

The Slovak Power Market: Key Trends and Challenges

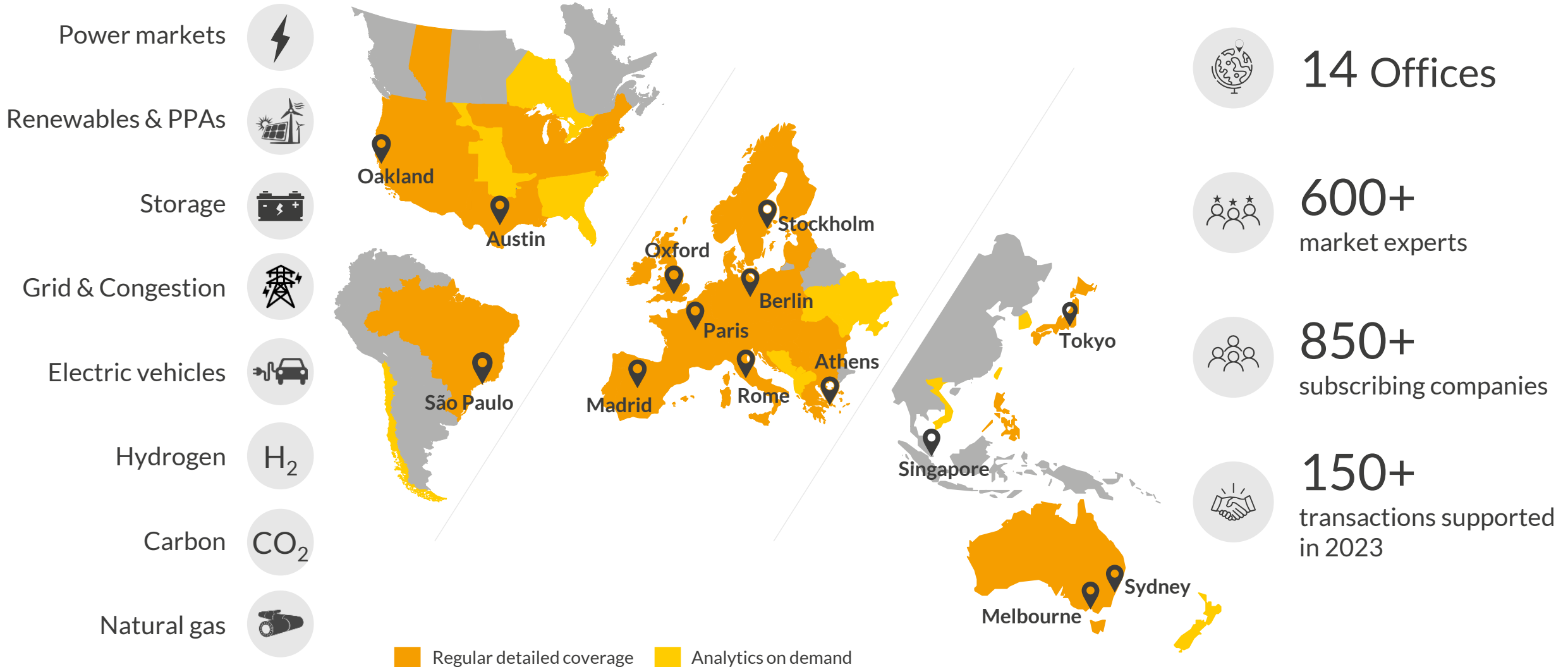
New Market Service



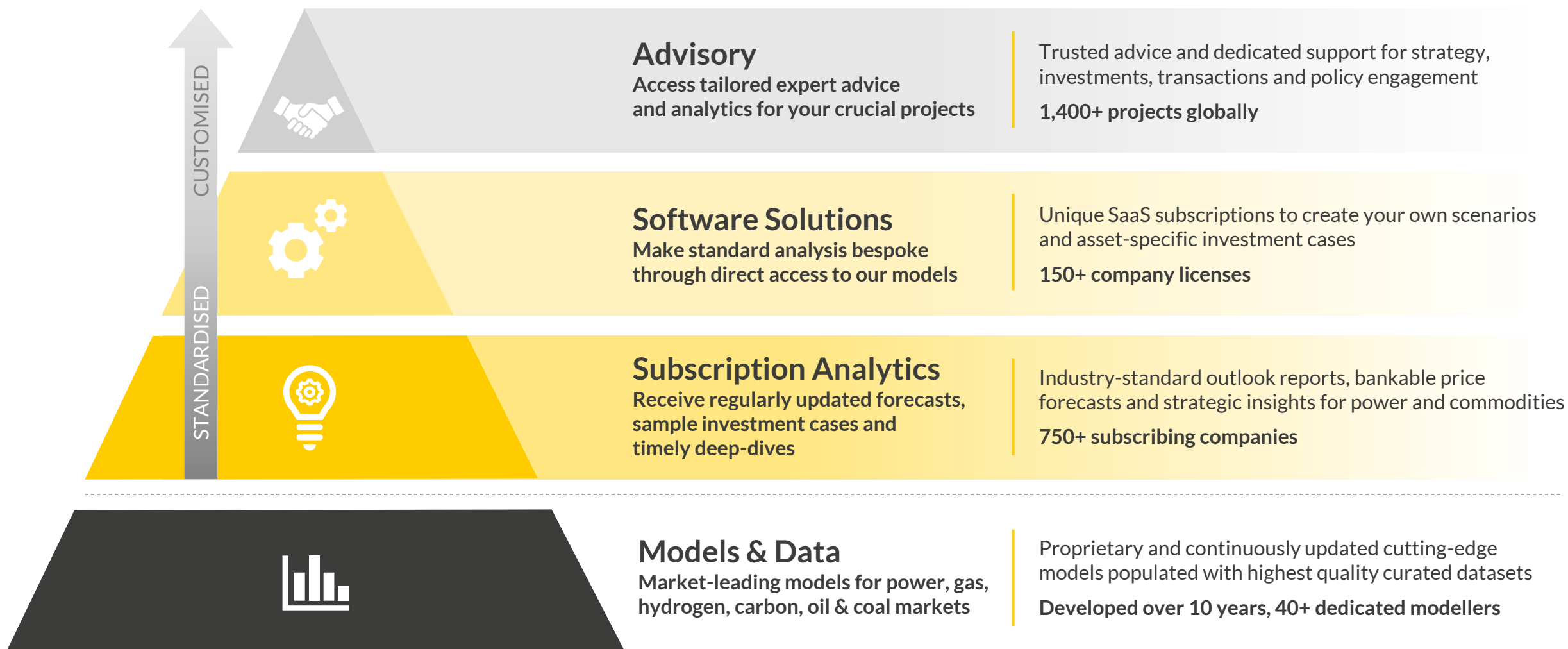
- I. About Aurora
- II. Key trends in the Slovak power market
- III. Aurora's Power & Renewables Forecasts offering in Slovakia

Aurora provides market leading forecasts & data-driven intelligence for the global energy transition

A U R  R A



Our market leading models underpin a comprehensive range of seamlessly integrated services to best suit your needs



We work with a very broad range of clients ... their constant challenge keeps us up on our toes and ensures our independence



"With its capabilities, intellect and with its credibility Aurora plays an essential role bringing the dialogue [in the global energy transition] to a different plane"

Ben van Beurden, CEO, Shell



"Aurora analysis and the provision of reliance was crucial for our debt funding. Their ability to explain market logics and revenue streams was vital for this successful financing."

