

Statistics and forecast

This is quarterly edition of statistics and forecasts for the Wind Power Market, covering data from turbine manufacturers and wind power developers acting on the Swedish market (estimated coverage is 100 percent respectively 95 percent of the total Swedish market)

Q1 2018

Svensk Vindenergi – Swedish Energy Association, SWEA

The statistics and forecast

- **The statistics** are based on the order books of the turbine manufacturers and project portfolios of the wind power developers presented at aggregated level
- **The forecast** consists of three future scenarios (low, base, high). They are based on assumptions regarding which projects will be realized - considering today's market situation and the future's.
- **Low case:** Only projects where turbine contracts (firm and unconditional) have been signed will be realized. In this scenario no further investment decisions are made, hence this scenario defines the lower limit of wind power growth in Sweden.
- **Base case:** Projects with signed turbine contracts, approximately 20 percent of permitted projects and 5 percent of projects under permission process will be realized. This is the most realistic scenario and is the official forecast.
- **High case:** Projects with signed turbine contracts, around 30 percent of permitted projects and 10 percent of projects under permission process will be realized. This scenario may be relevant in circumstances leading to higher electricity and green certificate prices and sets the ceiling for growth of wind power in Sweden.

Installations in 2018

Total by the end of 2017

Turbines: 3 437

Capacity: 6 691 MW

Actual production: 17,6 TWh *

Annual production (estimated): 17,2 TWh **

Added capacity in 2018 (forecast)

1st quarter: 8,4 MW

2nd quarter: 156,9 MW

3rd quarter: 251,2 MW

4th quarter: 399,1 MW

Total: 815,5 MW



Total by the end of 2018 (forecast)

Turbines: 3 681

Capacity: 7 506 MW

Actual production: 17,2 TWh *

Annual production (estimated): 19,8 TWh **

** Actual production is the real production and depends on wind conditions and when installations are made during the year.*

*** Estimated annual production is the annual production the turbines are expected to produce when in operation during a whole year with normal wind conditions.*

