Statistics and forecast 2021 – Q1

This is SWEA:s quarterly statistics and forecast for the Swedish wind power market. The figures are produced with data from turbine manufacturers and other market participants.

SWEA, Swedish Wind Energy Association - Svensk Vindenergi

2021-05-11

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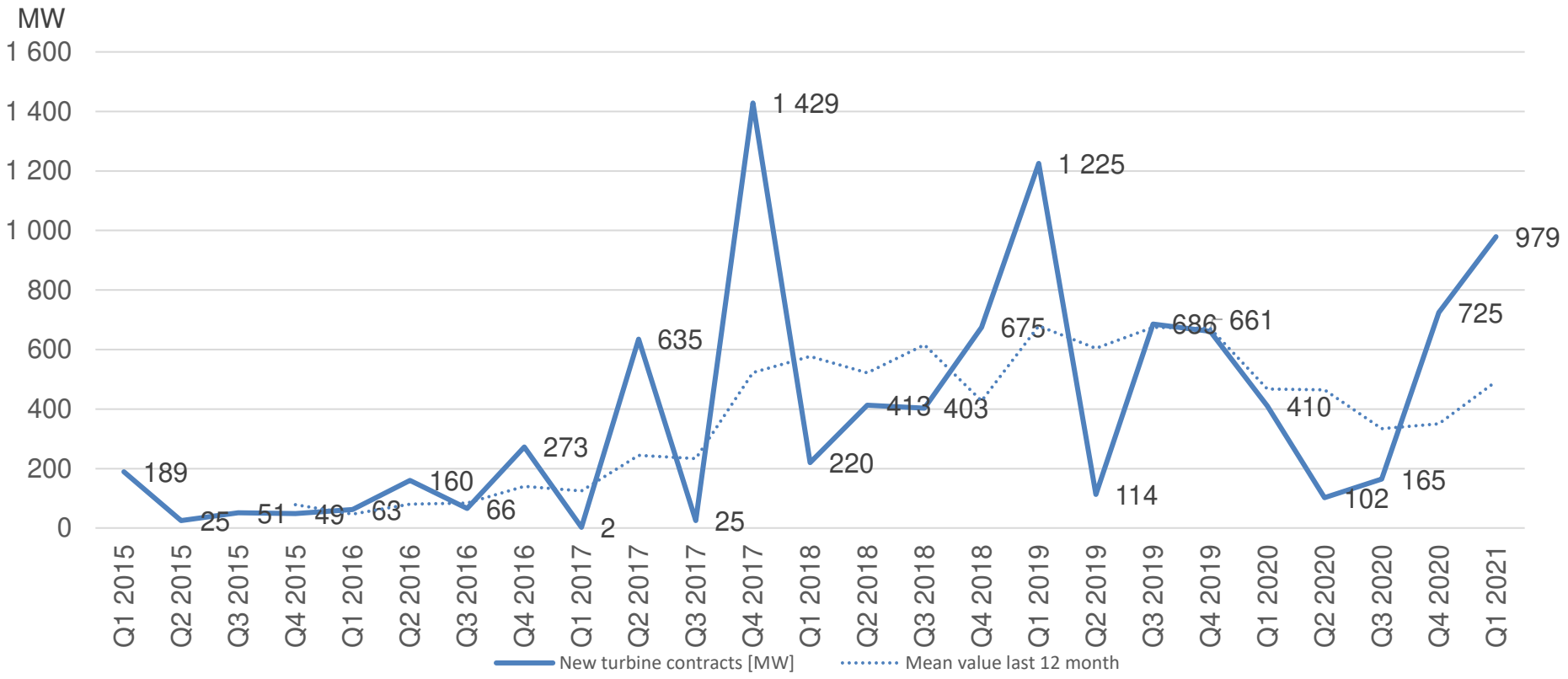
New turbine contracts* (firm and binding)

The market opened strong in the beginning of 2021, with orders corresponding to more than 10 B SEK signed. Q4 and Q1 are normally strong quarters.
The new contracts will add another 979 MW, corresponding to about 3,2 TWh clean electricity.



