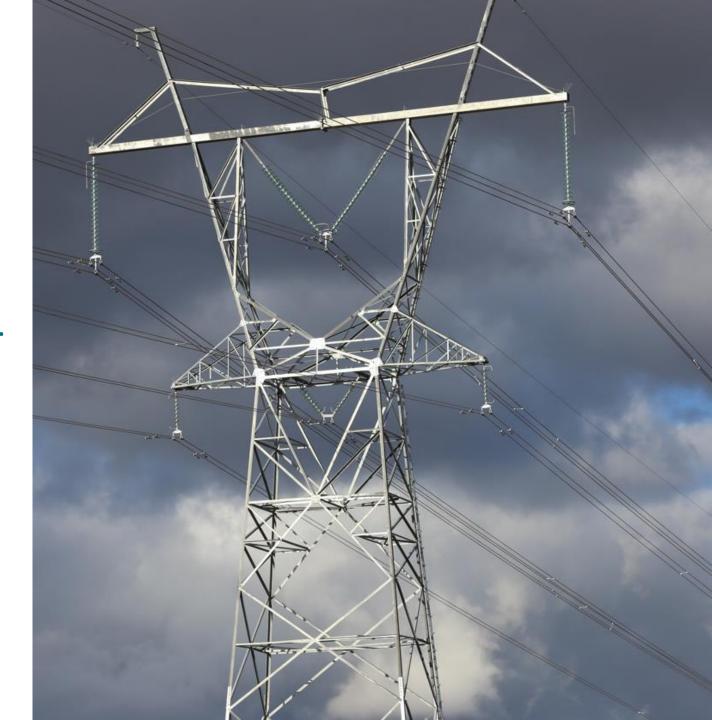
Strategy 2024 -2030 "On the way to a climate-neutral energy system"

Elering AS

October 2023



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# 1. Mission of Elering:

Keep the lights on and the rooms warm in Estonia





# 2. The vision of Elering:

# "SECURITY OF SUPPLY in a climate-neutral manner, supporting the competitiveness of the Estonian economy".

Explanatory description:

Our main mission is to ensure security of supply for Estonian consumers at all times.

Synchronising Estonia with the Continental European electric power system in 2025, whilst maintaining a reliable electricity supply during the transition period, which is the most important step to ensure continuous security of supply for Estonian consumers.

At the same time, we will help Estonia and the wider EU community achieve the 2030, 2035 and 2050 climate policy targets, keeping in mind the competitiveness of the Estonian economy. In order to achieve this, we ensure the availability of network capabilities, keep transmission capacities running and ensure the availability of system management capabilities.





# 3. Our common VALUES will help us to carry out our strategy

#### **RESPONSIBILITY**

- + We realise that we are RESPONSIBLE to the society for ensuring the supply of electricity and gas in an economically efficient manner.
- + A functioning energy market and the EQUAL TREATMENT OF MARKET PARTICIPANTS is the best way to ensure the security of supply.
- We value each and EVERY EMPLOYEE'S CONTRIBUTION, which helps to fulfil the obligations undertaken in society at a high standard.

#### COMMITMENT

- + EVERY SERVICE of Elering HAS A
  CUSTOMER. We are committed to
  CREATING VALUE FOR CUSTOMERS and to
  customers' customers
- We create value for our customers, by joining our employee's LONG-TERM EXPERIENCE WITH THE MOST UP-TO-DATE KNOWLEDGE.
- + We offer the BEST SOLUTIONS in the energy economy

#### **OPENNESS**

- + Today's energy system is rapidly changing. We are OPEN TO CHANGE and DYNAMIC.
- We CREATE new possibilities and SUPPORT INNOVATION in the energy economy.
- + READINESS FOR CHANGE begins with our own people. In order to lead change we value each and every one's INITIATIVE, COURAGE AND MOTIVATION TO DEVELOP.



#### 4. BUSINESS ENVIRONMENT. SUMMARY OF KEY TRENDS

DECARBONISATION of the energy sector

INCREASE IN GEOPOLITICAL RISKS

A SINGLE ENERGY SYSTEM and MARKET

Rapid DIGITALISATION

Growing competition
FOR TALENT

 $CO_2$ 

- 1. REDUCTION IN CONVENTIONAL PRODUCTION OPPORTUNITIES due to high CO2 prices and climate policy
- Rapid increase in wind and solar power capacities (incl. the OBJECTIVE of 100% RES in ELECTRICITY in ESTONIA by 2030) puts pressure on NETWORK DEVELOPMENT
- ELECTRIFICATION OF SOCIETY, the importance and responsibility of reliable electricity supply will increase. If there's no electricity, there's nothing. Electricity is the most important vital service for society.
- 4. Electrification leads to a reduction in gas consumption
- 5. The visibility and manageability of the ENERGY SYSTEM is becoming increasingly more complex due to the increase in the DISPERSED and fluctuating energy generation capacities
- RAPID RESERVES incl. FLEXIBILITY that can be moved in time are a key premise for 2035+ wind energy integration



