

25/05/2022

An Introduction to the EECS Market

Vienna

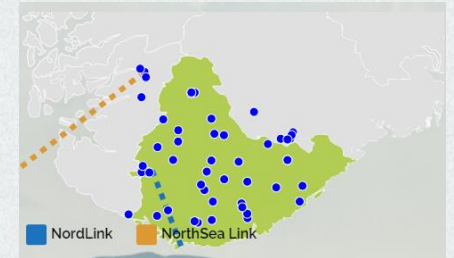
William Dixon

Head of Product Development, Environmental Markets

- 1) Terms of Reference
- 2) EECS Market Overview
- 3) Market Prices
- 4) Auctions
- 5) Case Studies: Norway / Germany / Czech Republic
- 6) The Future
- 7) Further Reading / Contact

- Agder Energi Vannkraft AS
- Located around Europe
- Production and PPA portfolios
- Active within global energy certificate markets

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1a) Terms of Reference

- **Production Issuance**
- **Transaction Issuance**

Considers:

the issued GO's production period

the time at which the GO was issued

1b) Terms of Reference

- **Production Issuance**
- **Transaction Issuance**

Considers:

the issued GO's production period

the time at which the GO was issued

- **Variable:**

the delay between production and GO issuance

1c) Terms of Reference

- **Production Issuance**
- **Transaction Issuance**

Considers:

the issued GO's production period
the time at which the GO was issued

- **Production Cancellation**
- **Transaction Cancellation**

the cancelled GO's production period
the time at which the GO was cancelled

1d) Terms of Reference

- **Production Issuance**
- **Transaction Issuance**

Considers:

the issued GO's production period
the time at which the GO was issued

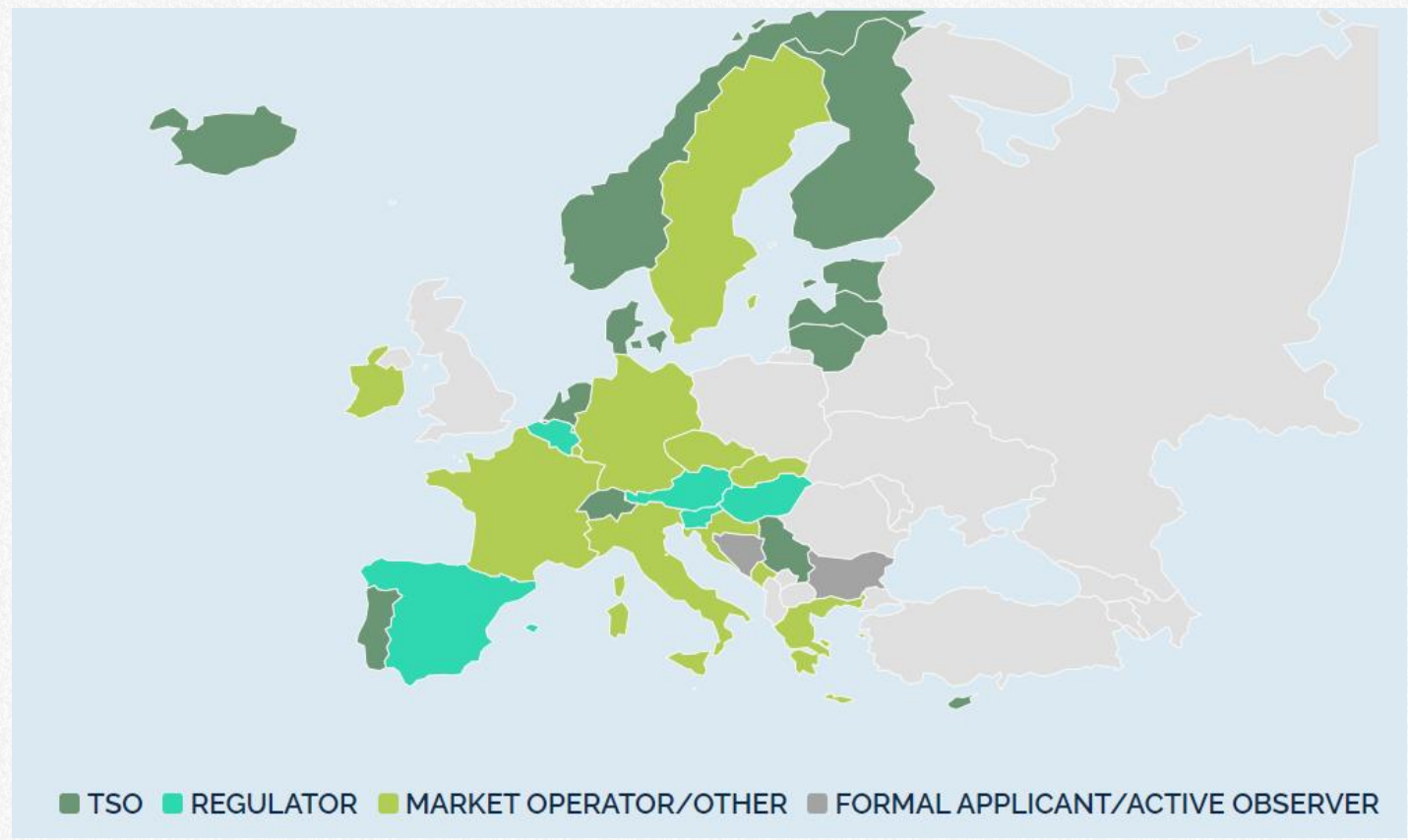
- **Production Cancellation**
- **Transaction Cancellation**

