

SVENSKA KRAFTNÄT



For a bright and sustainable Sweden

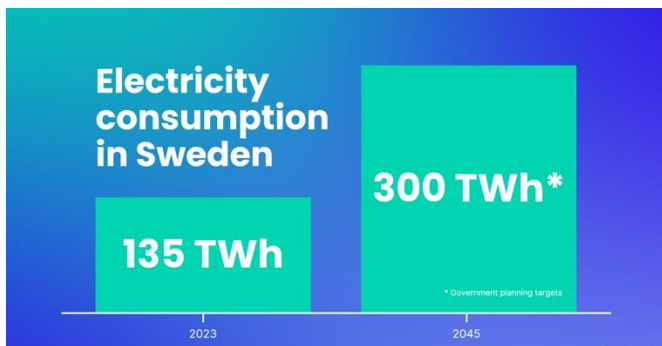
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20240819

An energy system in transition

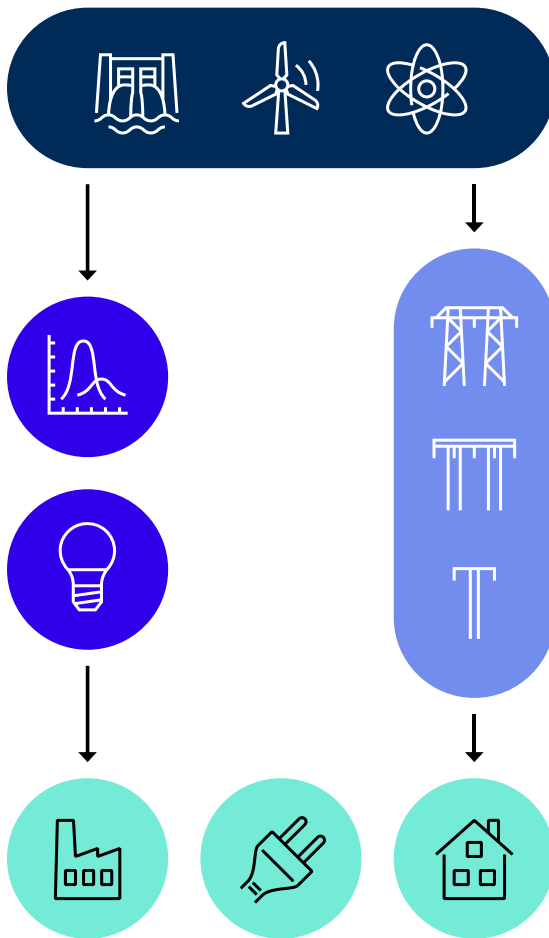
Electricity markets

Evolving and expanding marketplaces. New roles.



Consumption

Increased demand of electricity, more active and flexible consumption.

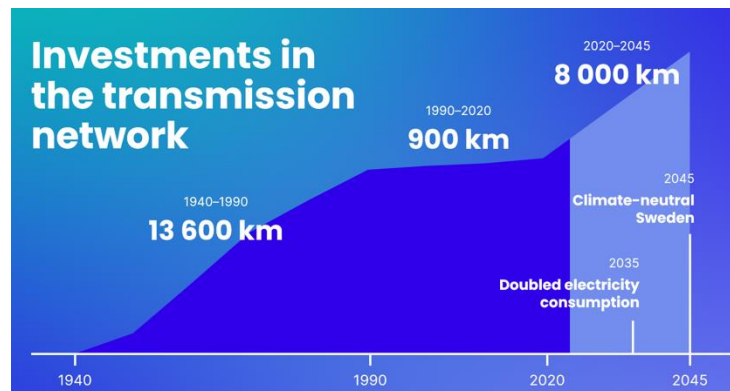


Electricity production

New mix of power sources changes the system capabilities and characteristics.

Transmission network

Need for increased network capacity, new connections, changed flow patterns.



High pace in the transition may cause several challenges

- **Grid development challenges** - to manage to develop the grid fast enough to meet the need at the same time having to deal with the uncertainty of the system need
- **Operational challenges** - increased and more volatile unbalances increase the operational strain
- **Adequacy challenges** – do we risk shortage of electricity production?
- **Market challenges** - the market participants will experience more volatile power prices and uncertain prognosis of the long-term power prices.
- **Political and legislative challenges** – complex permitting process and uncertainty about the stability of the market rules
- **Stability challenges** - With an increase of devices connected to the grid via power electronics (wind, solar, batteries), the power system may become unstable in a number of ways not experienced before.



An aerial night photograph of a Swedish town. The houses are illuminated from within, and streetlights cast a warm glow on the roads. A large lake is visible on the right side of the image, with some structures and a pier extending into the water. The sky is a deep twilight blue.

**Together for a
brighter Sweden**