



# PRICE FORECAST FOR THE NORWEGIAN/SWEDISH CERTIFICATE MARKET

## SPRING 2017 EDITION

*THEMA offers long-term price forecasts for the European and Nordic power markets as well as the market for electricity certificates in Norway and Sweden. Each forecast is delivered with latest market data at the time of order. In addition to our standard scenarios, we also cover a chosen topic in each forecast.*

# ELCERTIFICATE PRICE FORECASTS 2016-2035

## THE ANALYSIS OF CHOICE FOR UTILITIES, INVESTORS, BANKS AND REGULATORS

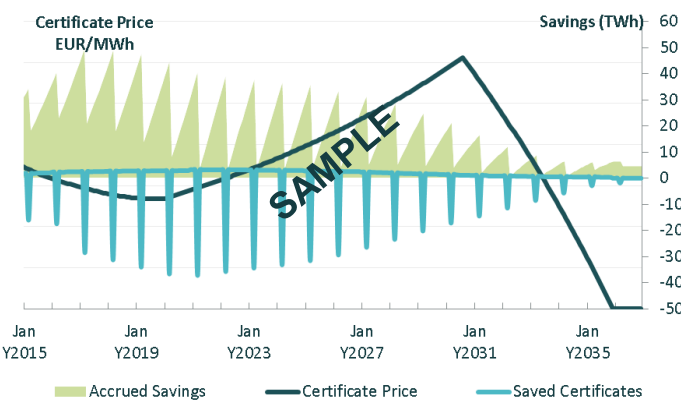
- In-depth fundamental analysis of the Swedish-Norwegian elcertificate market
- Based on our in-house developed model TheTGC, licensed to Nordic players and extensively used in projects
- Completed by an experienced group of analysts

## A REFERENCE SCENARIO AND A RANGE OF UNCERTAINTIES

In addition to a reference scenario, the forecast addresses uncertainties in form of a wide range of additional scenarios and sensitivities:

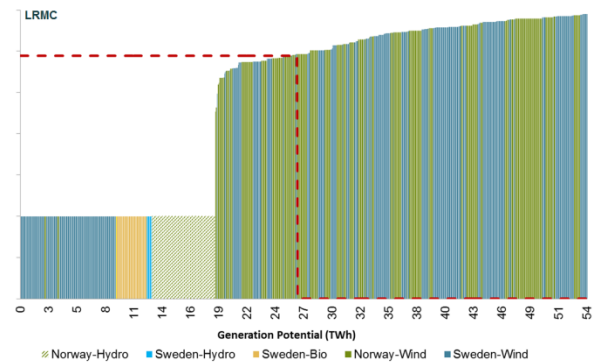
- Alternative power prices
- Technological trends
- Development of costs (LCoE)
- Hydro and bio built-out potential
- Timing of investments

Key to the elcertificate analysis is a detailed database for all potential RES investments in Norway and Sweden. The forecast is fully consistent with our power price forecast for Norway and Sweden.



## BENCHMARKING (OPTIONAL)

THEMA also offers benchmarking of wind investments against our comprehensive database of potential and actual RES projects in Norway and Sweden.



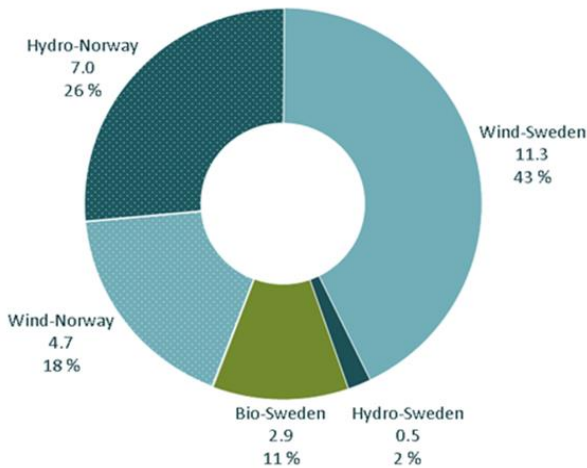
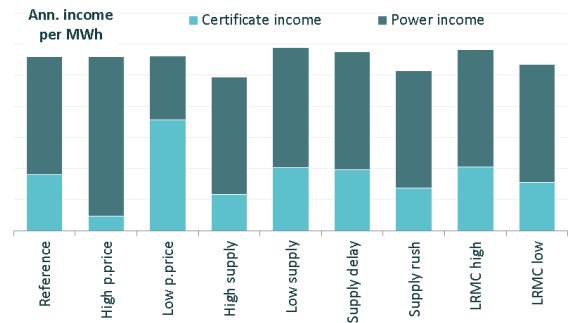
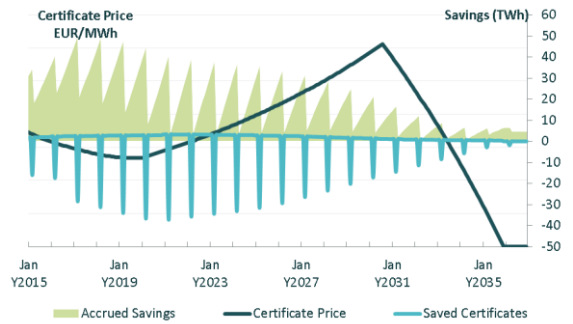
## DELIVERABLES

- A lean and to the point report
- Workshops where the report and market developments are discussed
- Key data is delivered in Excel-format

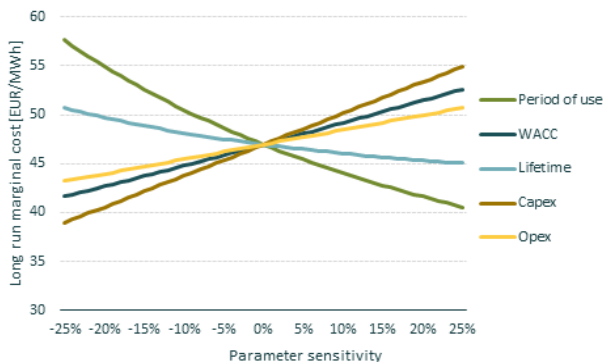


**An advanced simulation model:** For the certificate price forecast we have developed a simulation model that models prices and investments, taking into account a large number of variables and restrictions, including technology learning curves, grid restrictions, and area prices.

**Integrated forecast:** The certificate market model is seamlessly integrated with our power market model *TheMA*. Power prices and certificate prices are consistent with each other, and both models share the same base data for simulations. The certificate forecast is based on the Best-guess power price scenario.



**Country specific restrictions and market design accounted for:** In our analysis and database we also account for country specific restrictions and regulation (e.g. depreciation rules, committed investments, grid constraints, etc.).



**Detailed project data base:** THEMA has developed a comprehensive database for RES investments in Norway and Sweden, with project specific costs and other information relevant for the certificate market. The project database is regularly updated, and is also basis for our benchmarking services.

**Contact:**

Marius Holm Rennesund, Manager

+47 996 49 610

marius.rennesund@thema.no

**THEMA Consulting Group** THEMA Consulting Group is a consulting firm focused on Nordic and European power market and energy issues. THEMA is active in three areas: Market analysis, market design, and strategy consulting. Our products range from tailored products, studies and services to off-the-shelf price forecasts. To find out more, please visit [www.thema.no](http://www.thema.no)

**Clients** Our clients include major utilities, banks, investors, and trading companies as well as regulators, authorities, TSOs, and the European Commission.