** Figures from all turbine manufacturers acting on the Swedish market*

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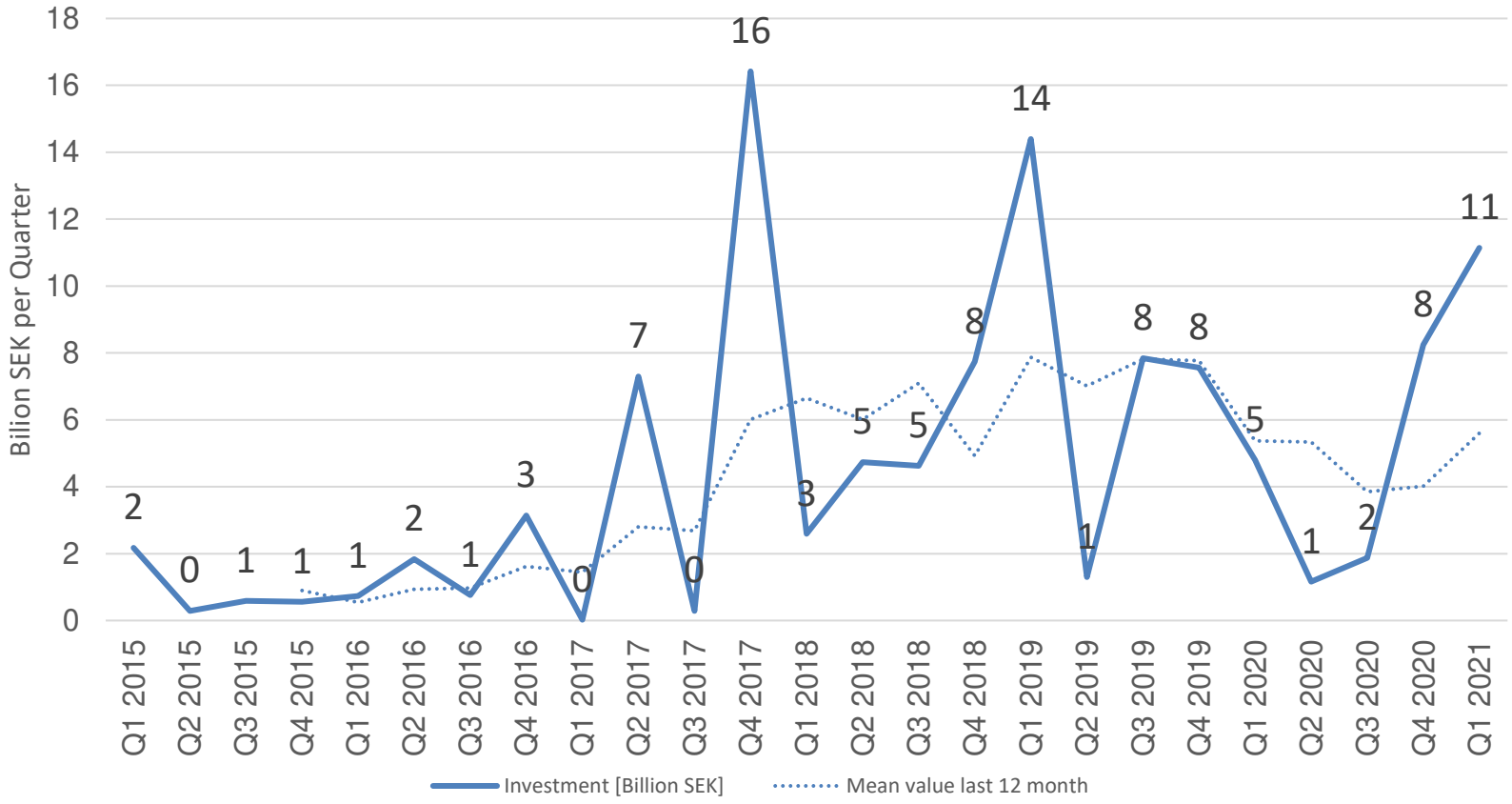
New turbine contracts* [Billion SEK]

Orders corresponding to more than 10 B SEK invesetment was signed in Q1 2021, making the 4-quarters mean value rising close to 6 B SEK.
The new contracts will add another 979 MW, corresponding to about 3,2 TWh clean electricity.



