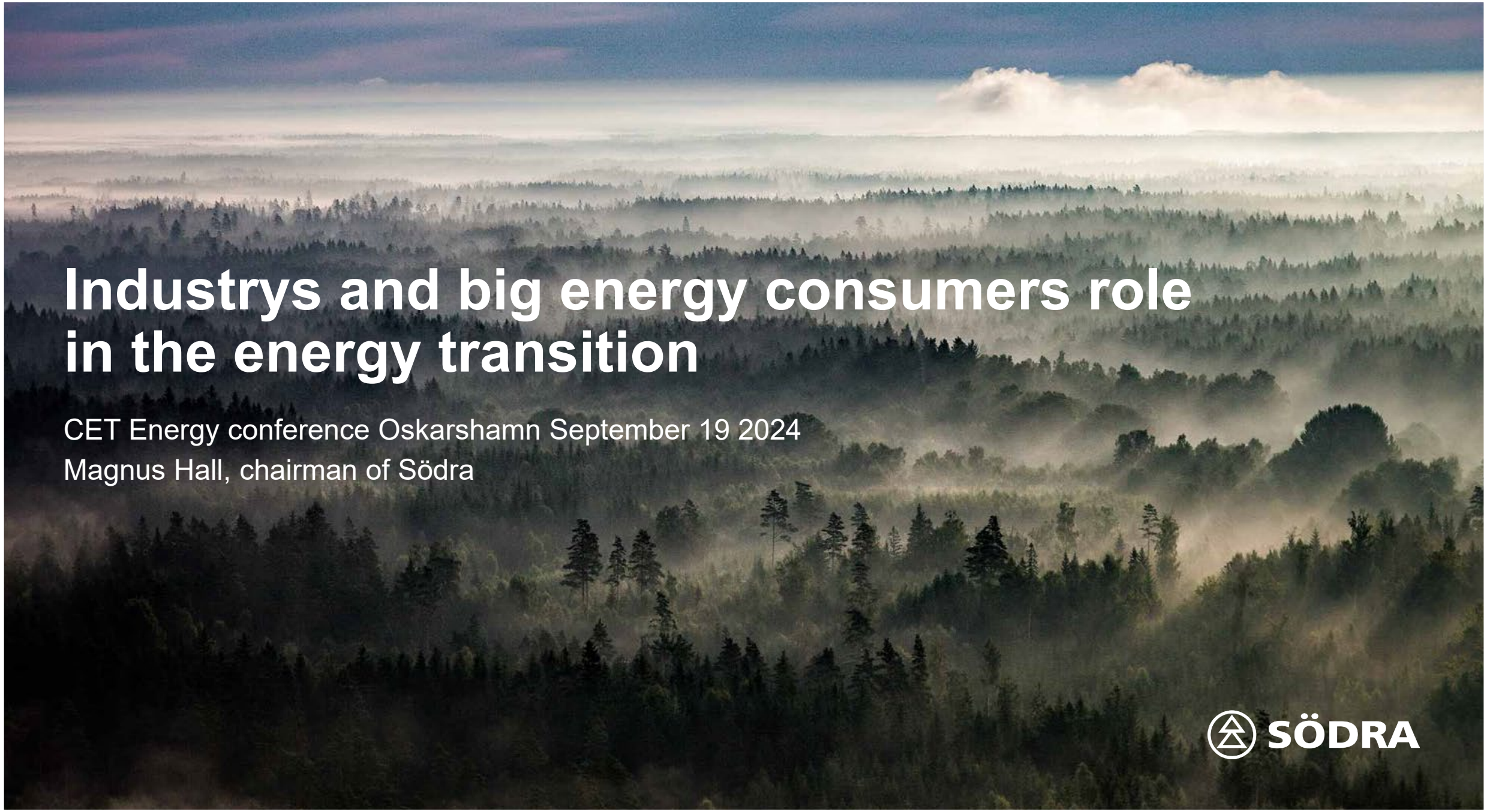


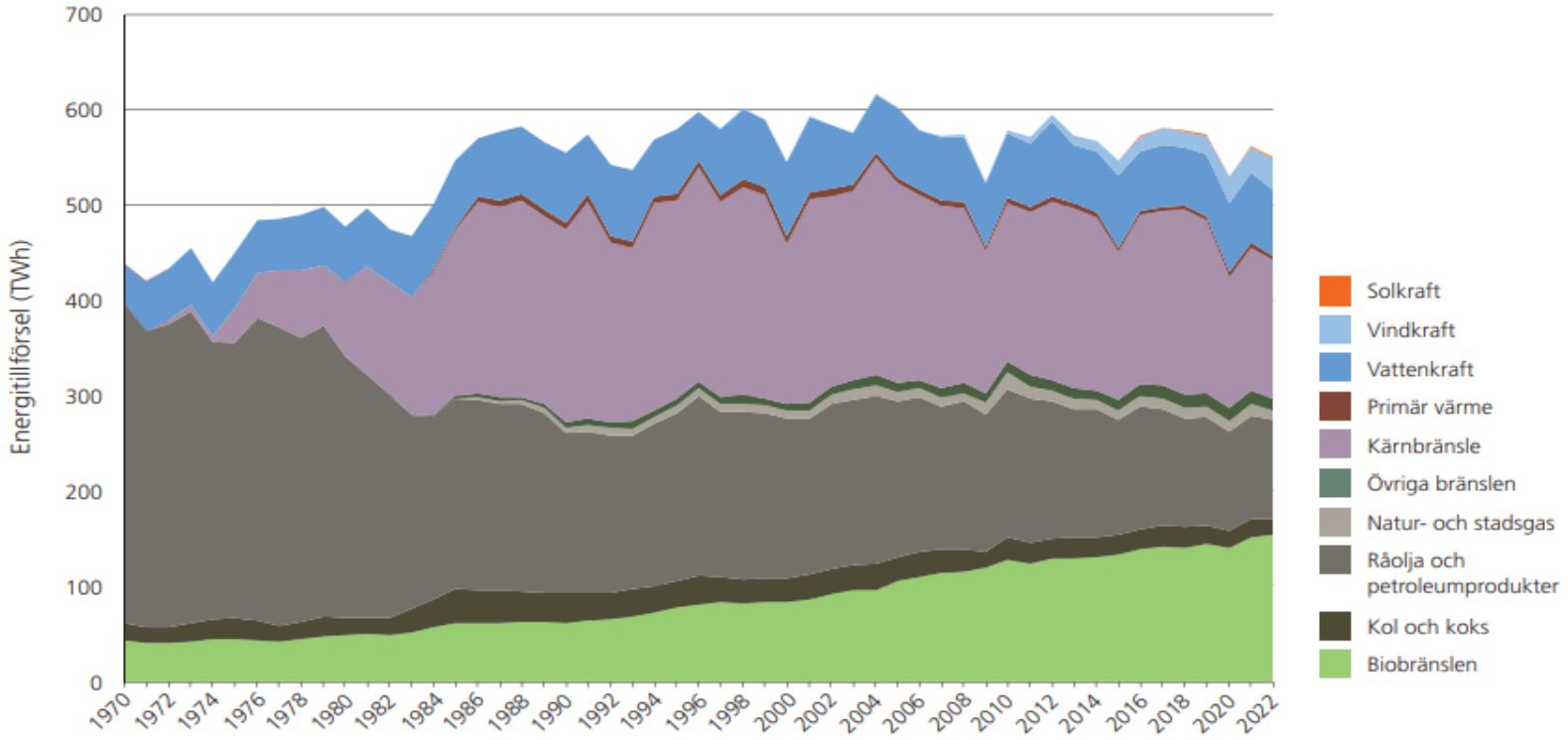
Industrys and big energy consumers role in the energy transition

CET Energy conference Oskarshamn September 19 2024

Magnus Hall, chairman of Södra

SÖDRA

Swedens energy sources 1970-2022



Figur 1 Total energitillförsel per energiråvara i det svenska energisystemet från 1970 till 2022 (baserad på data från Energimyndigheten, 2023a).