Jeremy Taylor, Director, Green Frog Power



Power & utilities



Oil & gas



Energy consumers



Project developers



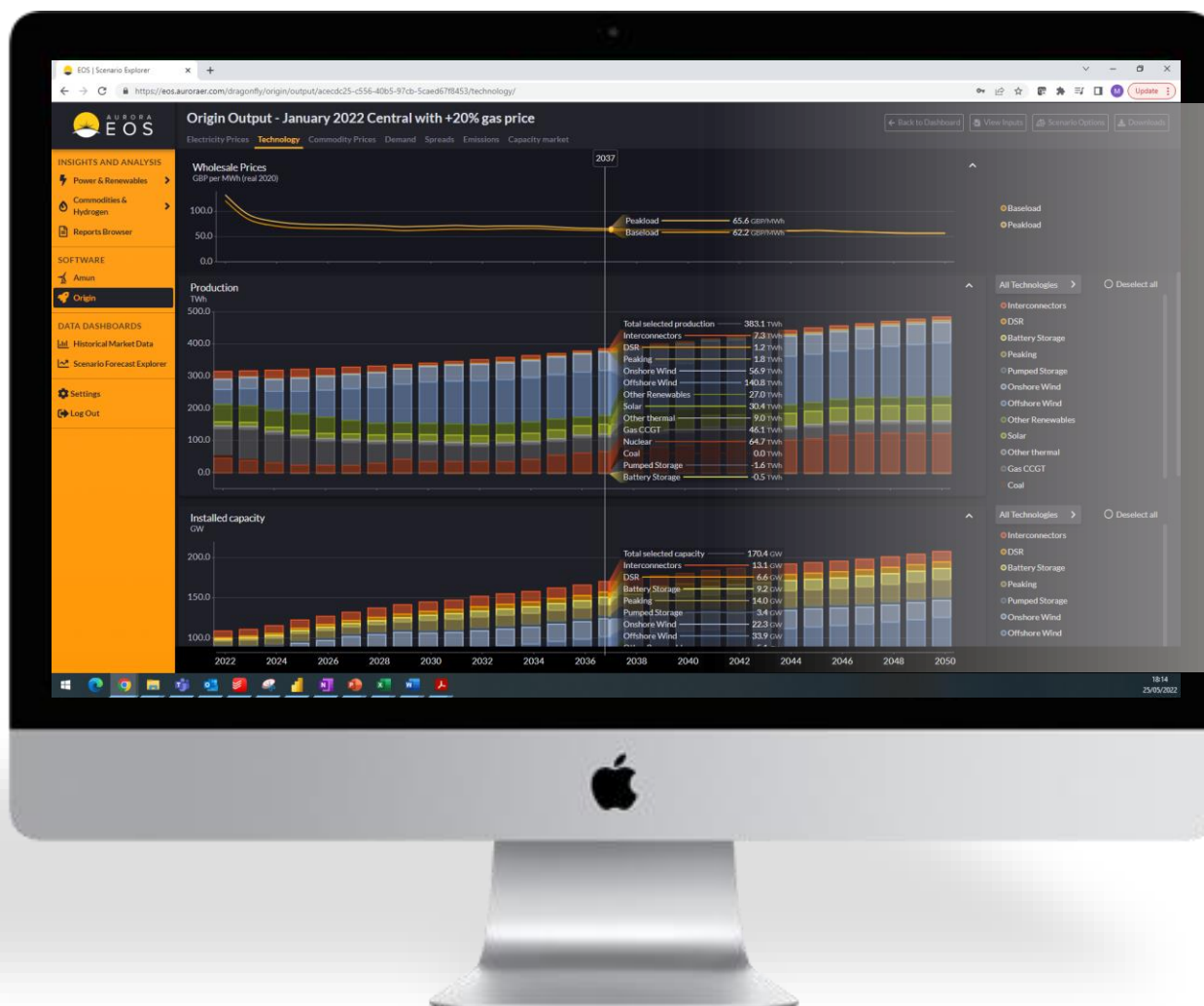
Financial sector & investors



Policy & regulation



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Power & Renewable Market Forecasts

Italian Power and Renewables Market Forecast - July 2021

This document presents the Italian Power and Renewables Market Forecast for July 2021. This quarterly update serves to refresh our analysis with the latest commodity prices, market and modelling developments and presents our latest outlook on



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The EU ETS under the Green Deal

In this report, we assess the impacts of the EU's new 55% emission reduction target on the ETS and provide an updated carbon price forecast until 2030.

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Policy and Market Updates

Policy Briefing: EEG 2021 Draft

The German government passed the first draft of the new EEG 2021 on September 23 2020; a revision that has been eagerly awaited for months by developers, investors, utilities and the public. With this Policy Briefing on the EEG 2021, we summarize the most important regulatory changes and open issues for you.