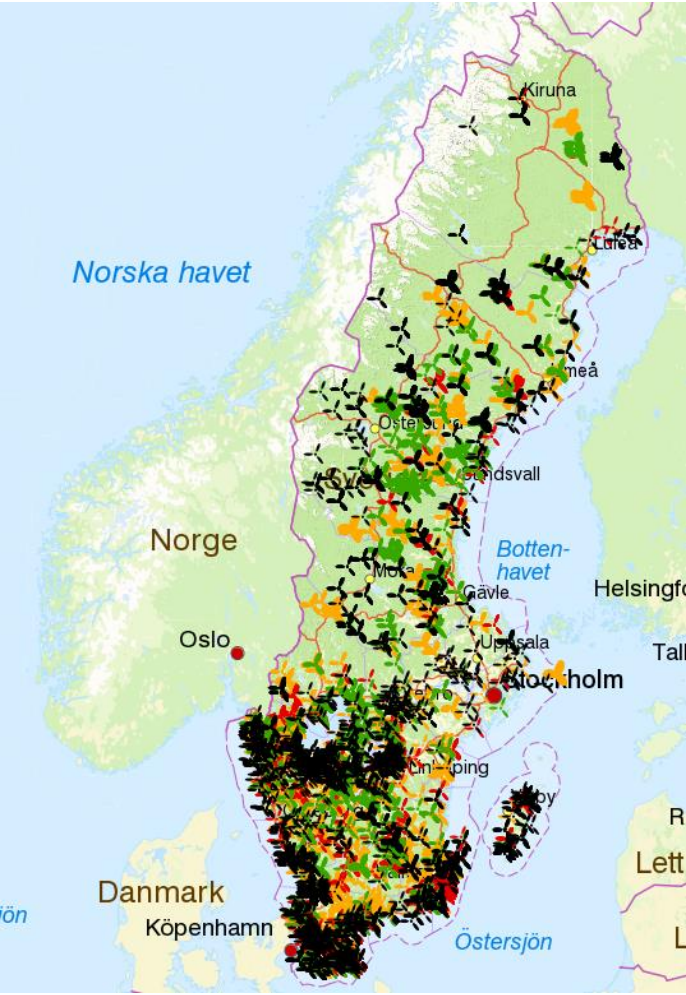
Project portfolio, status by 2018-03-31

| | | | | |
|---------------------------------|----------------|-----------------|--------------|------------------|
| In operation | Onshore | Offshore | Total | <i>Change Q4</i> |
| Windturbines | 3 354 | 86 | 3 440 | (+3) |
| Capacity (MW) | 6 499 | 200 | 6 699 | (+8) |
| * Under construction | Onshore | Offshore | Total | |
| Windturbines | 726 | | 726 | (+54) |
| Capacity (MW) | 2 613 | | 2 613 | (+212) |
| ** Permitted | Onshore | Offshore | Total | |
| Windturbines | 2 097 | 503 | 2 600 | |
| Capacity (MW) | 6 534 | 2 267 | 8 801 | |
| ** In permission process | Onshore | Offshore | Total | |
| Windturbines | 2 928 | 275 | 3 203 | |
| Capacity (MW) | 9 435 | 925 | 10 360 | |





