

Montel Nordic Energy Day - Oslo

Guarantees of Origin - will prices stay high?

Marie Thuestad, CEO

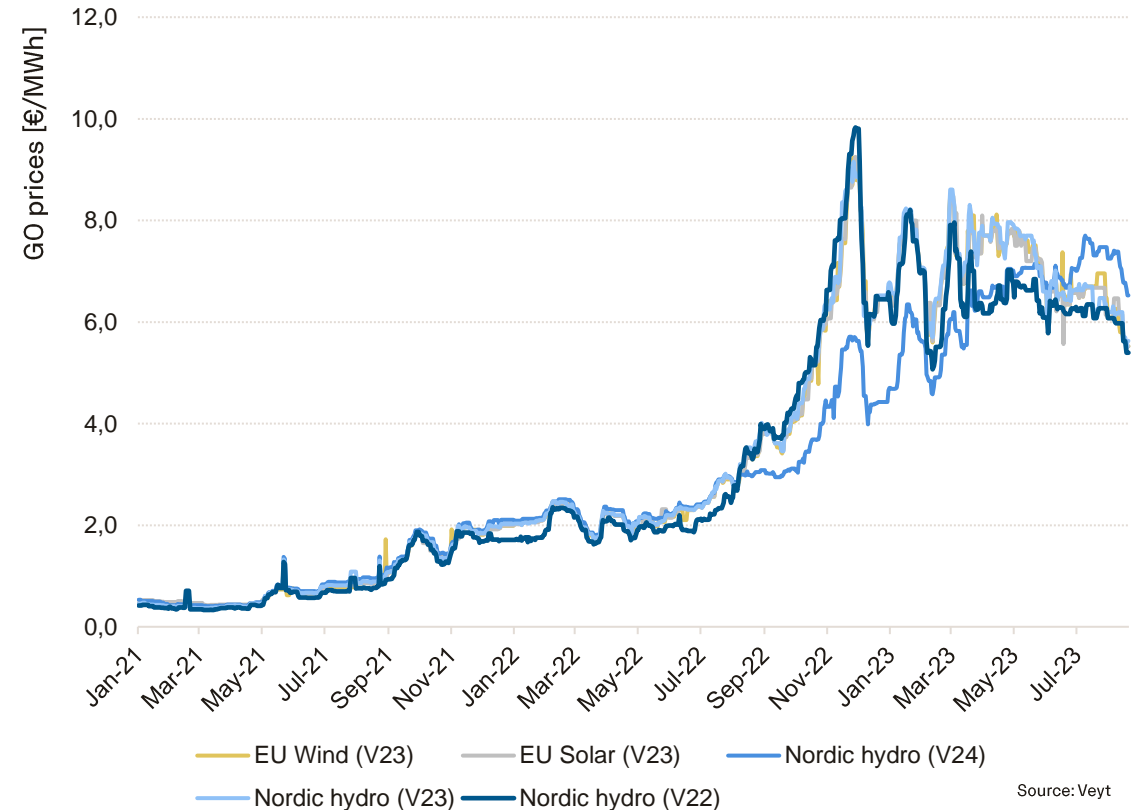
Guarantees of Origin - will prices stay high?

The bulls steered the market in 2022

Dry year, war in Europe and sky-high energy prices

- 2022 was significantly bullish coupled with higher volatility
- GO prices (Nordic hydro '22) more than quintupled from levels around €1.7/MWh at the start of 2022 to €9.8/MWh in November
 - Lower-than-normal hydrological balance created supply scarcity
 - As a result of the energy price crisis, Hydropower producers were cautioned to conserve water in their reservoirs from May onwards
 - Supply concerns as in in most countries, the disclosure of green power consumption needs to match the production from the same year
 - Emergency measures tackling high energy prices caused investment uncertainty

