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Wind Power at Scale

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Why Green Power Sweden?

Green Power Sweden brings together the companies that deliver renewable energy solutions in line with society's growing demand for electricity.

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Development is already heading in this direction on a global, European, and Swedish scale.

Acting collectively rather than continuing to operate separately creates better conditions for large-scale onshore and offshore wind power, large-scale solar power, and large-scale energy storage.

Green Power Sweden represent a system solution within renewable energy of around 180 member companies.





Costs have been falling for decades on learning curves

Decades of steady cost innovation improved electrotech economics

Solar PV module price

\$/W, global price

Logarithmic scale

36



99.6%

since 1980

0.1

1980

2020

Wind installation cost

\$/kW, global price

Logarithmic scale

5,694



80%

since 1984

1,157

1980

2020

Battery cell price

\$/kW, global price

Logarithmic scale

8,888



99%

since 1991

78

1980

2020



Rapid build-out but declining investment signals

Impressive growth in renewables, in particular onshore wind. Today represents wind power ca 25% of the electricity system.

Installed capacity in battery storage in Sweden ca 2 GW mostly during 2024-2025.

Solar power has an installed capacity at 5,5 GW + several big projects in pipeline.

In 2025, about 1,4 GW of onshore wind energy was built – but investment decisions are faltering. During 2025, just a few orders on new turbines have been placed (25 MW).





About wind power at scale

- Wind power will be the dominant energy supplier in Sweden in the future
- All scenarios for Sweden shows a huge increase in wind power
- The relation between onshore/offshore shows challenges for offshore but also possibilities with big potential – but the question here is timing and political will
- We will need the offshore potential to reach 300 TWh or to come even close
- Subsidies represent a cost – no free lunches – nuclear and offshore wind – so cost efficiency must be regarded
- Swedish policy today – creating incentives for municipalities and local residents are big steps in the right direction
- The Swedish industry needs cost-efficient electricity in the future. Until 2040 only wind, solar and storage will be available and we need political strong support.



New development is gaining momentum

- Virtual hybrid parks and PPA:s are developing the concept of renewable electricity 24-7
- More advanced optimization in co-operation with aggregators stabilize production and revenues
- Even new combinations in the physical world as hybrid parks built with hydro power, and solar and batteries are being planned
- Regulation is stepping up and has made it possible to even integrate production of hydrogen in wind and solar parks expanding the definition of hybrid parks even further
- The future is integrating different sources of renewable energy together with digitalisation



Thanks!

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