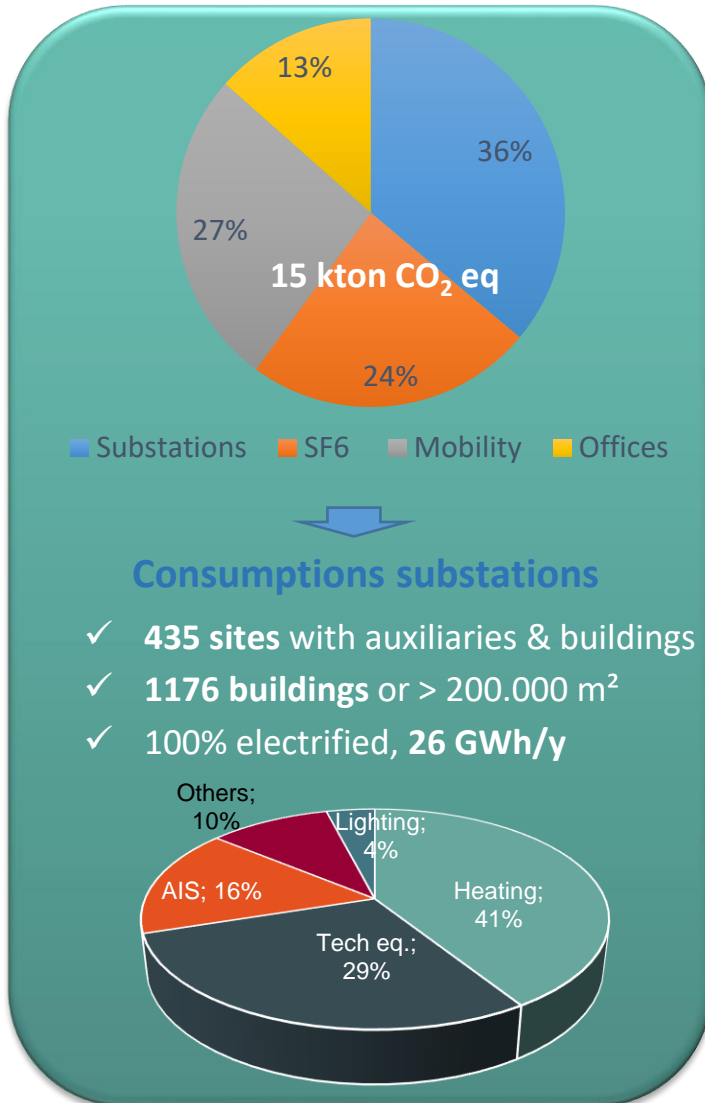
Increase resilience to climate change impacts

- Climate risk management
- Grid and asset planning and dimensioning
- Anticipation and handling of extreme weather disasters
- Insurance

*Excluding balancing and redispatch (emissions not on a TSO CO₂ balance according to GHG protocol)

Local roadmaps own activities (Obj.3): Substations

ETB emissions "Own activities"



1. Reduction potential

Scenario	Reduction (GWh/y)
Existing roof renovation (BAU)	1,3 (- 5%)
+ Change heating	6,7 (-25%)
+ RES (solar panels)	12,7 (-48%)
+ Acc. roof renov.	14,7 (-56%)



2. Cost - benefit

IRR [%]	Carbon cost [€/ton]				
	70	150	250	1.000	
Electr. price [€/MWh]	50	-3,3%	-1,1%	1,3%	14,3%
	100	2,9%	4,5%	6,2%	18,5%
	150	7,6%	8,9%	10,6%	22,9%
	200	11,8%	13,1%	14,7%	27,7%

3. Final scope & roadmap by 2030

Measures	Building type	
	new	existing
Heat pumps	x	
Climate control	x	x
PV on ground		x
PV on roof	x	x