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Agenda

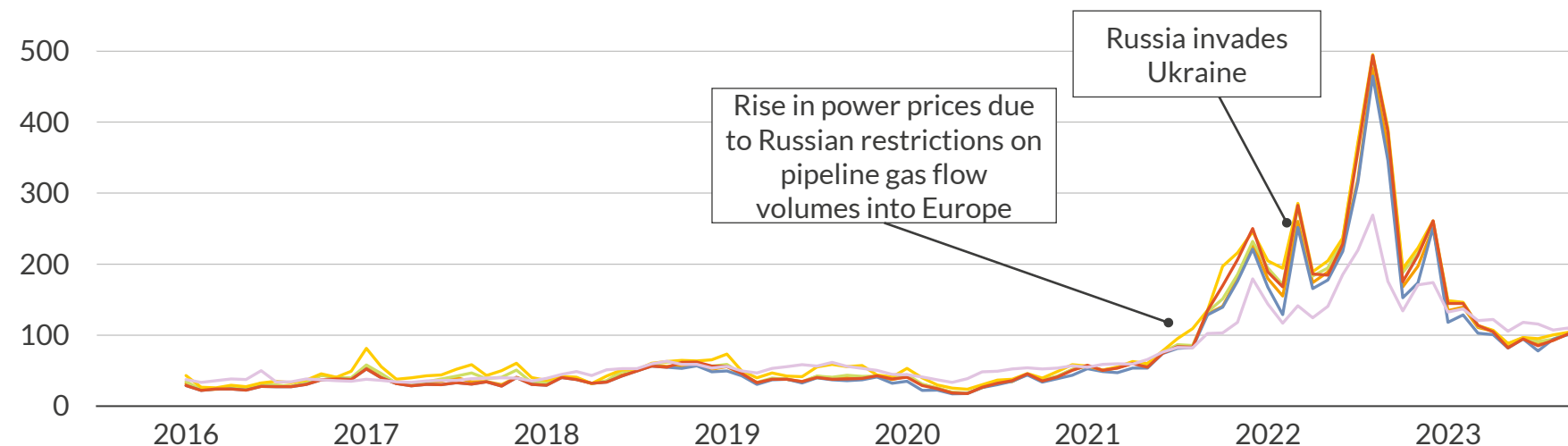
I. About Aurora

II. Key trends in the Slovak power market

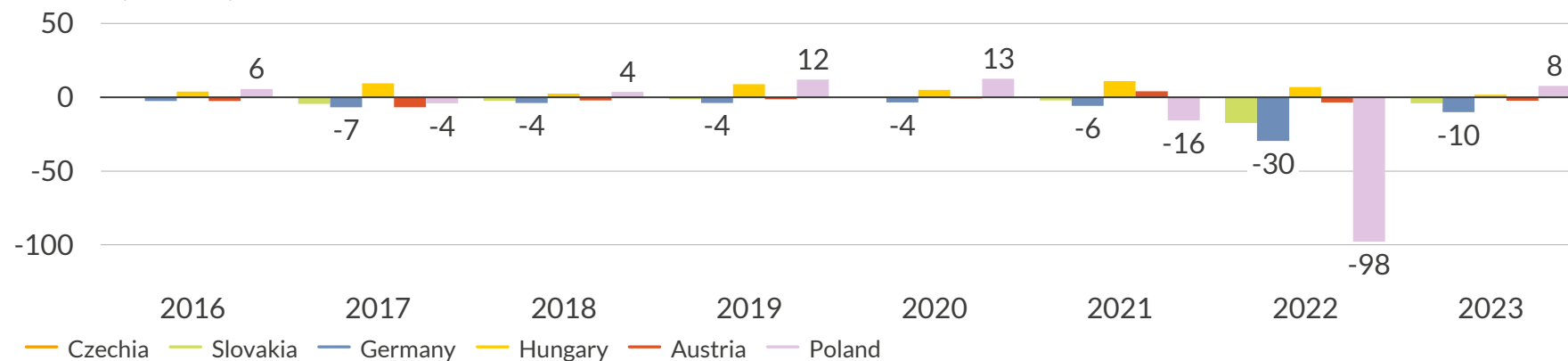
III. Aurora's Power & Renewables Forecasts offering in Slovakia

Slovak power prices have traded at a premium to western neighbours due to greater exposure to the more expensive Hungarian market

Historical baseload electricity prices¹
€/MWh (nominal)



Average annual delta in baseload electricity prices between neighbouring countries and Slovakia
€/MWh (nominal)