** Figures from all turbine manufacturers acting on the Swedish market*

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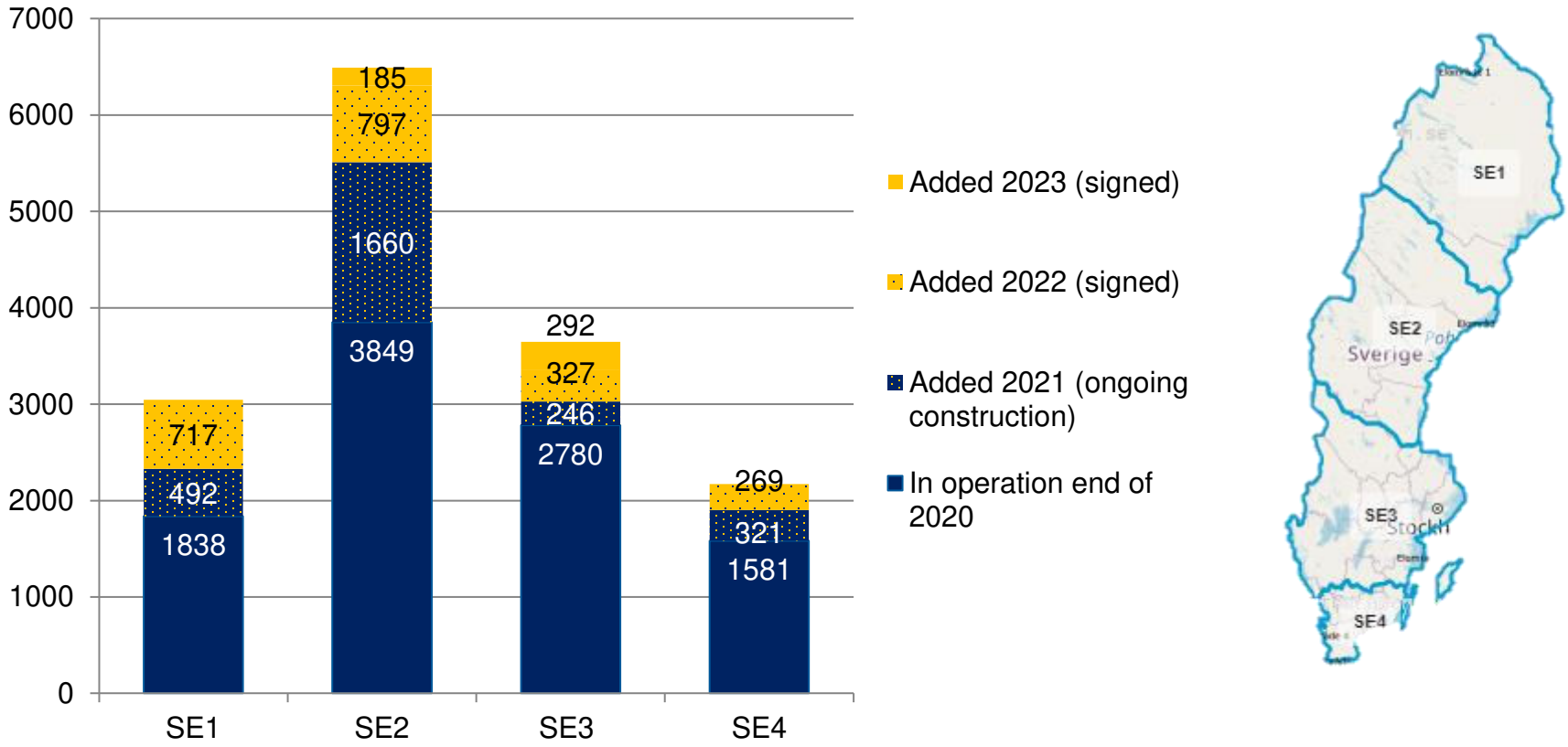
Bidding area break down of scheduled comissioning.

SE2 remains dominant in 2021 and 2022. For already signed deliveries in 2023 SE3 is in a slight lead…



** Figures from all turbine manufacturers acting on the Swedish market. Undisclosed orders are not always included*

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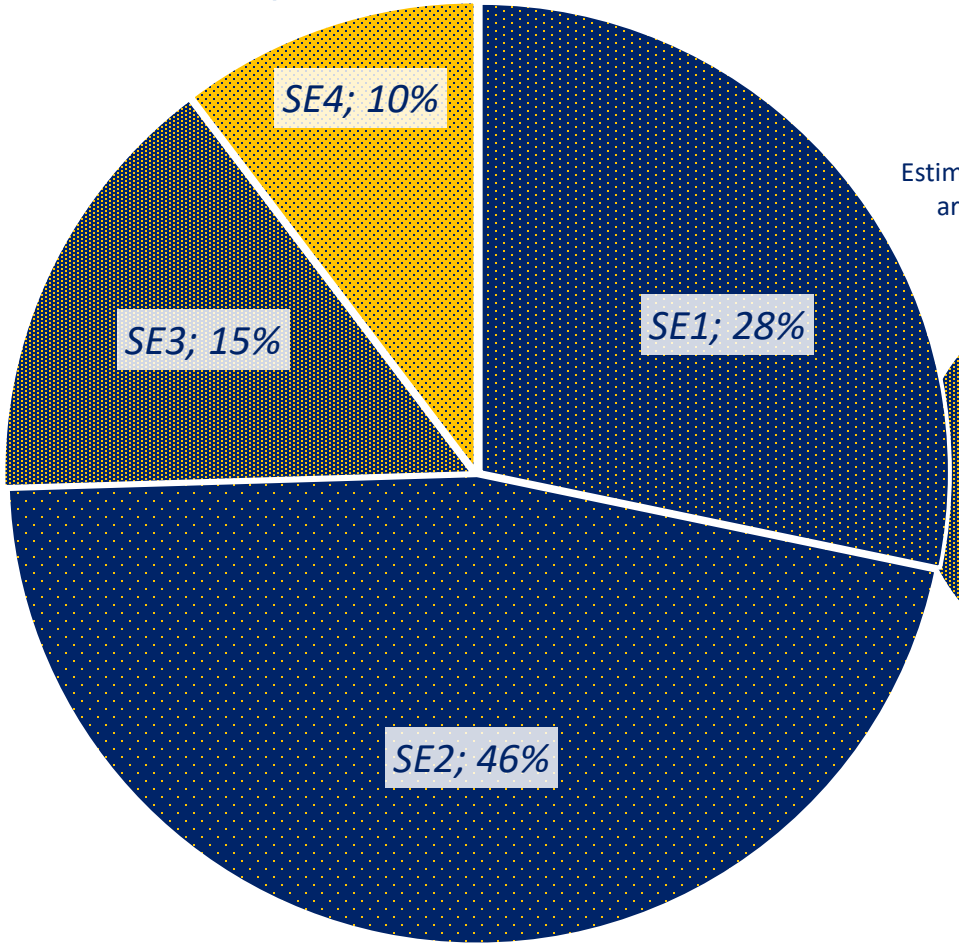
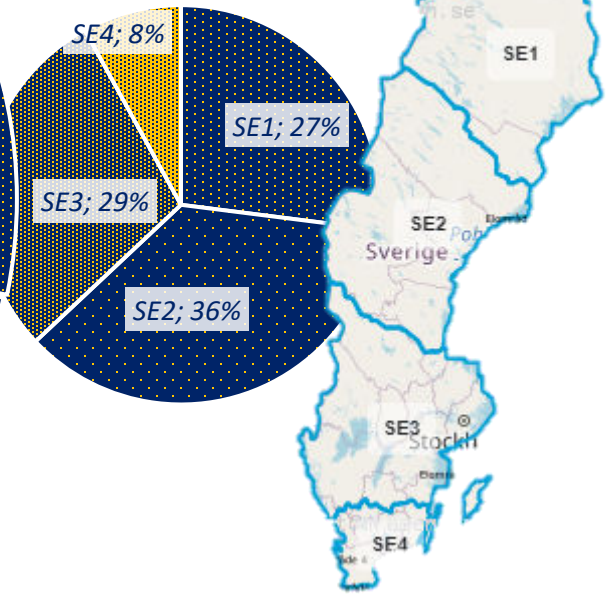
Geographical/ ”bidding zone break down”.