the cancelled GO's production period
the time at which the GO was cancelled

1e) Terms of Reference

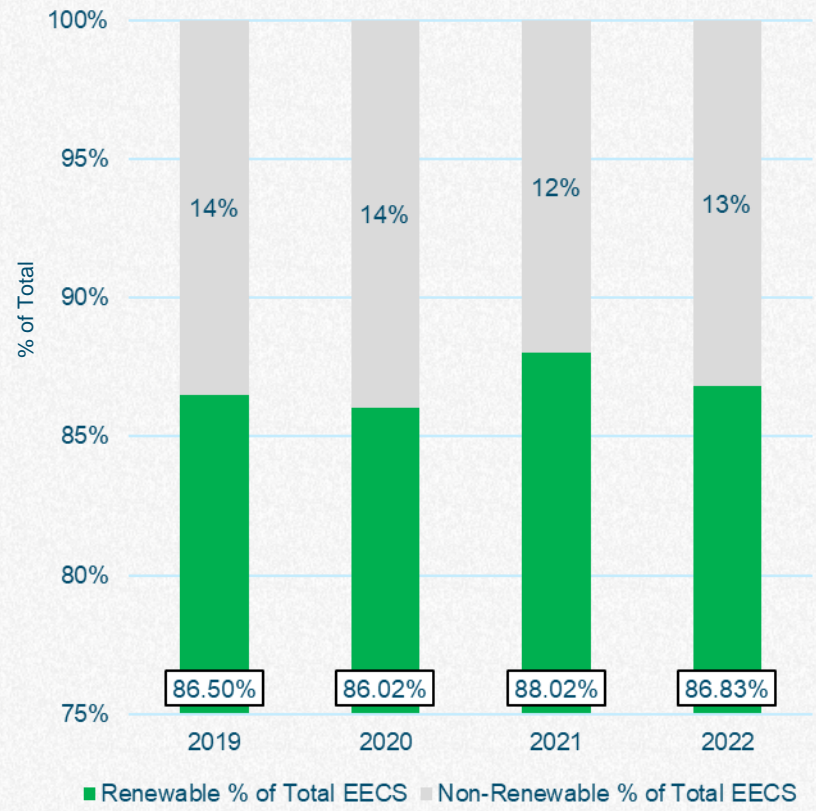
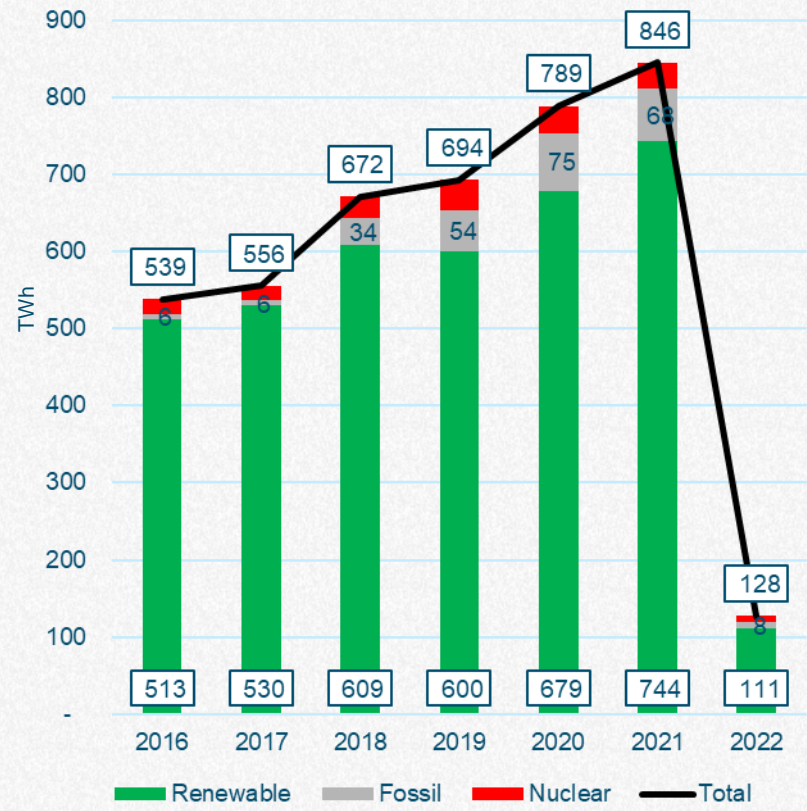
- “**Cancellation**” of a GO (Redemption / Redeem / Retire / Consume)
- “**GO**” / GoO / GOO / EECS REC / EECS Guarantee of Origin
- “**Earmark**” / Support / Unsupported / Incentive Mechanism / Subsidy

