

Electricity Price Scenarios by Fraunhofer ISE

Services by the department of energy system analysis

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Our Service: Price Scenarios and Energy Market Analysis

Analysis of electricity prices

What we offer:

1

Detailed data market analysis on
electricity markets and electricity prices

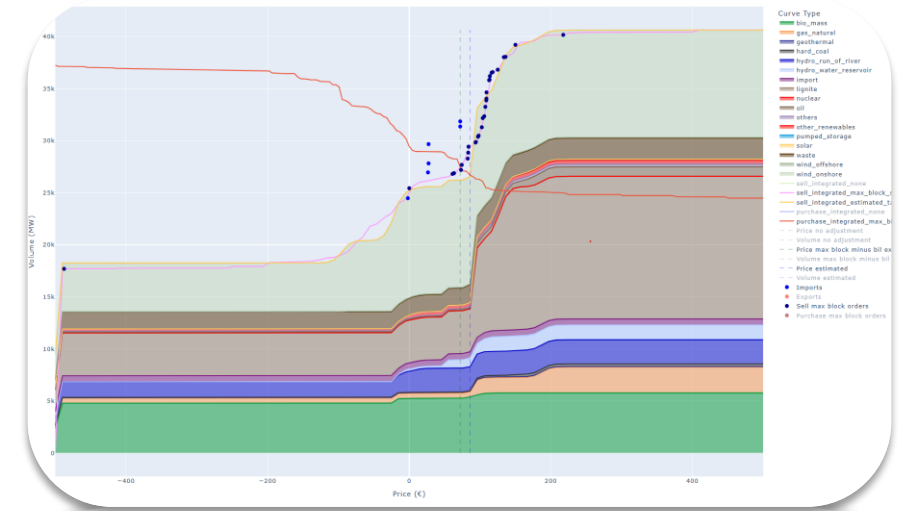
2

Short-term (2-7 days) Price scenarios:
Day-Ahead, intraday markets, reserve markets

3

Long-term (1-20 years) Price scenarios:
Day-Ahead

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Based on our competences

Detailed data on market behavior
of different production technologies

Detailed data on **market coupling**
effects and complex bids

Our price prognoses

Based on:

Energy-Charts 

REMod 

Short-Term Price Prognosis

Day/week

Short-term
decisions

- **Auctions: Day-Ahead, Intraday, FCR**
- **Uses real-time solar, wind, and load forecasts as input**
- **Hourly/Quarterhourly output for the next 3–7 days (DAA)**
- **AI based**

Long-Term Price Prognosis

Up to 25
years

Long and short-term
investments

- **Auctions: Day-Ahead**
- **Uses transformation pathway scenarios of Fraunhofer ISE (REMod) with different selectable weather years**
- **Models supply behavior & market curves**
- **External gas and CO₂ price assumptions**
- **Hourly/Quarterhourly output for up to the next 25 years**
- **AI based or AI supported**