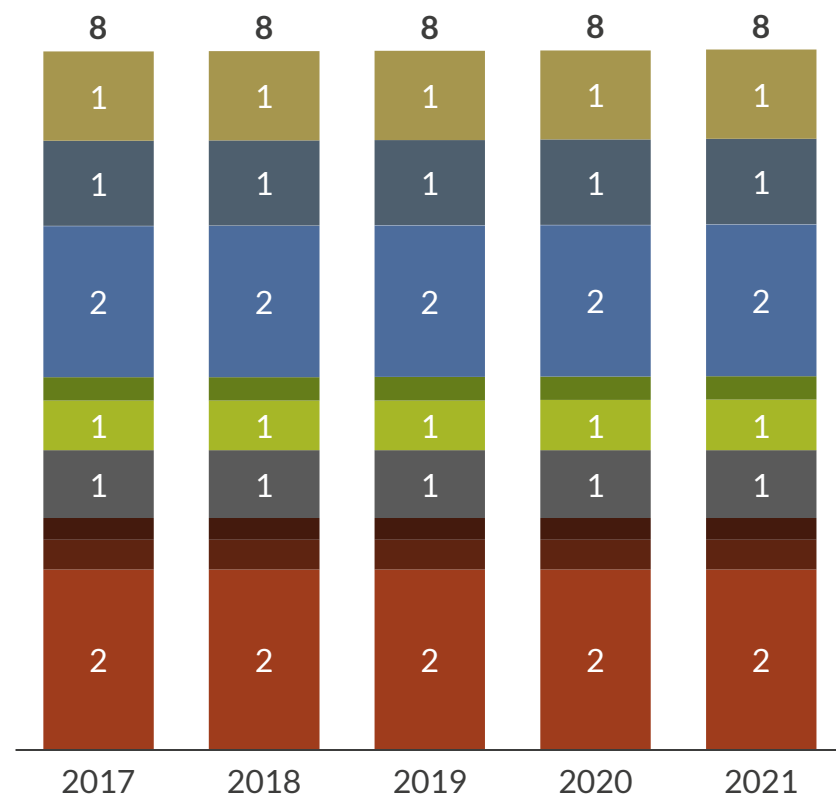


1) Monthly average.

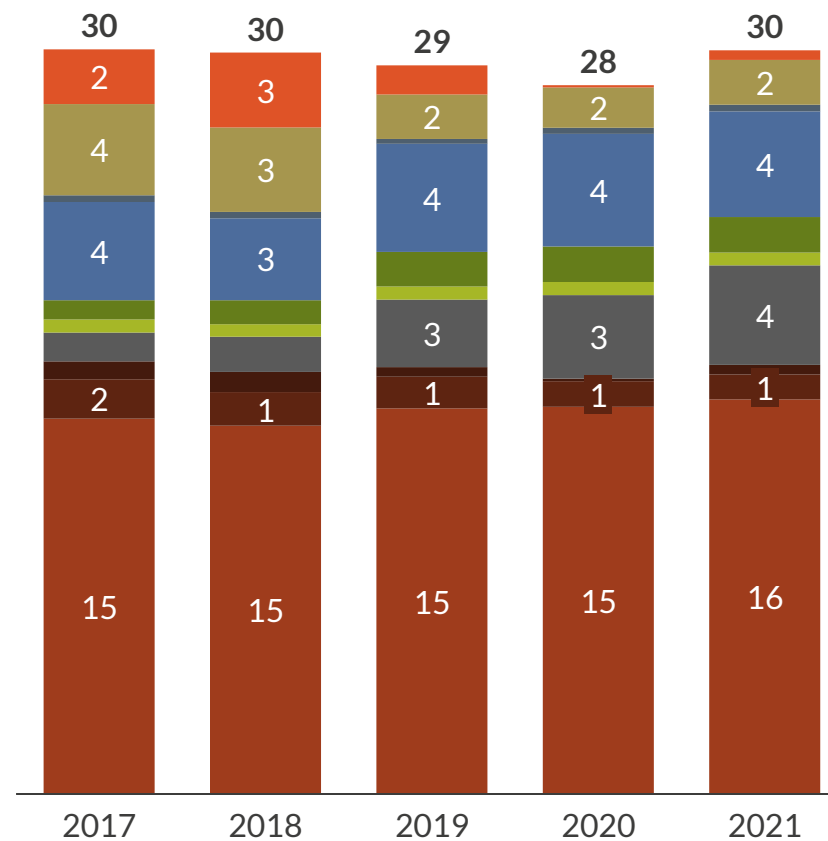
- The large share of lignite, nuclear and hydro in generation mixes has historically meant low exposure to commodity prices. Power prices stayed low and stable in Czechia and Slovakia together with low ETS prices.
- Nonetheless, high levels of interconnection meant both markets were left exposed to record gas prices following Russia's invasion of Ukraine.
- Czech and Slovak prices have closely tracked those of their neighbours. Slovakia has traded at a premium to Czechia, largely due to greater exposure to the more expensive Hungarian market.
- Polish prices diverge more strongly, caused by weaker interconnection and reliance on domestically-produced coal.