Distribution for on-going wind power comissioning [%] on bidding areas in 2021-2024.
SE3 is somewhat underrepresented in terms of added MW/km2.



Estimated Bidding-zone-area of total land area in Sweden [% of 450 000 km2]



** Figures from all turbine manufacturers acting on the Swedish market.*
Undisclosed orders are not always included

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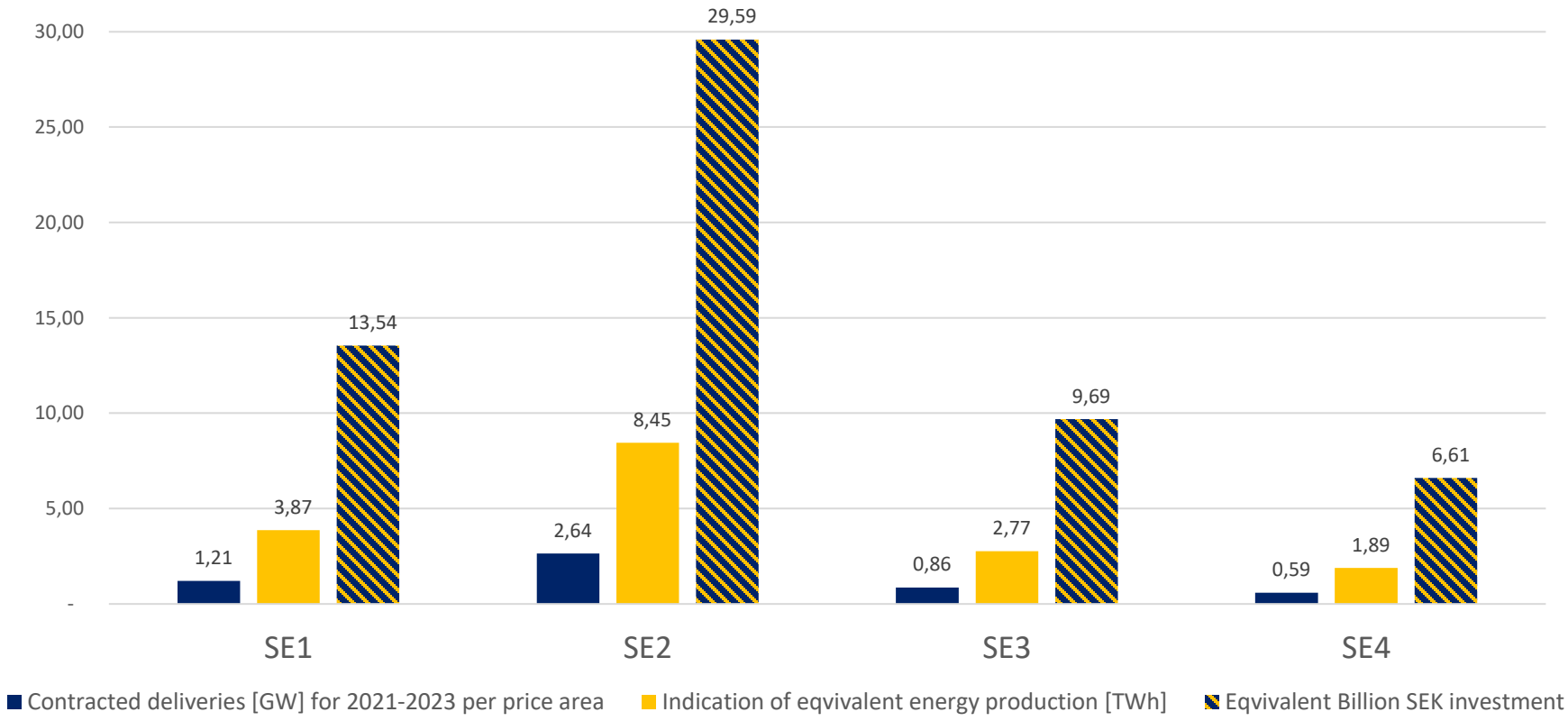
Capacity [GW], Energy [TWh] and Investment [BSEK] additions per price area 2021-2023