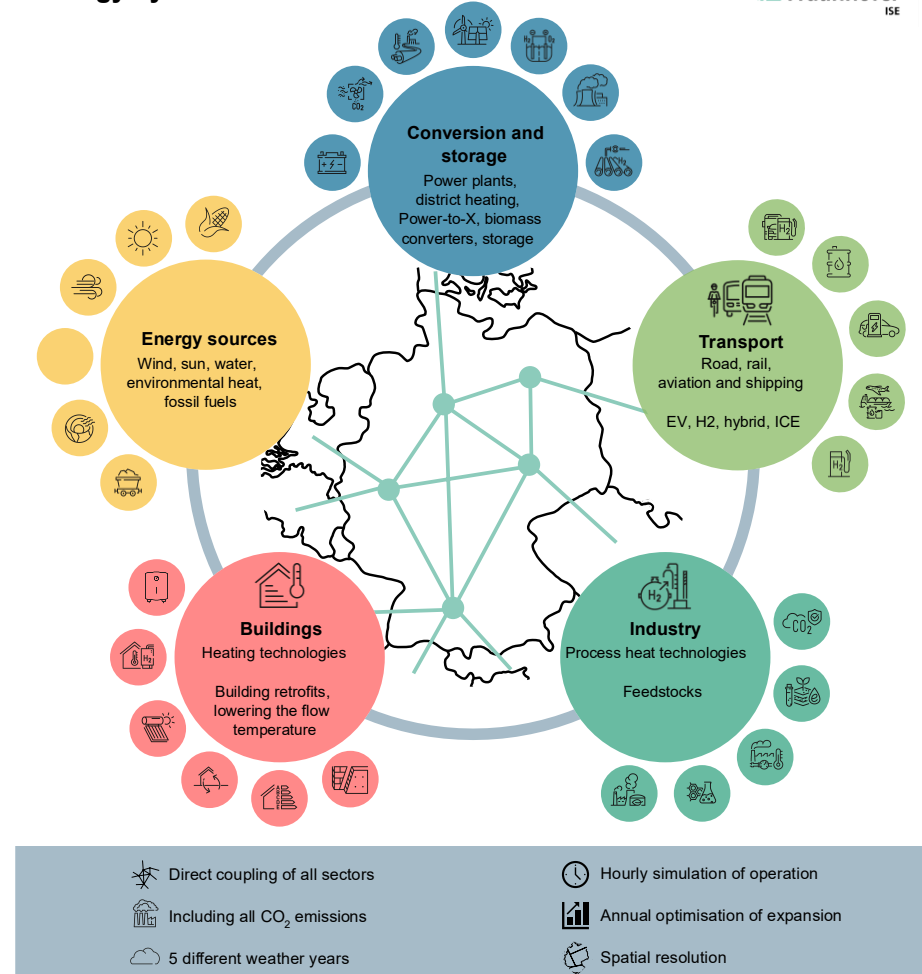
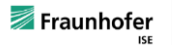
REMod Input Data for Long-Term Price Prognosis