* Firm and unconditional turbine order based on investment decisions

** Estimations

Geographical spread

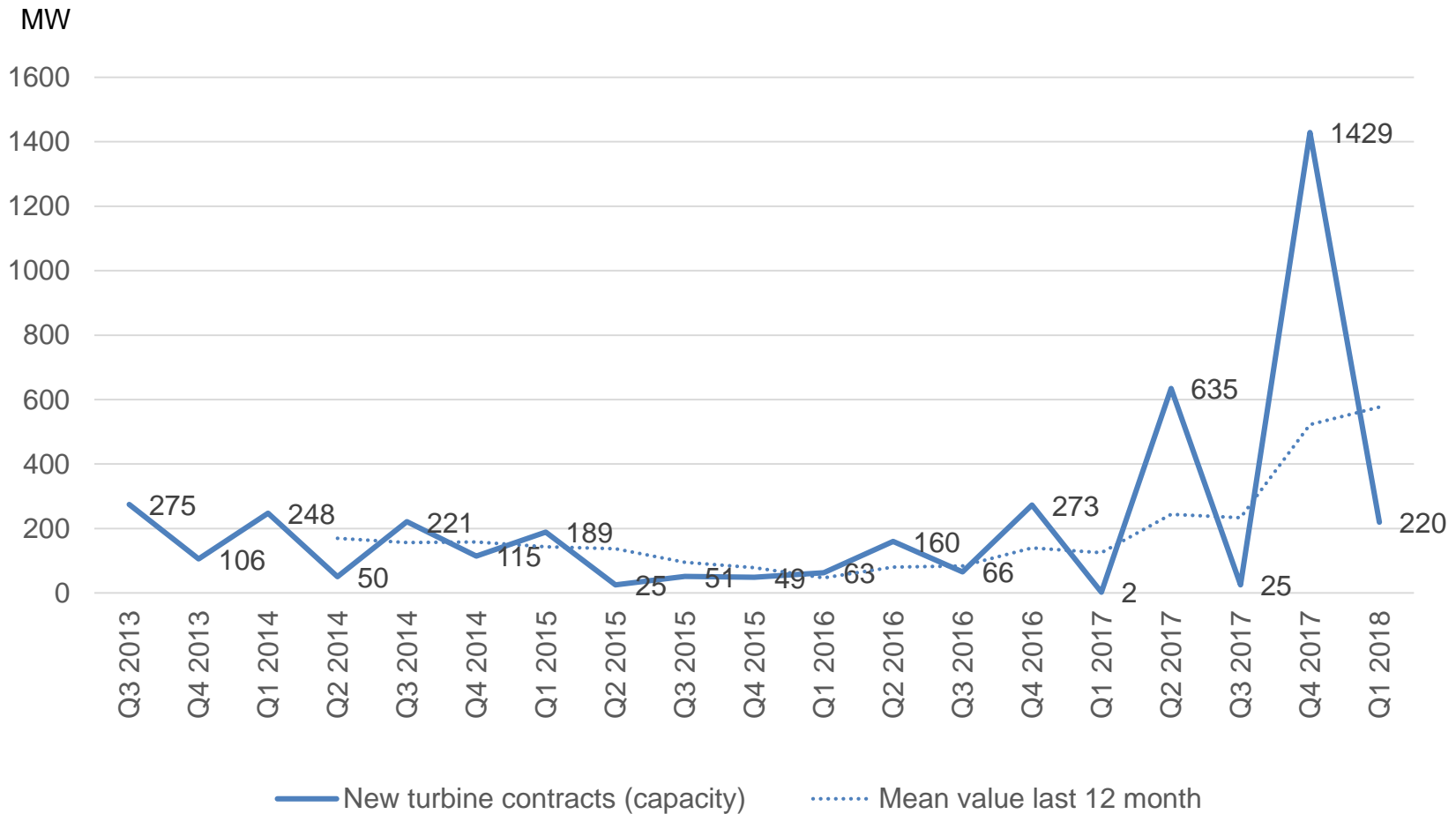


Project status

-  In operation
-  Permitted
-  Rejected
-  In permitting process

Source: [Vindbrukskollen.se](http://vindbrukskollen.se)

New turbine contracts (firm and binding)