Energy and capacity additions [GW and TWh] are strongly dominated by SE2 which accounts for 50% of installations 2021-2023. Investments are only to be taken as an indication and calculated using the key figure of 3,5 BSEK/TWh



** Figures from all turbine manufacturers acting on the Swedish market*

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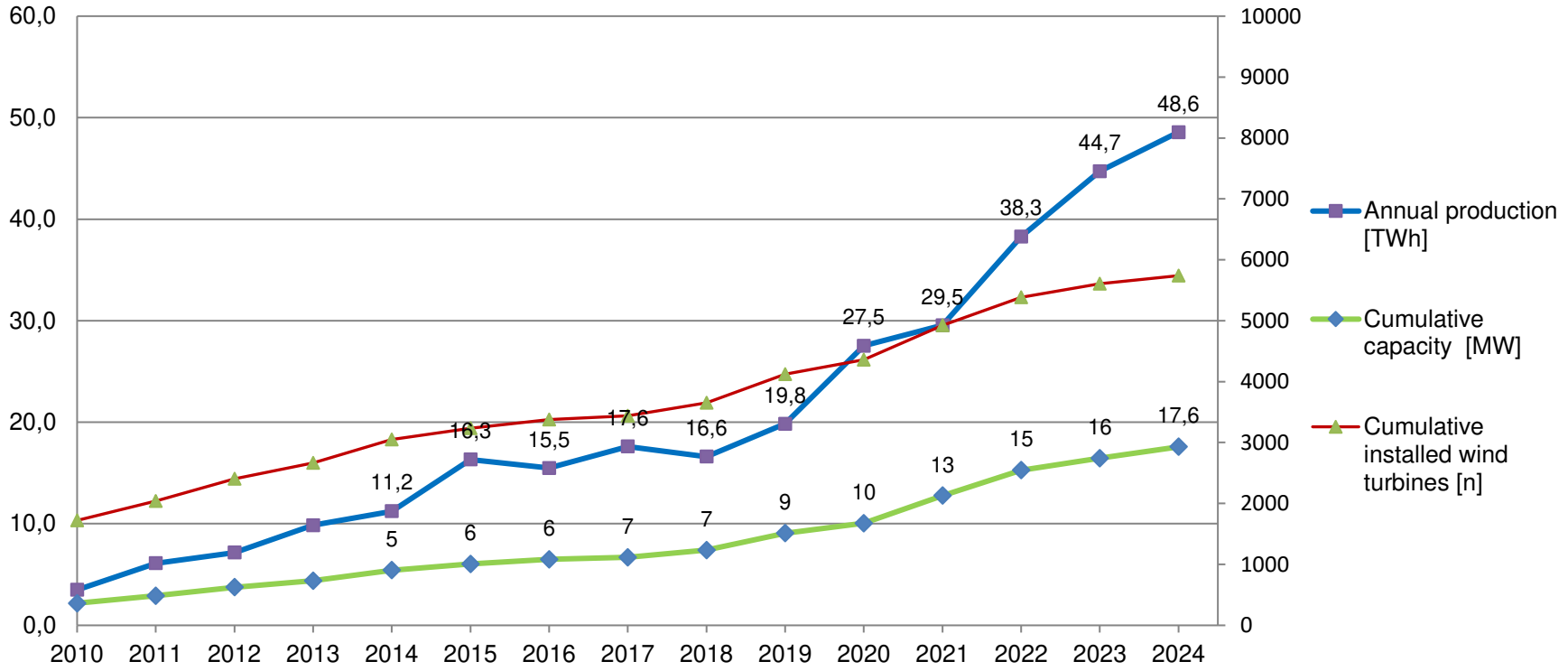
Short term forecast, 2021-05-11

The growth is continuing. Towards 2024 the installed power is likely reaching above 17 GW, with normal year production reaching 50 TWh, but the number of installed turbines will remain below 6000 - as every turbine has an ever higher yield.