The Slovak generation mix is centred on nuclear and hydro, which met 65% of demand in 2021, with solar playing a minimal role

Historical installed capacity in SVK
GW



Historical electricity production and net imports in SVK
TWh



■ Nuclear ■ Coal ■ Solar ■ Hydro ■ Pumped storage
■ Lignite ■ Gas ■ Other RES ■ Onshore wind ■ Other thermal¹

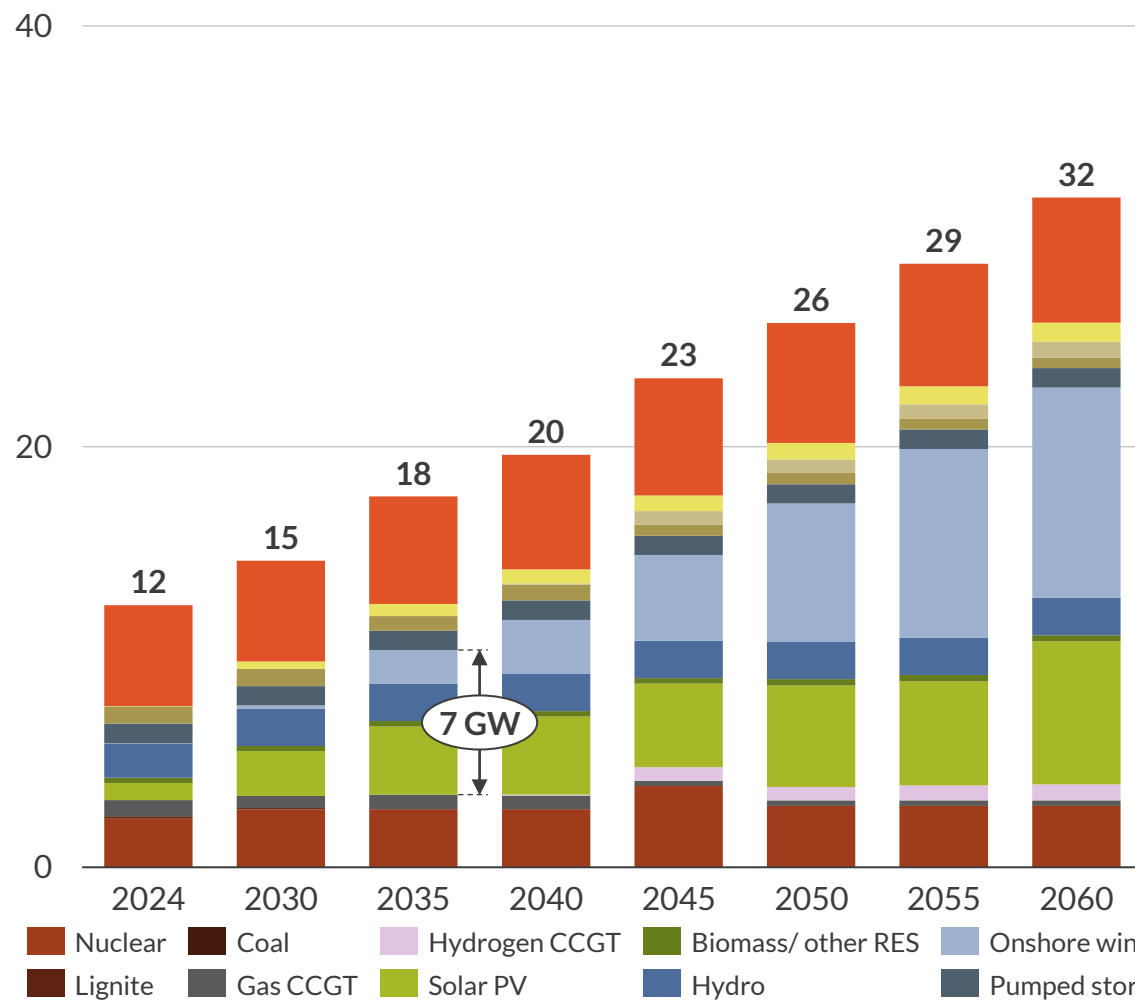
1) Other thermal includes oil and uncategorised thermal plants.

Sources: Aurora Energy Research, ENTSO-E, E-Control.