Path scenarios to reach climate neutrality

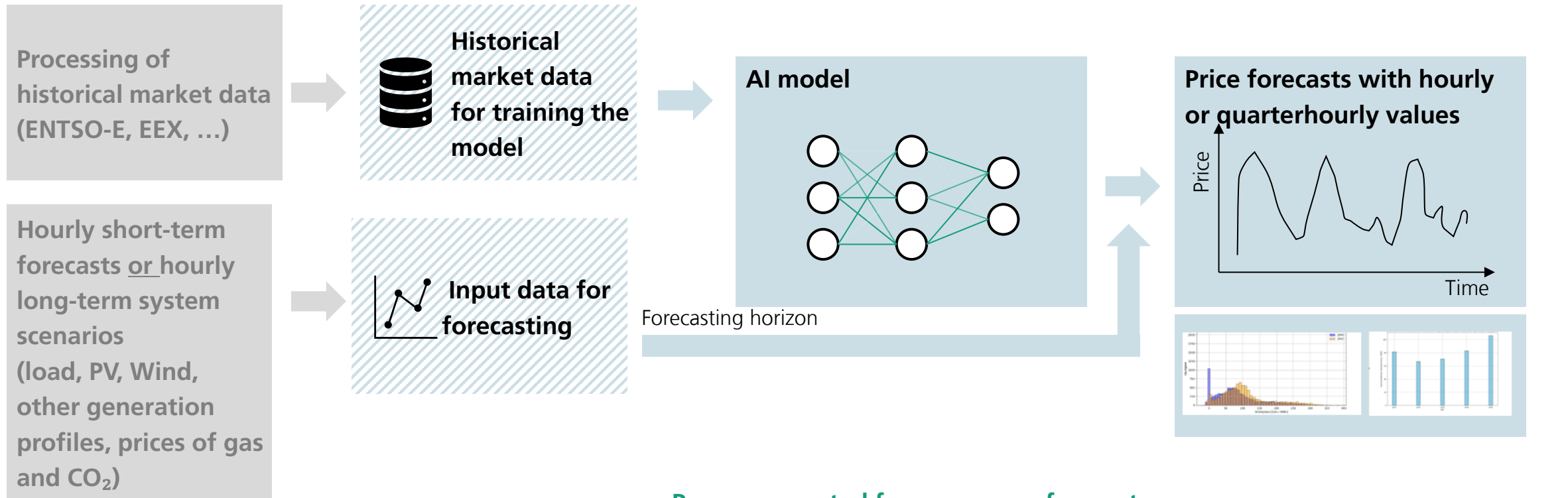
- Weather years 2011-2015

<p>Technology Neutral – Cost-Optimal Transformation Path</p> <ul style="list-style-type: none"> • Only minimal technology-related restrictions 	<p>Efficiency – Demand Reduction and Behavioural Changes</p> <ul style="list-style-type: none"> • Decline in energy demand across all sectors • Additional potential for the expansion of renewable energy sources • GHG budget is 1Gt lower
<p>Persistence – Resistance to Renewable Expansion and Technology Change</p> <ul style="list-style-type: none"> • Limited expansion of renewable energy sources • Continued reliance on conventional technology in the buildings and transport sectors • Delayed decarbonisation of industry 	<p>Robust – Resilient Energy System Against Disruptive Events</p> <p>Considers disruptive events</p> <ul style="list-style-type: none"> • Supply shortages for PV and battery storage • Limited availability of synthetic energy carrier imports • Climate changes and their consequences