** Figures based on reported firm and binding contracts from all turbine manufacturers acting on the Swedish market. This scenario is the official short term forecast of SWEA and updated quarterly. The long term forecast (2040) is found on the homepage of SWEA*

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Comissioning [MW] – record high scheduled comission for 2021 and 2022

Time plan according to turbine manufacturers for wind power installations during year n [MW]*. Delays** in projects are influencing scheduled commissioning but planned installations during 2021 and 2022 are record high and will put total value chains on test and drive futher innovation. Further delays are considered likely – which makes forecasting changeable.

2020	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2021 (Tot)	2022	2023	2024
988	*297*	593	627	1202	2719	2110	477	405
				Difference since Q4 2020:	*-200*	*+998*	*-181*	*+405*

** Figures from all turbine manufacturers acting on the Swedish market*
*** Delays depend on various reasons. E.g. windy conditions, supply chain constraints and covid-restrictions*

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Installations in 2021

Total by the beginning of 2021

Turbines: 4359 st

Capacity: 10,0 GW

Annual normal production:
- capacity installed beginning 2021: 26,3 TWh*
- added during 2021: 8,7 TWh*

Added capacity in 2021

1st quarter:	297 MW	(actual)
2nd quarter:	593 MW	(estimated)
3rd quarter:	627 MW	(estimated)
4th quarter:	1202 MW	(estimated)
Total:	**2 719 MW**	

Total by the end of 2021 - forecast

Turbines: 4932 st

Capacity: 12,7 GW

Estimated production: 29,5 TWh**

Annual normal production end of 2021: 35,0 TWh*

** Annual normal production is the calculated annual production if Wind Index is 100 and all capacity are on line during a full year.*

Capacity added during a year typically contributes with 30-40% of annual normal production during first operational year and Wind Index is highly variable year to year.

*** Estimated real production is depending on when capacity is going online and how windy it is. Year 2020 had a Wind Index of 114 and actual production of 27,5 TWh.*

Estimations for the reminder of 2021 based on the assumption that new projects comes on line as above and normal wind conditions (WI100)

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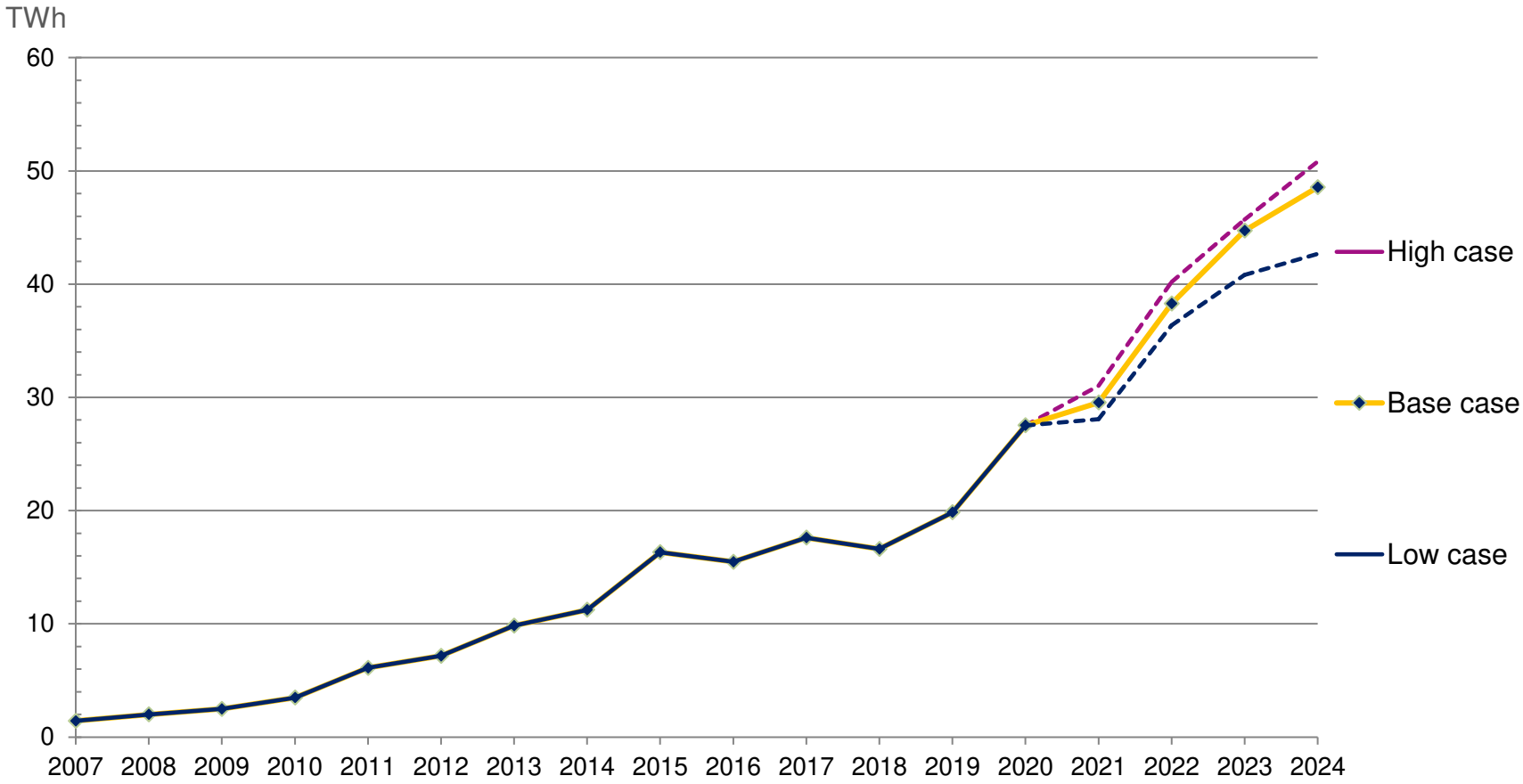
Wind power production forcast – all cases