SÖDRA

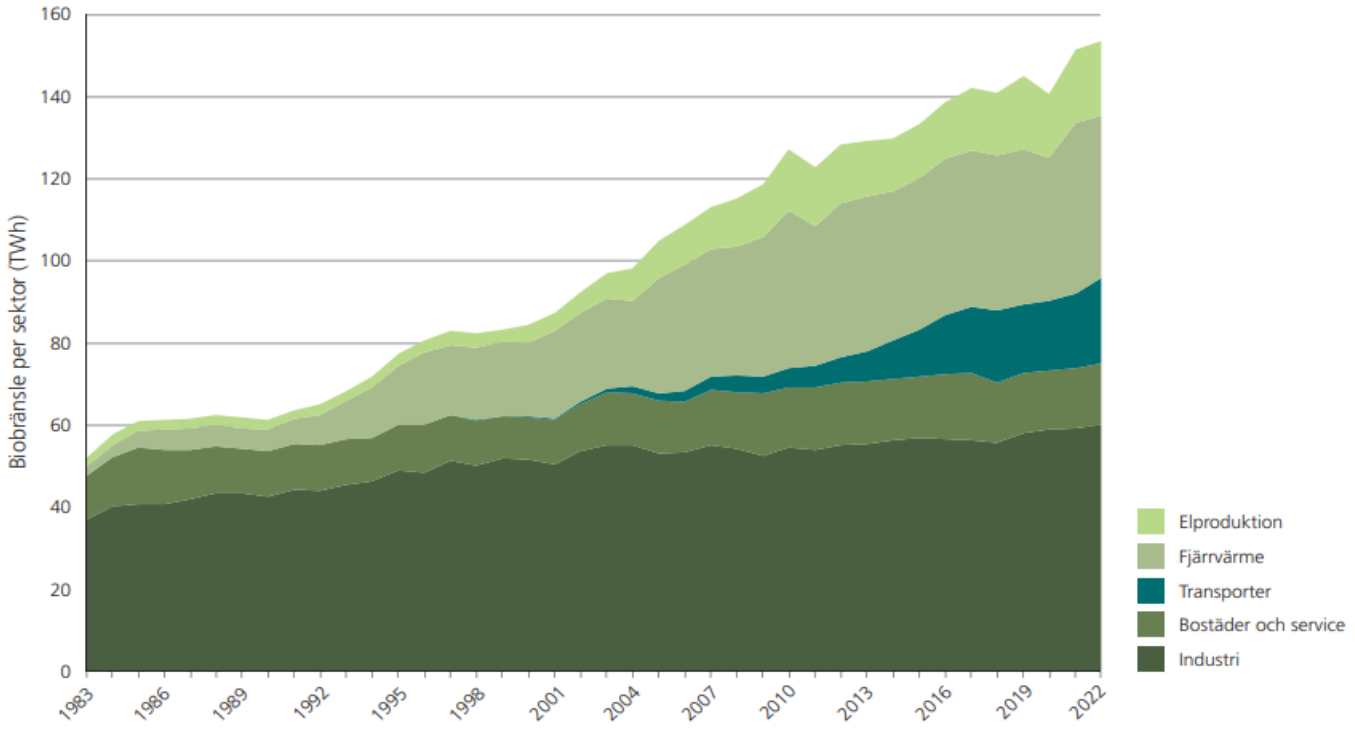
Industry energy supply in Sweden

- Overarching move: Electrification!!!
- 140 TWh ➔ 280 TWh
  - Transport 15 TWh
  - Industry +100TWh

Industry energy supply in Sweden

- Industry adapting to electricity as main energy carrier
  - Energy efficiency stays as a No regret
  - New process investment (flexibility)
  - Active participation in the energy system a new normal
    - Flexibility in consumption has a value
    - Own production - Industrikraft 2.0
    - PPAs to drive new investments and act as hedging portfolio

Role of Bioenergy in Sweden



Figur 2 Användning av biobränsle per sektor i det svenska energisystemet från 1983 till 2022 (baserad på data från Energimyndigheten, 2023a).