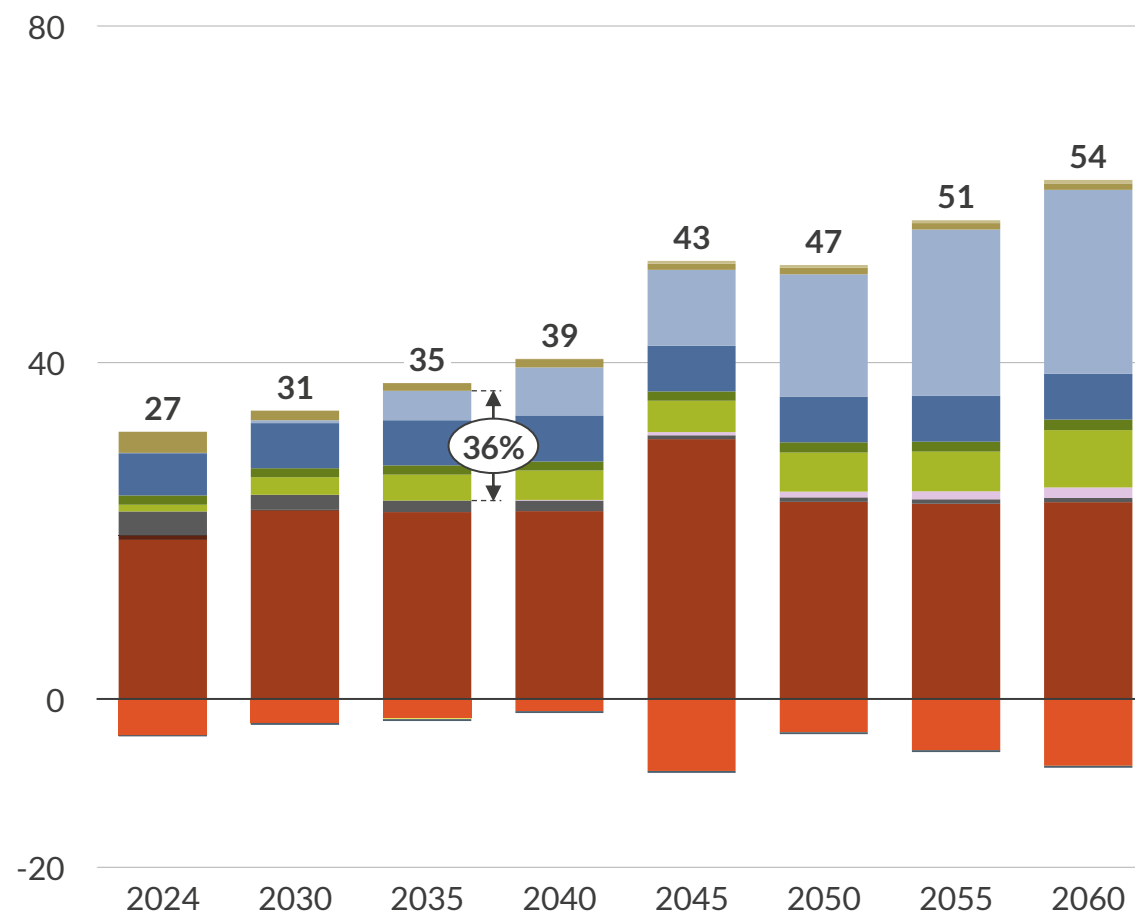
- Nuclear constitutes a key part of the Slovak power system, with 2 GW of capacity historically covering approximately 50% of demand. Two additional newbuild units are adding almost 1 GW of additional capacity by 2025.
- Coal and lignite have played a minimal role in Slovak generation, having been mostly replaced by gas in the district heating system. The final Slovak coal units were closed in 2023.
- Hydro is key to providing both generation and flexibility, with around 2 GW of run of river units and 1 GW of pumped storage operating.
- Variable renewables play a marginal role in the system, with less than 1 GW of installed capacity in total.

While the Slovak generation mix remains mostly stable, growing demand causes renewables capacity to reach 7 GW by 2035