Production is increasing to between 44 TWh (low) and 54 TWh (high) normal year production in 2024. This places wind power as the second largest power supplier, in all scenarios.The apparent trend break and upwards skip in the curve is due to very high winds during 2020.



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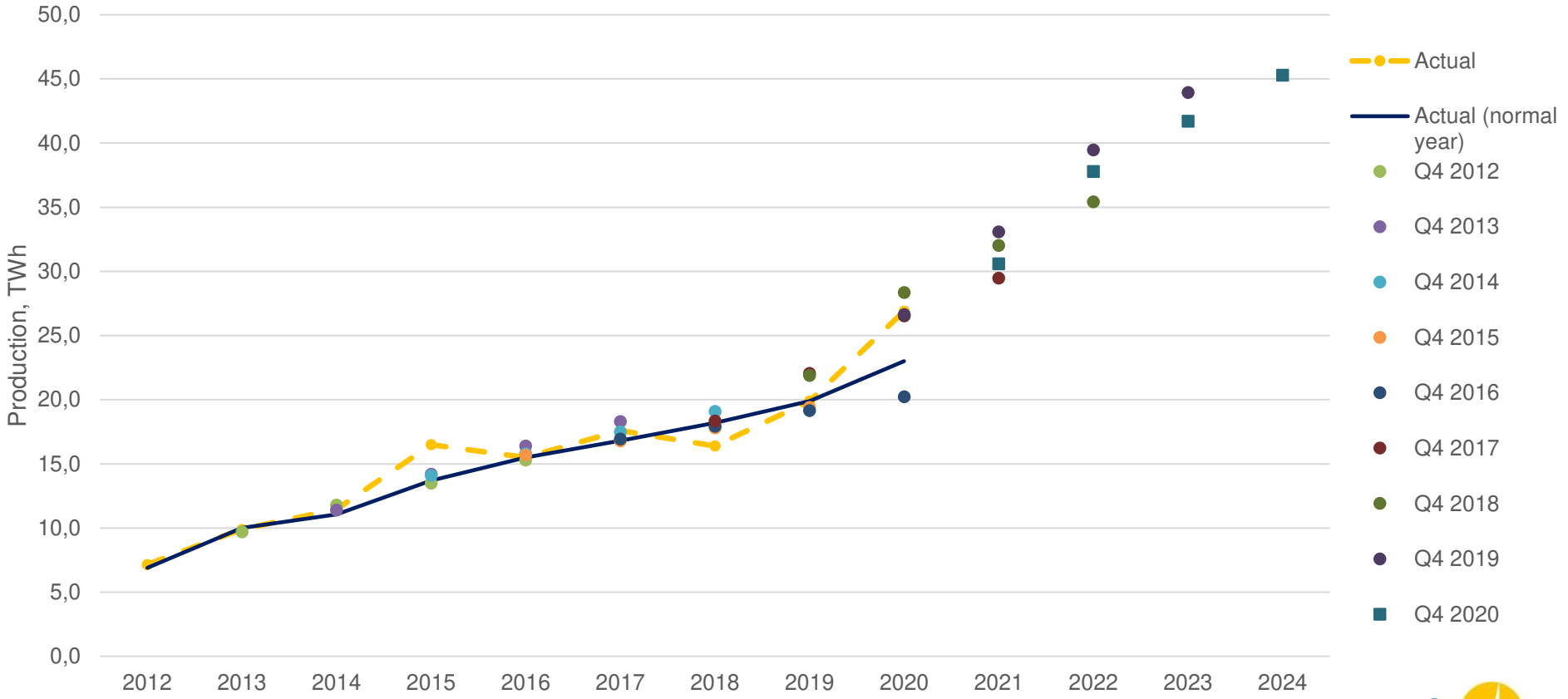
Evaluation of SWEA:s previous forecasts (base case)

Graph shows previous forecasts (dots) as well as actual real production and actual normal annual production (line). SWEA's previous forcasts shows a solid track record.