- Due to the geopolitical situation, there is an urgent need to make the energy system of the EU/ESTONIA INDEPENDENT FROM RU/BY, and there is an increased risk of physical attacks on the energy infrastructure
  - The need to replace and own the main SOS capacities in Estonia (e.g. frequency regulation reserves and management) in order to maintain the self-sustainability of the power system
- 3. CLIMATE POLICY STRENGTHENS 3. the EU's capacity to free itself from supplies of crude oil, natural gas and solid fossil fuels from third countries

- 1. The future of Europe: a cross-border INTEGRATED LOOP between the land and marine ENERGY SYSTEM and the INTEGRATION OF SECTORS (electricity, gas, heat, transport, etc.)
- 2. CENTRAL EUROPE IS HUNGRY FOR ENERGY, increasing energy flows from the North to Central Europe. FUTURE EUROPEAN TRANSIT CORRIDORS ARE BEING POSITIONED.
- Gaseous fuels play an important role in ENERGY STORAGE and TRANSPORT, with the potential for green gas and green hydrogen.

- SYSTEM MANAGEMENT becomes MORE COMPLEX and CLOSER TO REAL TIME due to fluctuating production capacities
- Variable generation capacity leads to the need to process LARGER QUANTITIES OF ENERGY DATA
- 3. CYBERSECURITY RISKS and IMPACTS increase significantly
- Rapid advances in artificial intelligence technologies offer the opportunity for a better management of the FUTURE energy system.

1. IT COMPETENCES ADDED TO TSO
CORE COMPETENCE. The rapid
development of the field leads to the
NEED FOR UNIQUE SKILLS —
management of the energy network,
development of energy markets, IT,
etc.

2. AGEING POPULATION AND NOT

- ENOUGH NEXT GENERATION
  EMPLOYEES IN THE ENERGY SECTOR.
  We need more and more new energy specialists, but the number of graduates with degrees in sciences is increasingly smaller.
- 3. The fierce competition for talent with both EST and EU energy companies puts more focus on keeping existing talent, and a competitive value proposition and distinctive employer brand are increasingly more important.





## 5. CHANGES IN THE ENERGY SYSTEM

[energy system = electricity, natural gas/hydrogen, district heating, transport]

#### **Generation**

#### Solar energy boom



~ 510 MW of solar energy in the network by the end of 2022

1000+ MW by the end of 2024

The nearly zero-energy requirement for buildings in the Building Act adds PV to roofs

#### New wind farms are built again after 10 years

The current capacity of wind farms is 319 MW



315 MW is being built (Purtse, Saarde, Tootsi)

#### Planned developments

Three offshore wind developments that could be ready in 2030



~3600 MW

Onshore wind developments ~3700 MW

Two pumped-storage hydroelectric power plant projects

#### **Consumption**

#### Transport sector



Passenger cars and vans are becoming electrified

Different fuels and energy carriers in heavy transport, aviation and shipping - electricity / hydrogen / biofuels / synthetic fuels

#### District heating



Heat pumps, heat storage devices, electric boilers

Alternative fuel to cover peak consumption?

#### **Buildings**



National building renovation strategy for increasing energy efficiency

#### **Industries**



Direction towards clean fuels - electricity, biofuels, hydrogen

# 6. SECURITY OF SUPPLY CAPACITIES

Security of supply consists of four parts - all equally important to keep the lights on for the Estonian energy consumer.

- 1. System capacity Consumption is covered by production, import and consumption management (including storage).
- 2. Management capacity The power system can withstand potential disruptions reliable planning and adequate reserves.
- 3. **Network capacity** The electricity network has sufficient throughput capacity and reliability to ensure that electricity reaches consumers.
- 4. **Digital capacity** sufficient ability to provide the correct and necessary information to manage the system in a timely manner and the ability to perform the necessary operational activities digitally. This includes resilience to cyberattacks.





**Future** 

are the basis for complex real-time

most important challenges

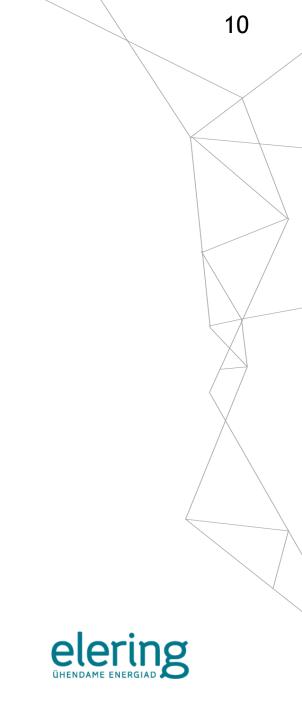
decisions. Cybersecurity threat is one of the

6. We're facing significant CHANGES in capacities in order to ensure our mission and achieve our vision in the light of the trends. **Past** 