Perfect bullish storm in 2022



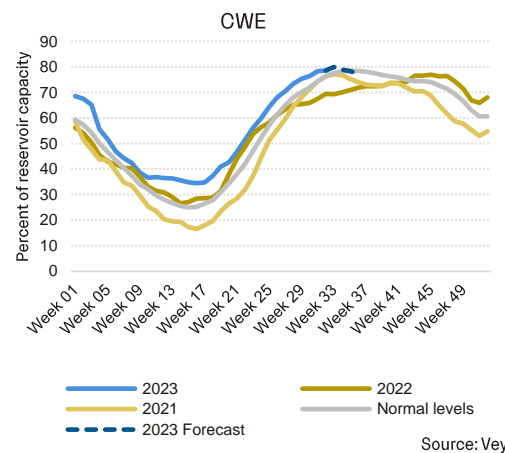
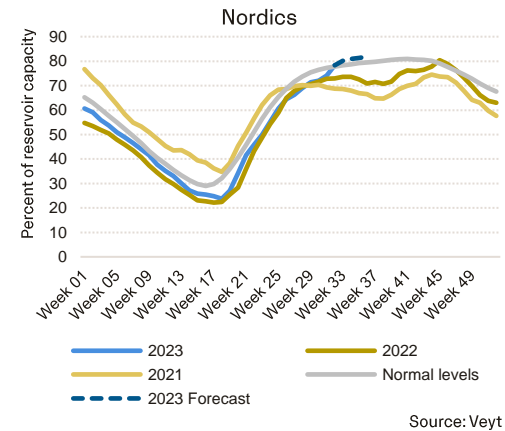
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2023 saw some correction – prices remain elevated

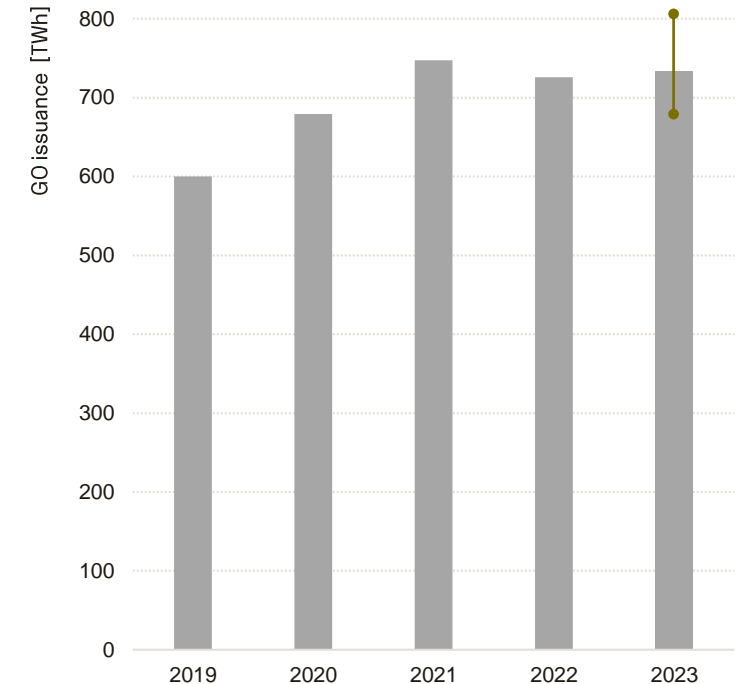
Role of GOs strengthened - demand to remain

- Energy prices eased as well as hydrological balances with the start of 2023
- With the adoption of revised regulation role of GOs was strengthened as instrument for mandatory disclosure (RED III, State aid Guidelines, Taxonomy, Internal Electricity Market Directive)
- This results in higher willingness-to-pay
- The temporary export ban of Icelandic GOs created some confusion amongst market participants, wondering whether AIB could take a more active role, leading to increasing volatility
- Short-term outlook
 - Market activity is currently quite low, characterized by subdued trading and volume levels over summer while volatility remains elevated
 - Focus is shifting to 2024 and 2025 contracts
 - We expect 2023 contracts to trade around the € 6/MWh threshold, dropped below lately due to “Hans”
 - We expect a €7.5 - € 8.0/MWh range for 2024 and around €7/MWh for 2025
 - Main driver is increasing demand to bolster renewable electricity claims and higher regulatory requirements causing competition for GOs