SÖDRA

Södra in figures 2023

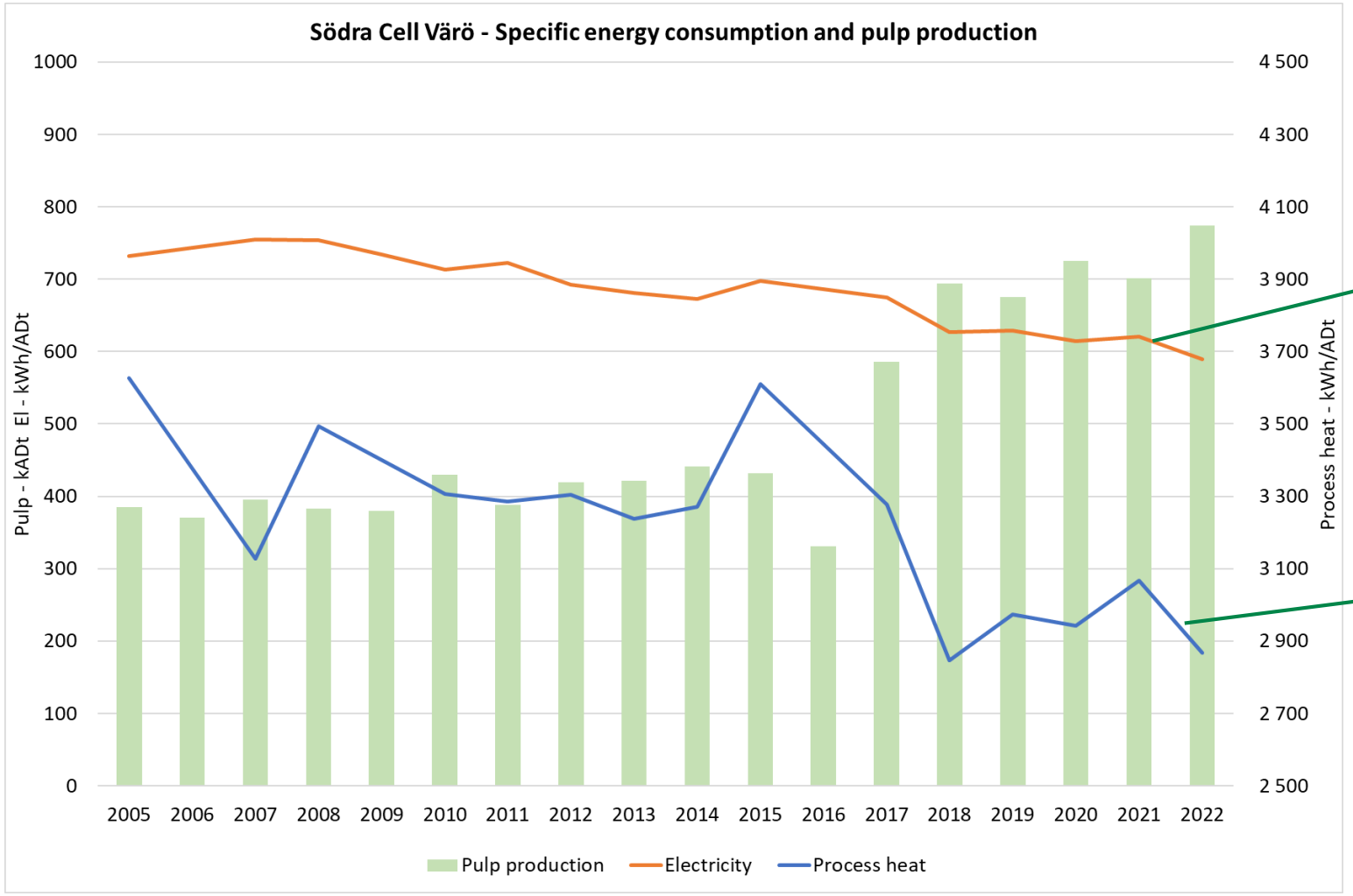
2,8	Members' forests **million hectars**	**52,000**	**members**
29	Nettoomsättning **SEK billion**	**3,400**	**employees**
03	**pulp mills**	**17**	Wood volume **million m3 sub**
19	**forestry operations areas**	**08**	**sawmills**

SÖDRA

The forestry industry as an energy supplier to society

- Bioenergy is already the largest energy source in Sweden today, accounting for 158 TWh in 2022.
- In 2023, Södra produced nearly 2 TWh, with 422 GWh sold to the grid.
- We deliver surplus heat to the district heating networks in Varberg (≈ 80%), Mönsterås (≈ 100%), and Blekinge (≈ 95%).

Energy efficiency – continuous improvements and large investments



Electricity consumption has improved more than 1% each year

Process heat – strong improvement during rebuilt/expansion.