* Figures from all turbine manufacturers acting on the Swedish market

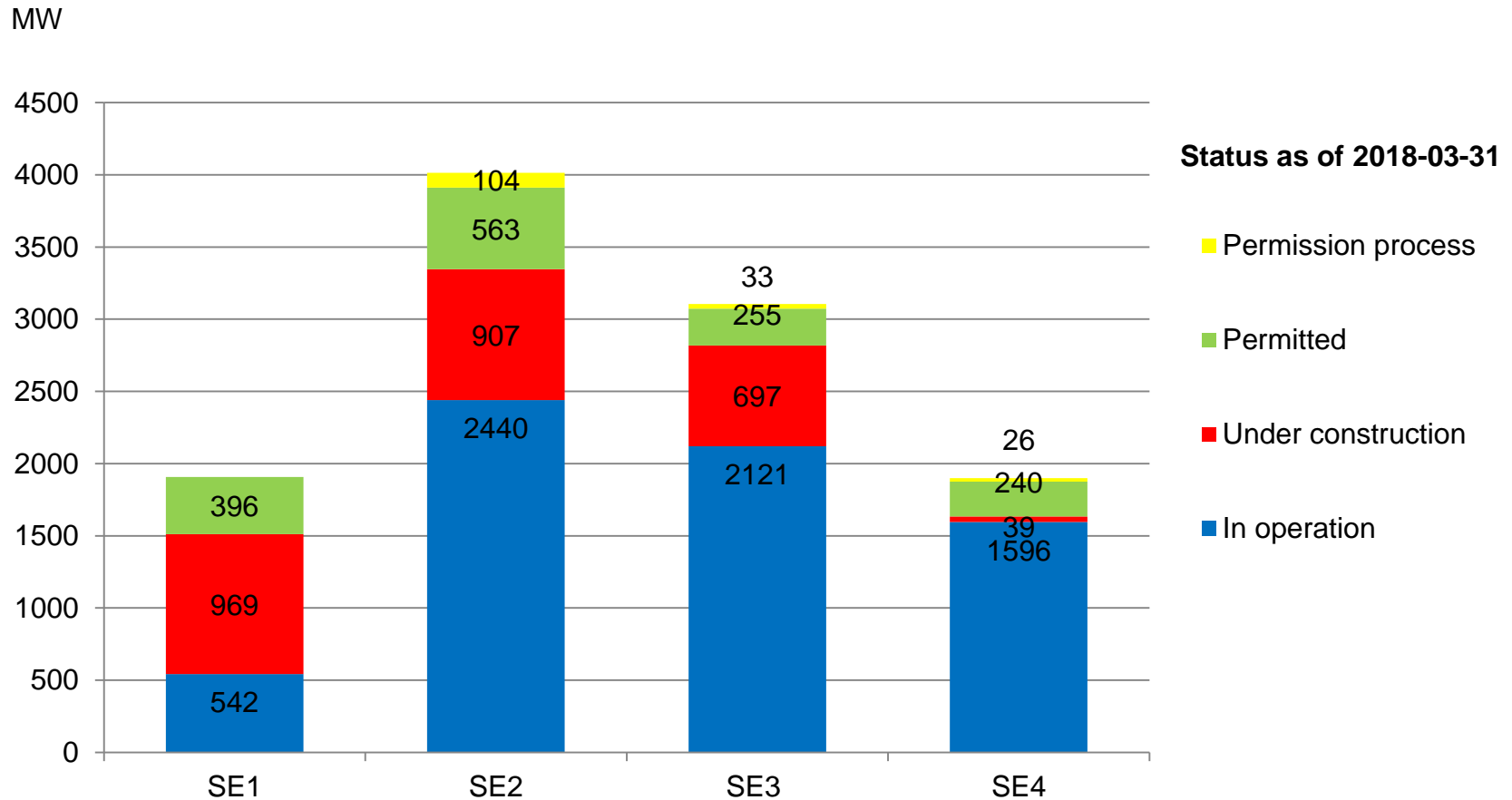
Order books

Time plan according to turbine manufacturers for wind power installations during year (MW) *

| 2017 | 2018 Q1 | 2018 Q2 | 2018 Q3 | 2018 Q4 | 2018 (Tot) | 2019 | 2020 |
|------|---------|---------|---------|---------|------------|------|------|
| 199 | 8 | 157 | 251 | 399 | 815 | 1734 | 72 |

* Figures from all turbine manufacturers acting on the Swedish market

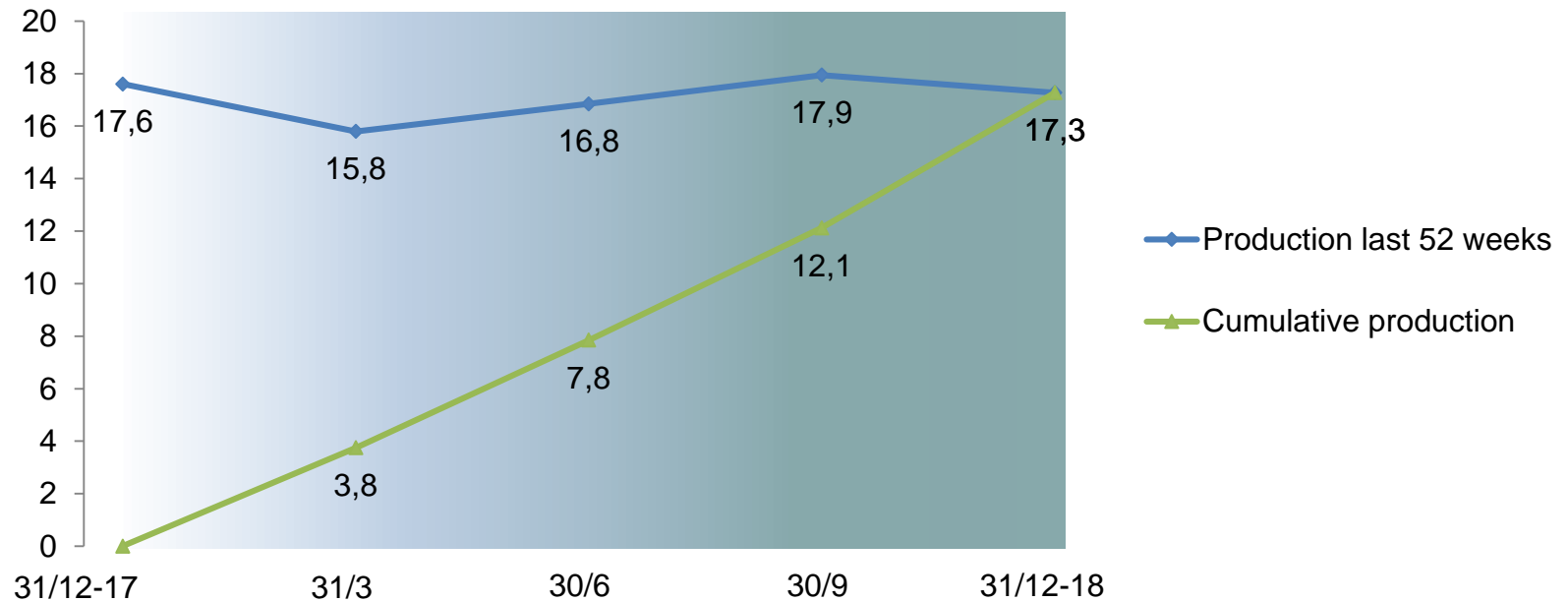
Installed capacity by price area 2021-12-31 (base case)