System capacity Dispersed variable generation Secure central, regular electricity generation Management capacity Dynamic operational decisions in real time Well predictable planning a day ahead **Network capacity** Network for ensuring energy availability and Centralised grid for transmission and system reliability distribution of energy Data that move together and without energy Digital capacity

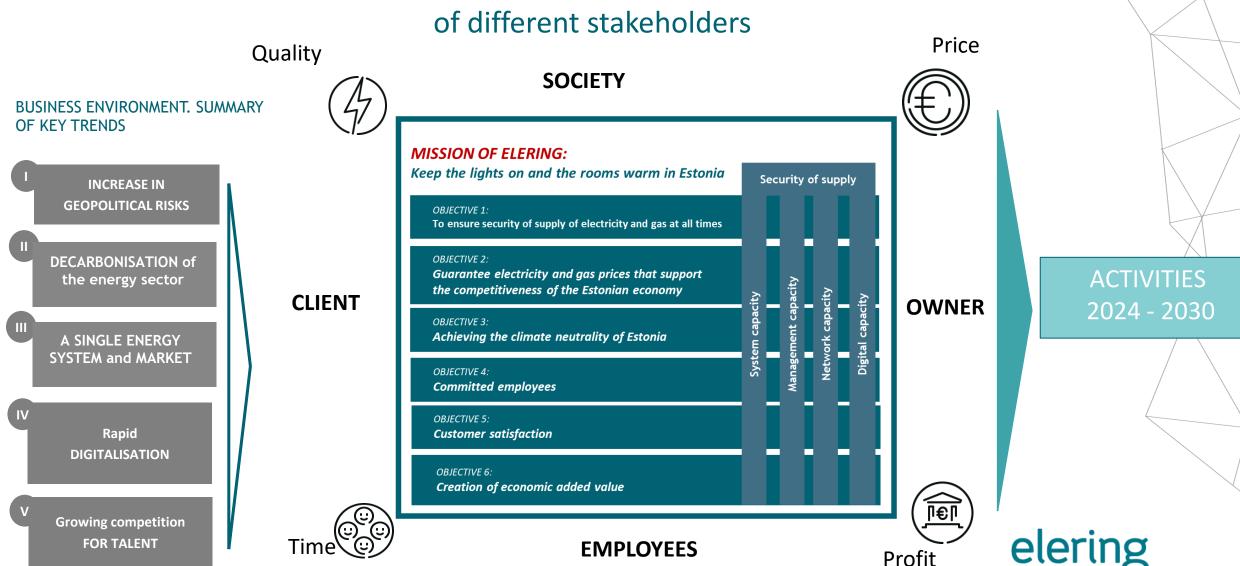
Support

# 8. Strategic OBJECTIVES 2024-2030



### 8. STRATEGIC OBJECTIVES 2024-2030

Setting strategic objectives is about balancing the interests of different stakeholders



## 8. Strategic objectives of Elering 2024-2030

Objective	Indicator
Objective 1: To ensure security of supply of electricity and gas at all times	
1.1 A well-functioning transmission network	Electricity not provided (10-year average)
1.2 A well-functioning gas transmission network	Gas not provided MWh (10-year average)
1.3 The Estonian power system supply security standard has been met in a three-year horizon.	The security of supply forecast for 3 years exceeds the Estonian SoS standard
1.4 Synchronisation with continental Europe in 2025	Key actions have been completed (approved by the supervisory board with the annex to the annual budget "Key results")
Objective 2: Guarantee electricity and gas prices that support the competitiveness of the Estonian	economy
2.1 Ensuring the same price of electricity in the Estonian bidding area as in the other countries by the Baltic Sea	% of hours without bottlenecks on cross-border lines (less than rated capacity allocated to the border)
2.2 Thin power grid	Ratio: Investment budget for the next 5 years/expenditure in RAB for the next 5 years (excluding synchronisation)
2.3 Ensuring the same price of gas in Estonia as in the FI-3B market region	% of hours without bottlenecks on cross-border lines (less than rated capacity allocated to the border)
2.4 Thin gas network	Ratio: Investment budget for the next 5 years/expenditure in RAB for the next 5 years
2.5 Highly competitive energy market (incl. elimination of cross-border bottlenecks)	Key actions have been completed (approved by the supervisory board with the annex to the annual budget "Key results")
Objective 3: Achieving the climate neutrality of Estonia	
3.1 Sufficient generation capacity of the transmission network	Minimal generation capacity of the Estonian electricity network in the direction of generation (taking into account the Estonian renewable energy 2030 target)
3.2 Climate neutrality of Elering	The direct (including loss of network) emissions of Elering are neutralised (including compensated) compared to the baseline plan
Objective 4: Committed employees	Employee commitment index
Objective 5: Customer satisfaction	Customer satisfaction index
Objective 6: Creation of economic added value	Economic value added (EVA)



# 9. MOST RESOURCE-INTENSIVE WORK STREAMS OF ELERING in 2024-2030, in order to ensure that the vision is achieved