Through the investment in a new condensing turbine at the pulp mill in Mörrum, electricity production in Blekinge increases by 20 percent.

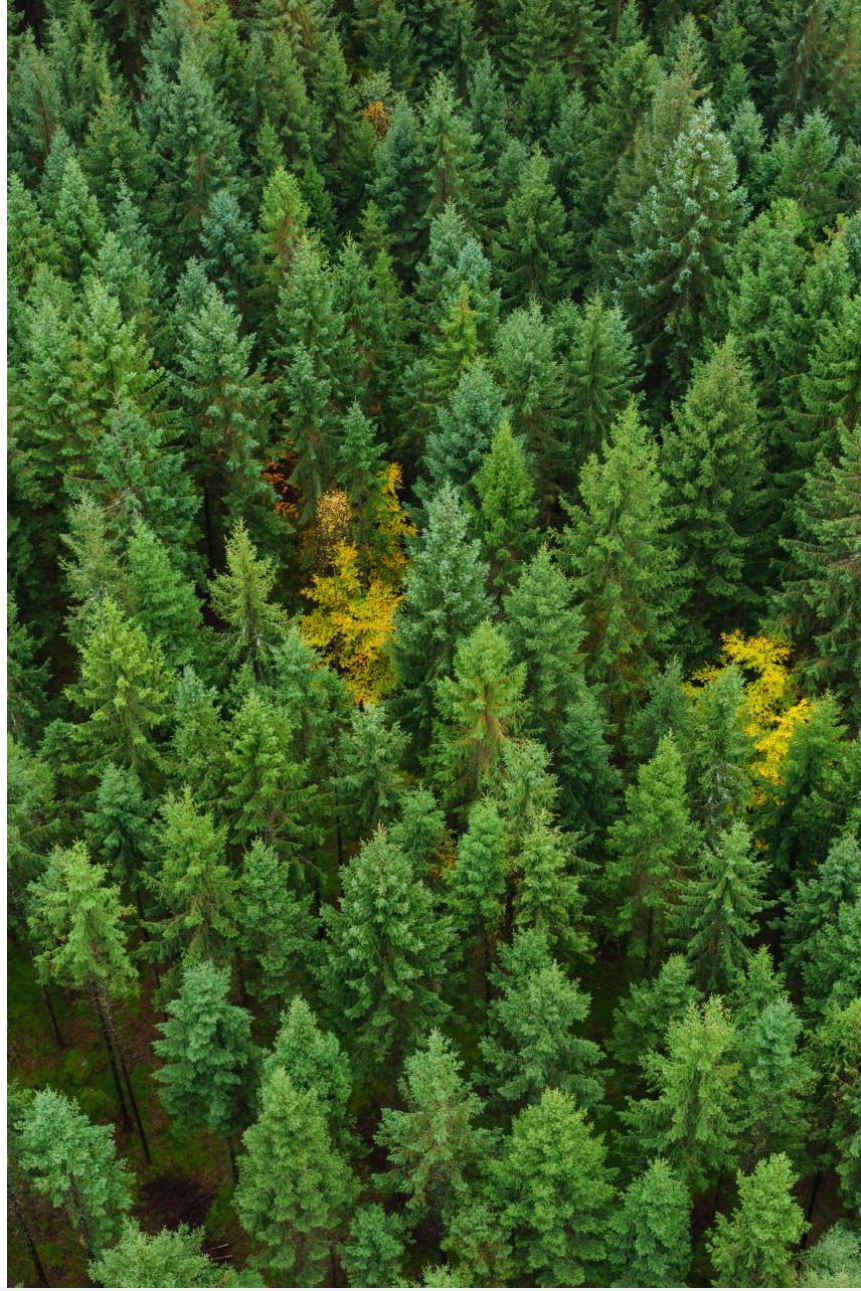
From a single tree grows a thousand opportunities

Our long-term strategic direction is to extract more value from each tree in a sustainable and profitable way, and to develop products that create the highest value and profitability for the forest farm.

We achieve this through sustainable forest management, innovations, and efficient resource use.