❖ 45.000 m² of PV
❖ #780/ 130.000 m² buildings with climate control



435
Substations greenified by 2030



33%
Energy savings in substations by 2030



2,0 kton CO₂ eq.
Emission reduction per year

Towards a carbon neutral value chain (Obj. 4) - construction works

Tracking emissions from works

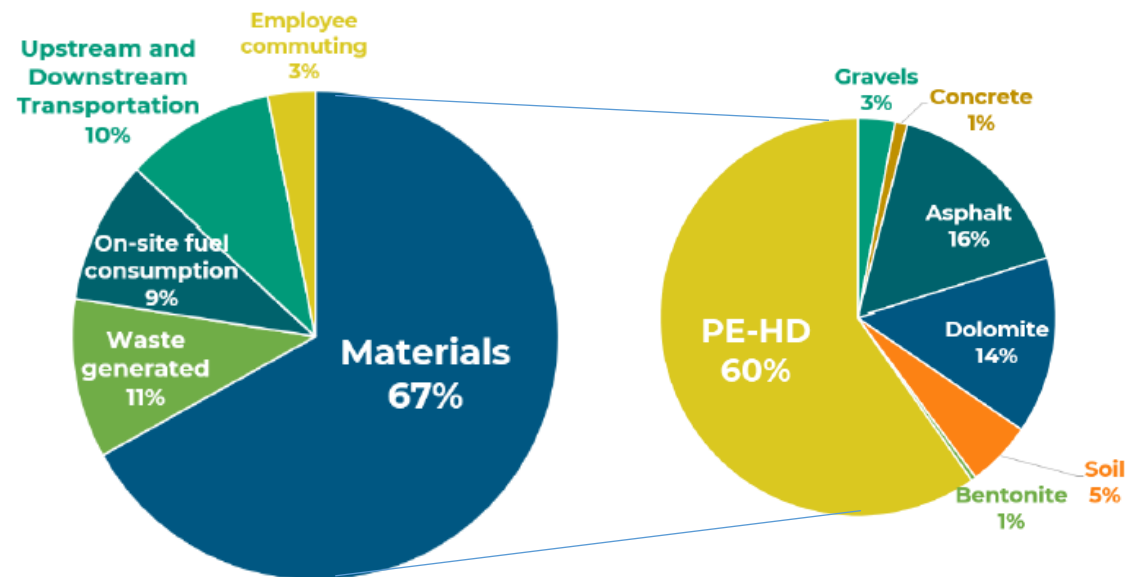
- ✓ 8 pilots different type of projects (cable, line & substations)
- ✓ CO2 simulators (based on standards)
- ✓ Integrate in Accounting platform (merge with purchased equipment)

Evaluate reduction potential

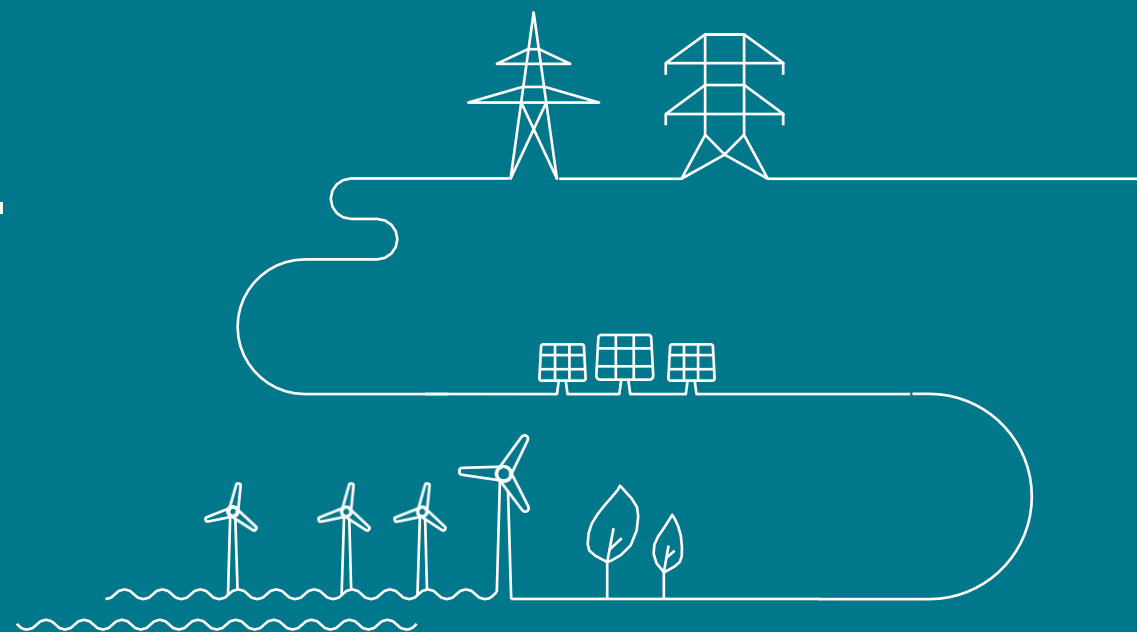
- ✓ Identify main impacts
- Develop reduction measures
- Setting reduction targets

**Cable case:
150 kV PRC
2000 AL**

- Works 176 tCO₂ (43%) vs EF cable: 233 tCO₂ eq./km
- Materials represent almost 70% of work emissions
- Materials: tubes, road cover & dolomite



Thank you.





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