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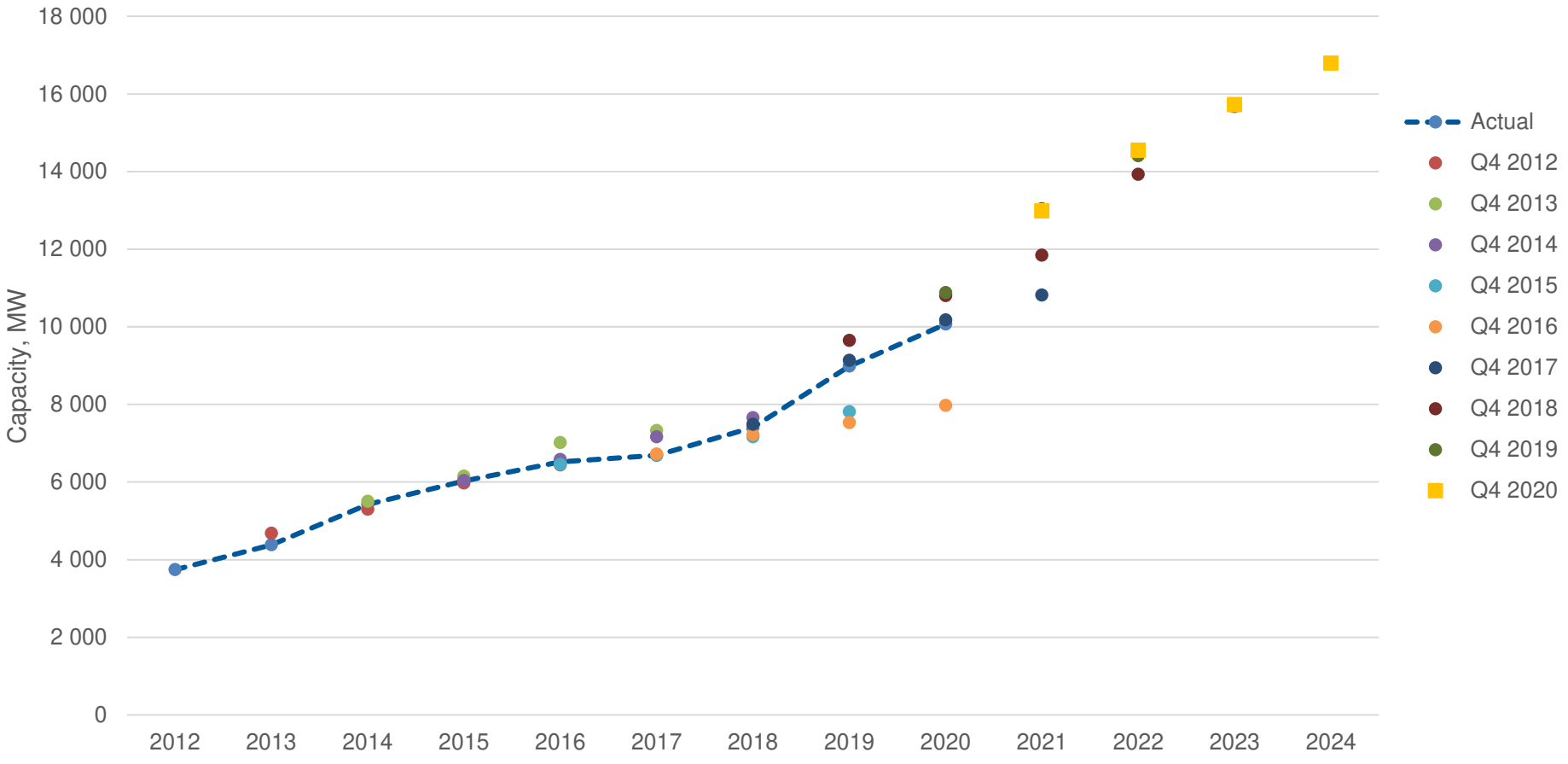
Follow up – installed capacity [MW]

Graph shows previous forecasts (dots) and actual installed wind power capacity (line).
Earlier forecasts have proven to be very close to the real development.



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The statistics and forecast

- ***The statistics*** are mailny based on sales figures reported by the turbine manufacturers and project figures from project developers combined with official scources.
- ***The forecasts*** are based on the above figures combined with estimates regarding future market conditions. It may differ since last quarter and yearly production figures are based on the assumption that 50% of the capacity added one year is available for production.
  - ***Base case:*** Refer to the short term forecast. It is based on the estimation that all firm and binding turbine contracts yet reported are realised together with some new projects. That is our assessment of the most realistic scenario and is the official forecast.
  - ***Low case:*** Assumes only projects where turbine contracts (firm and binding) have been signed will be realized. In this scenario no further investment decisions are made. Thus, this scenario defines the lower limit of wind power growth in Sweden.
  - ***High case:*** Projects with turbine contracts (firm and binding) are realized and on top of that an estimation that most projects considered favorable are realized.

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daniel.kulin@svenskvindenergi.org

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