Hydrology situation normalized



Our mid-term forecast suggests slightly higher supply y-o-y



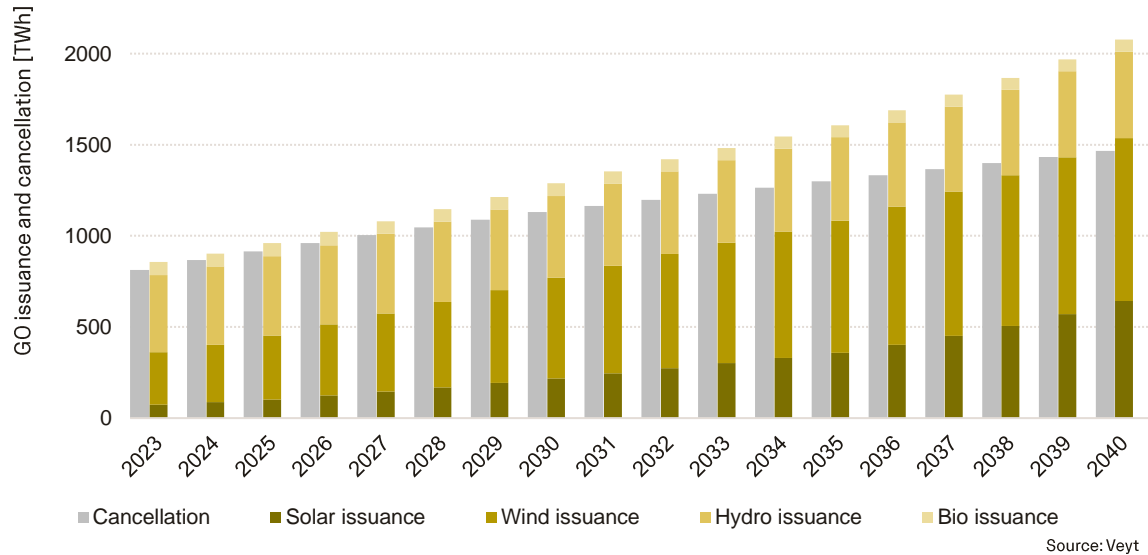
We estimate that the number of GOs issued in 2023 (Biomass, Hydro, Solar & Wind) will be 733.6 ± 68 TWh, versus 726 TWh in 2022 and 747 TWh in 2021

Source: Veyt

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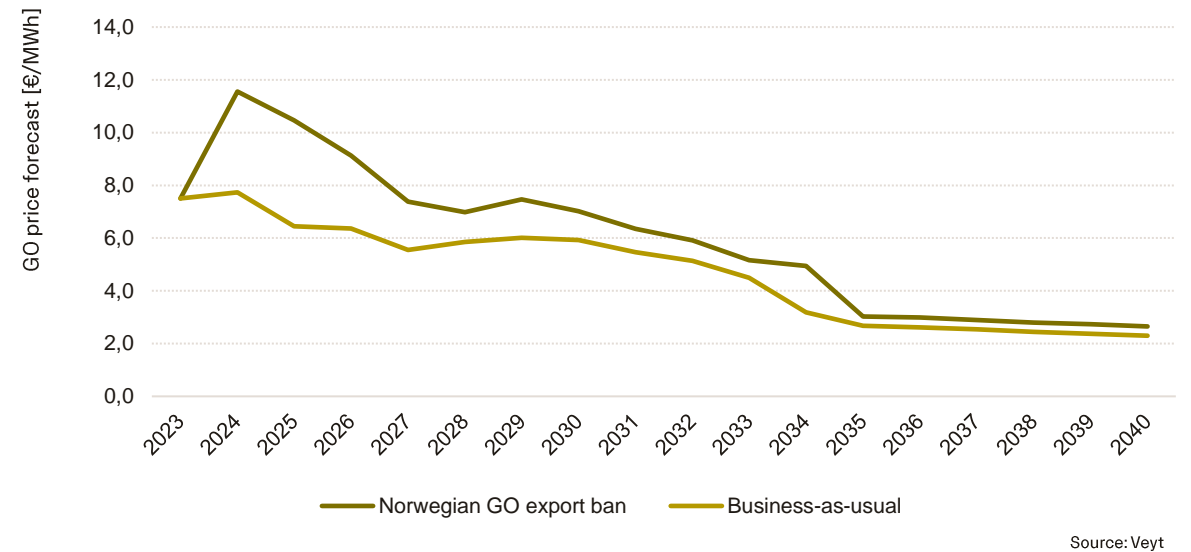
Our long-term outlook – have we seen the peak?

Assuming BAU corporate demand our forecast is bearish



- The capacity build-out in this model reflects EU’s net-zero emission target by 2050 and National Energy and Climate Plans, renewable electricity demand is reflecting IEA’s net-zero emission scenario
- This is our conservative scenario, showing BAU corporate demand. With increasing claims and stronger regulatory requirements for using GOs we assume demand to deviate from here

Norway exiting EECS could lift prices by €4/MWh



- Prices are declining towards 2040 due to high renewable capacity build-out and corresponding GO issuance.
- In case Norway were to leave the GO market (as indicated by the coalition contract), we see a €4/MWh upside potential in the near-term as a result of 130 TWh not being exported

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We empower decision-makers towards
a net zero world.

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