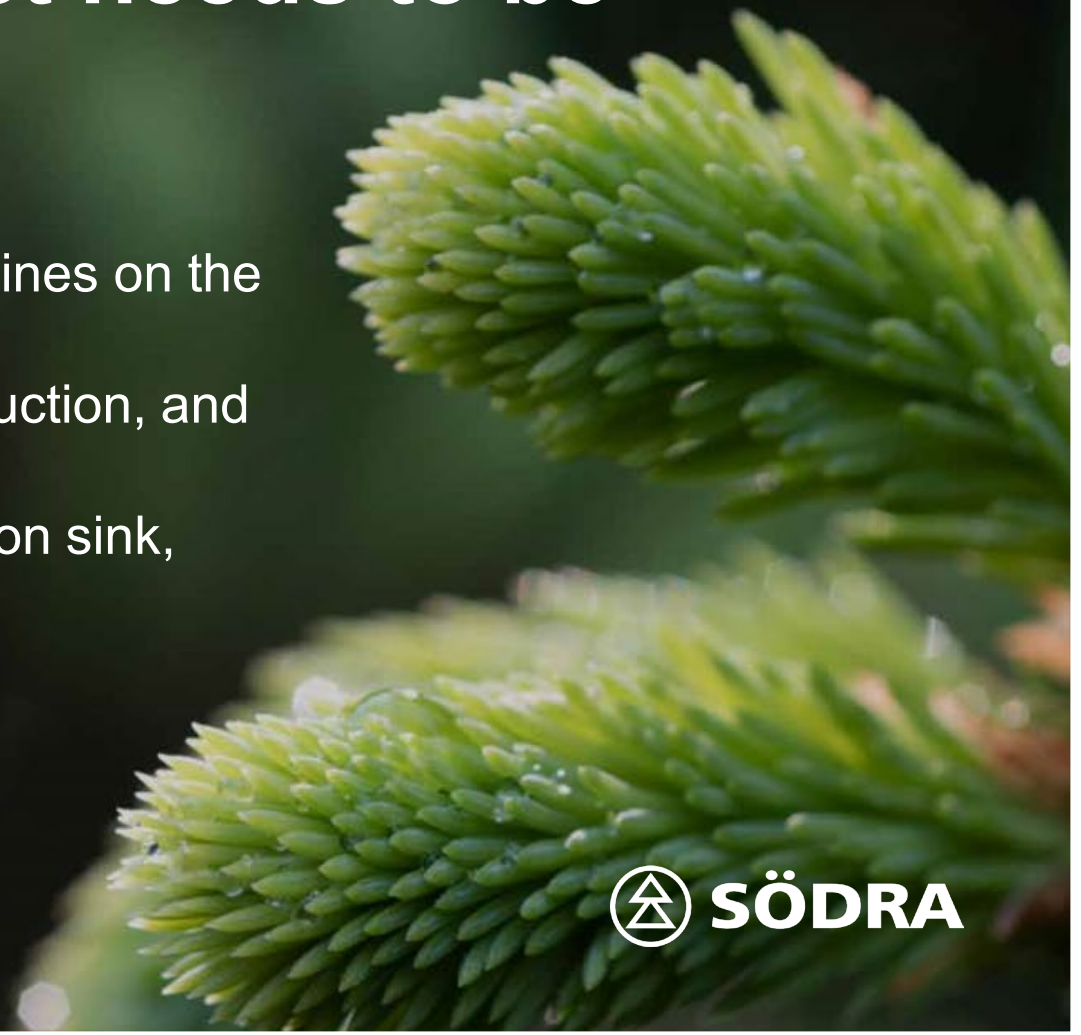
The forest plays a central role in the green transition.

- Bioenergy accounts for 38% of energy use in Sweden.
- As the forest is used to replace fossil fuels, the energy balance will change.
- It is crucial to have stable and competitive fossil-free electricity



The full potential of the forest needs to be considered

- Include the impact of construction and transmission lines on the forest estate in the socio-economic calculation
- Risk that forestry will be disrupted, and growth, production, and competitiveness will be jeopardized
- Risk of negative development of the forest as a carbon sink, biodiversity, and recreation



SÖDRA

Summary

- A mix of different fossil-free energy sources is needed to meet society’s energy needs.
- In pulp mills and sawmills, half of the output currently becomes products, and the other half becomes energy. This balance will most probably change.
- Enabling the full potential of the forest most likely means no energy conversion as primary use
- Future investments will lead to the need for accessible and stable fossil-free electricity

SÖDRA