Wind power production 2018 (forecast)

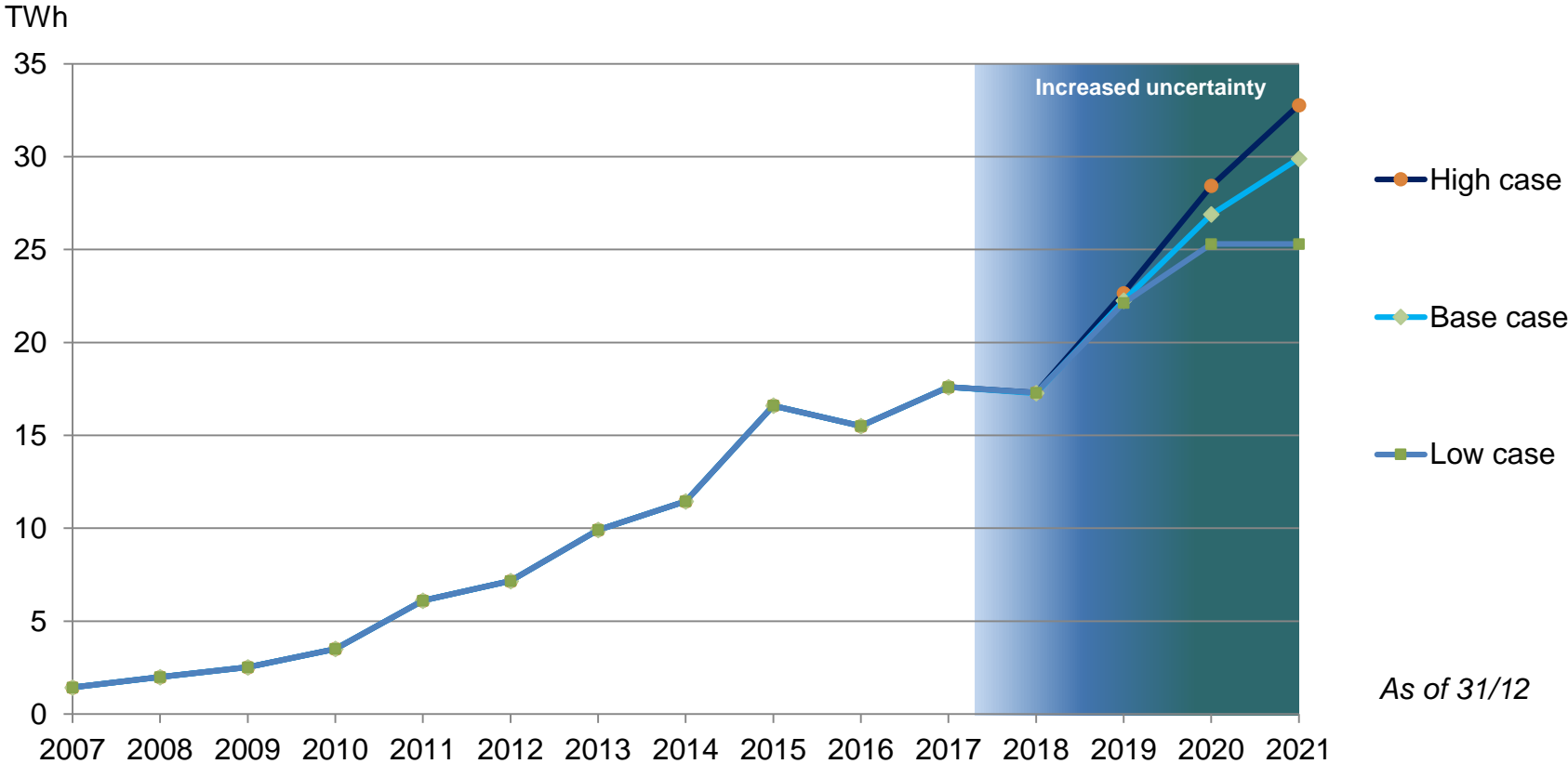
Actual and forecast

TWh



Wind power production – different scenarios

Actual and forecast

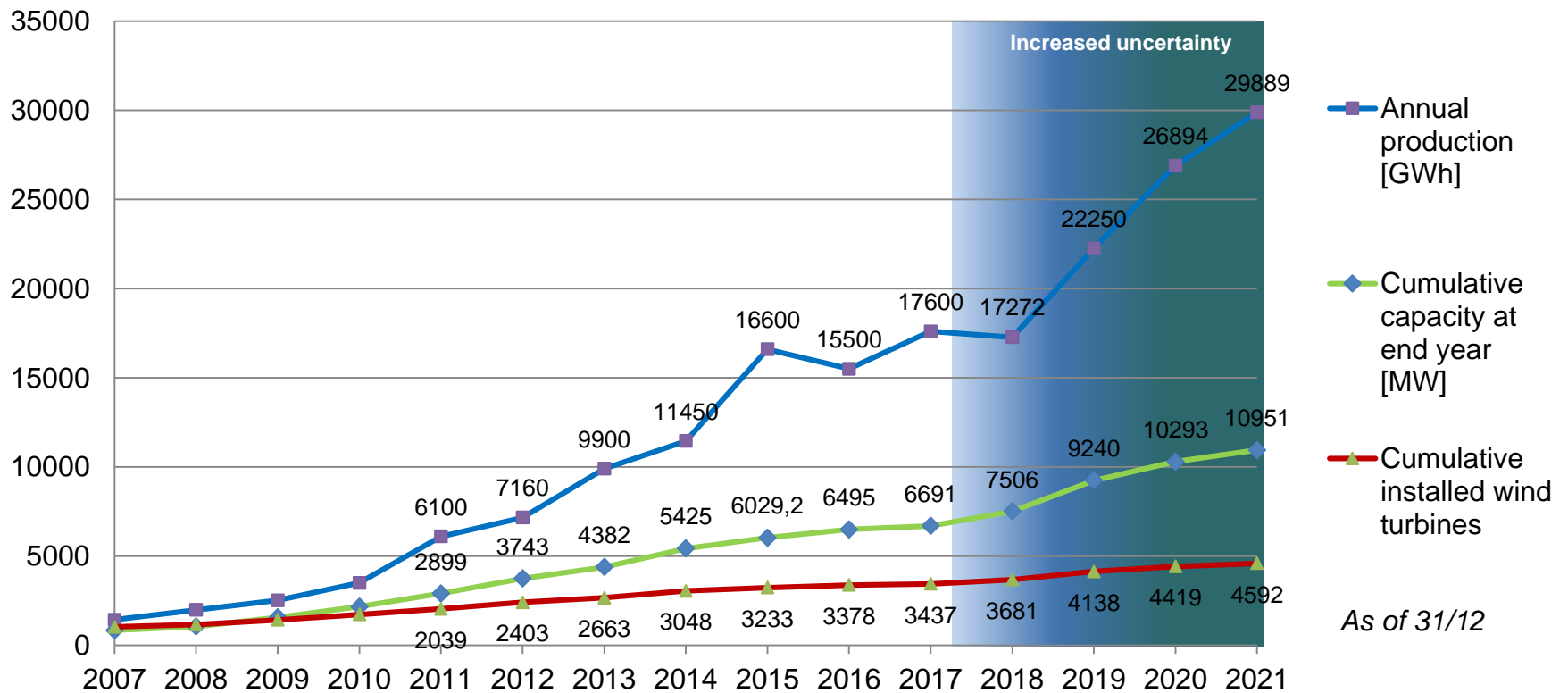


As of 31/12

Base case

This scenario is the most realistic and official forecast of Svensk Vindenergi

Actual and forecast



As of 31/12

Assumptions

Part of wind power project portfolio capacity expected to be realized within given time frame depending on scenario (approximate figures)