Installed Capacity
GW



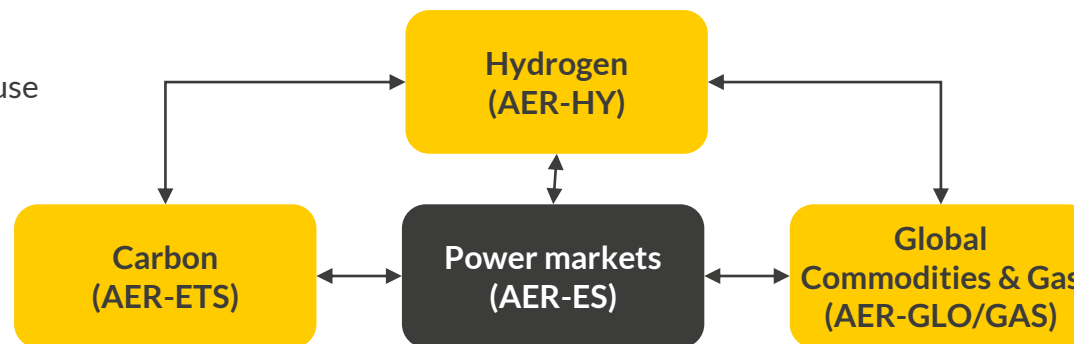
Electricity Production and Net Imports
TWh



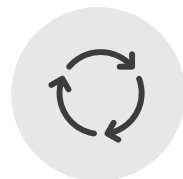
Aurora's unique, proprietary, in-house modelling capabilities allow to assess challenges for the CZE and SVK power market in a holistic manner



Integration of Aurora's four inhouse models



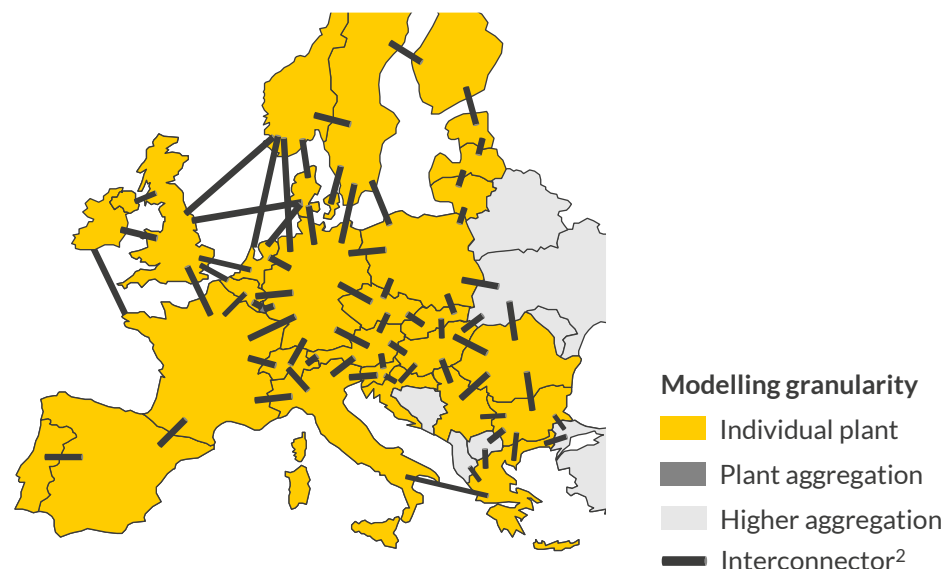
Endogenous interconnector flows based on price differentials



Interdependence of prices and capacities in different regions



High granularity right down to individual plant level



Advantages of Aurora approach

- Aurora have invested heavily in developing our dispatch models since 2013 and believe they are the most sophisticated available
- Our models have been rigorously tested and refined in a wide range of client contexts
- Flexible and nimble because we own the code
- Zero dependence on black-box third-party software (e.g. PLEXOS)
- Ability to model complex policy changes quickly
- Taking into consideration Europe wide developments through cross-border market modelling

1) Gas, coal, oil and carbon prices fundamentally modelled in-house with fully Integrated commodities and gas market model, 2) Sizes and lengths of interconnectors are for visual representation only, Illustrative and are not to scale

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Slovak Power & Renewables Forecasts:

Dive into key market analysis and forecasts for the Slovak power and renewables markets

Power & Renewables Forecasts

Forecast Reports & Data



Biannual forecast reports with biannual data updates

- Forecast of **wholesale prices** to 2060
- Data under **three scenarios**: Central, Low and High
- **Policy outlook** detailing policy developments and their impacts
- **Capacity development**, generation mix and exports
- **Capture prices** of key technologies (onshore wind, solar)
- Power price distributions
- EU-ETS carbon price forecasts
- All forecast data easily downloadable in Excel format and available as **interactive dashboards** on our EOS platform

Strategic Insights



Analyst Support

- **Bi-annual workshops** to discuss specific issues on the Slovak market
- **Ongoing support** from our bank of analysts, including native speakers and on-the-ground experts

Our service can take your business to the next level. Discuss its benefits with **Joanna Marszalkowska, Commercial Associate**

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