Energy system model REMod



Process for generating electricity price forecasts using AI

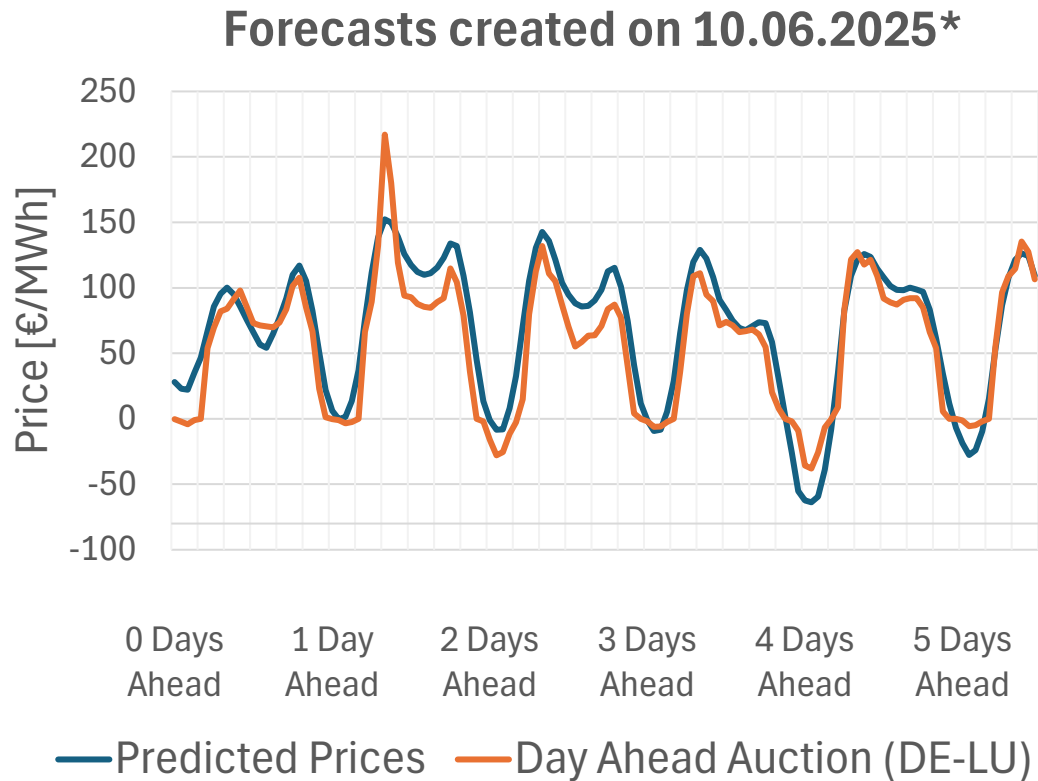


Process repeated for every new forecast

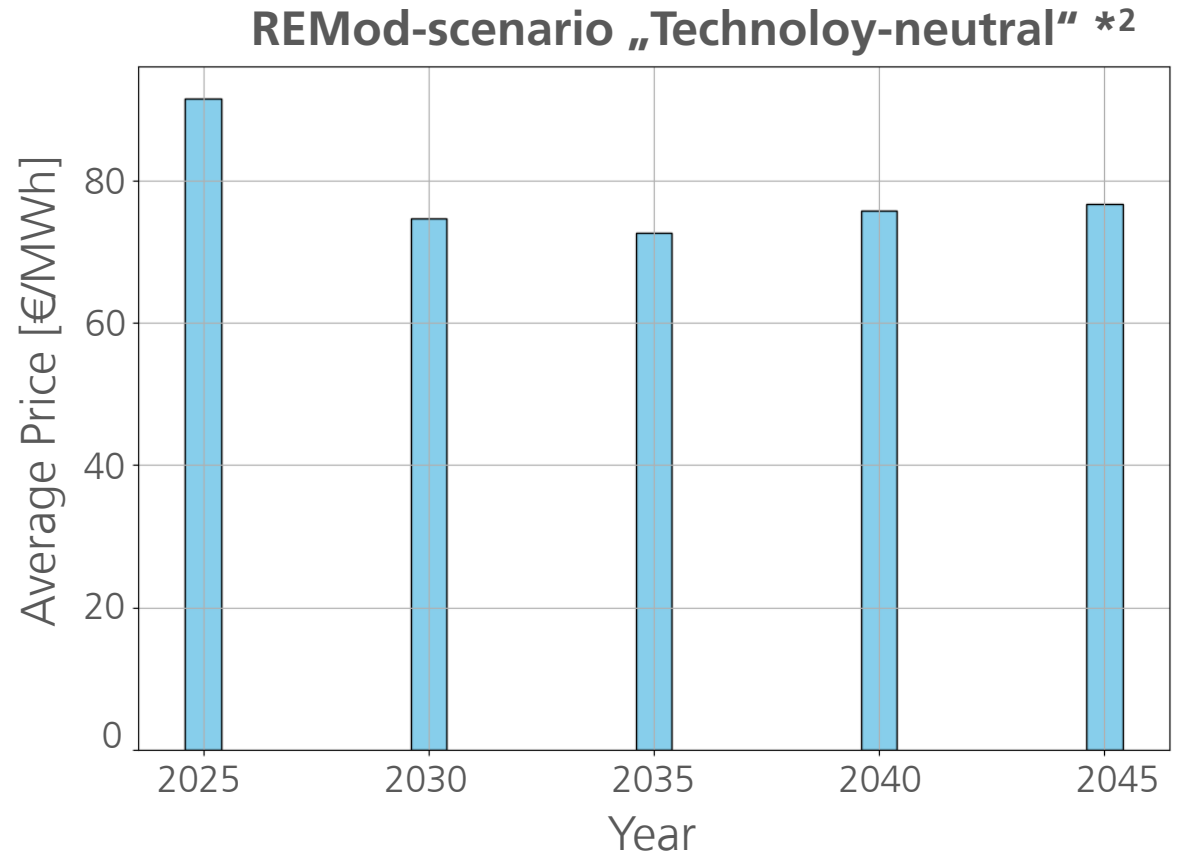


Example Output

Short-Term Forecast



Long-Term Forecast



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