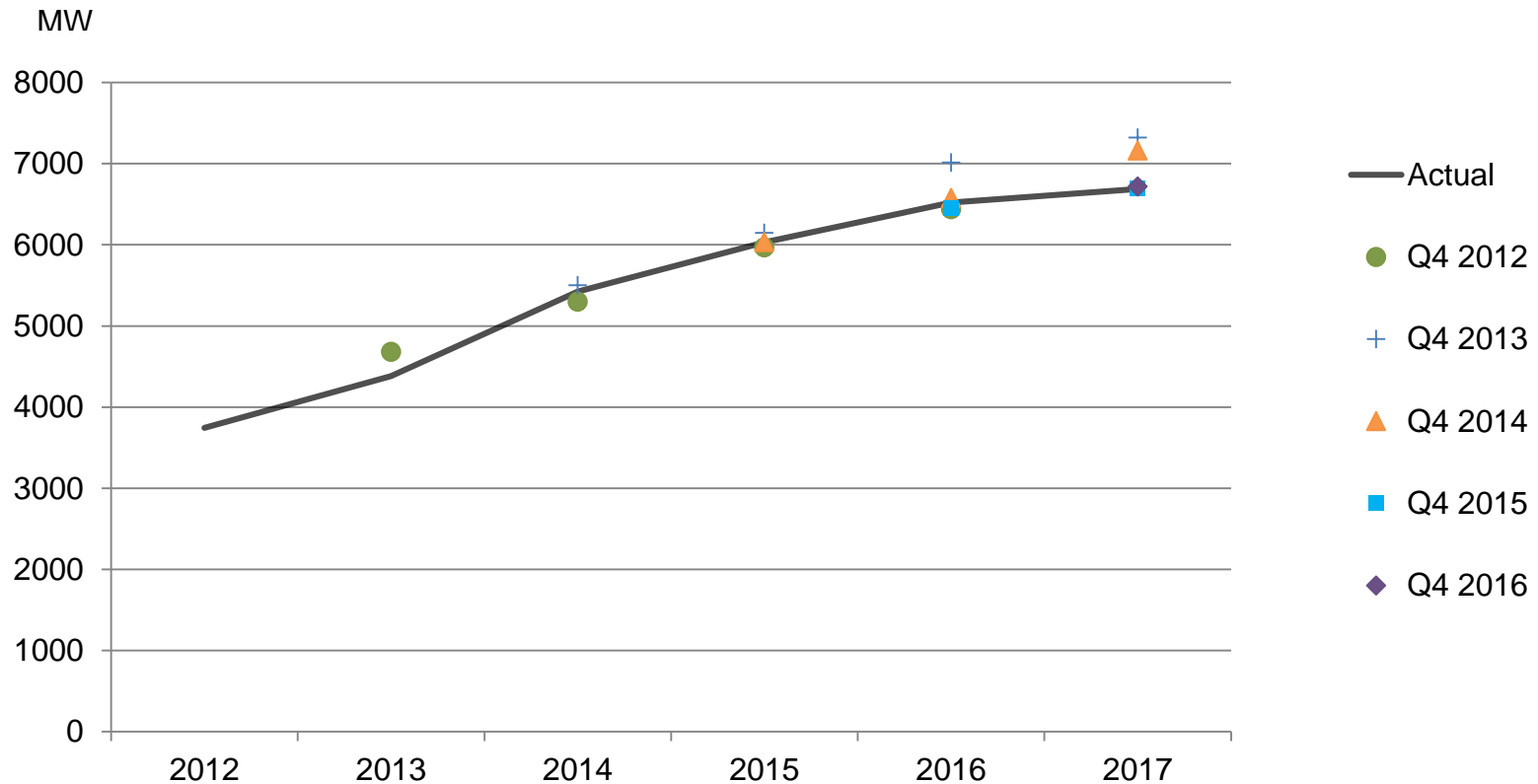
| Status | High | Base ** | Low |
|-------------------------|-------|---------|------|
| Under construction | 100 % | 100 % | 95 % |
| Permitted * | 30 % | 20 % | 0 % |
| In permission process * | 10 % | 5 % | 0 % |

* Only onshore wind power are expected to be built.

** The base case reflects a possible scenario based on an assessment of current and future market conditions.

Follow up

Previous forecasts and actual installed wind power capacity



Follow up

Previous forecasts and actual annual wind power production