EECS Market Area



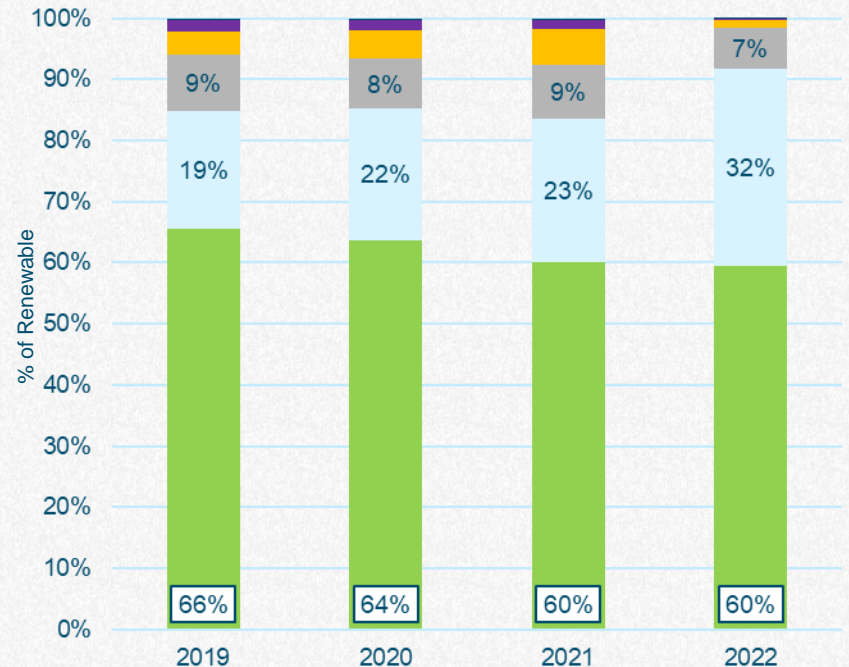
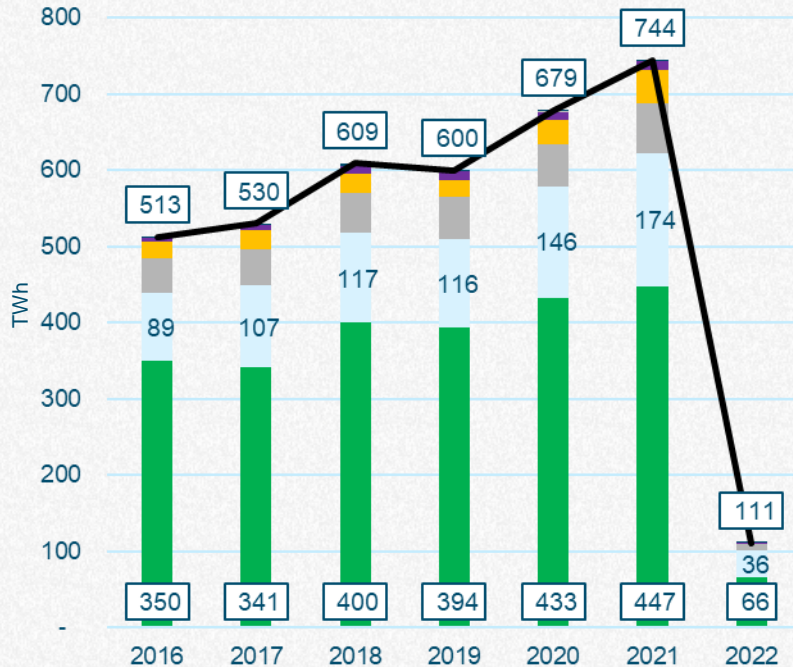
2b) Market Overview

Total EECS Production Issuance



2c) Market Overview

Total EECS Renewable Production Issuance

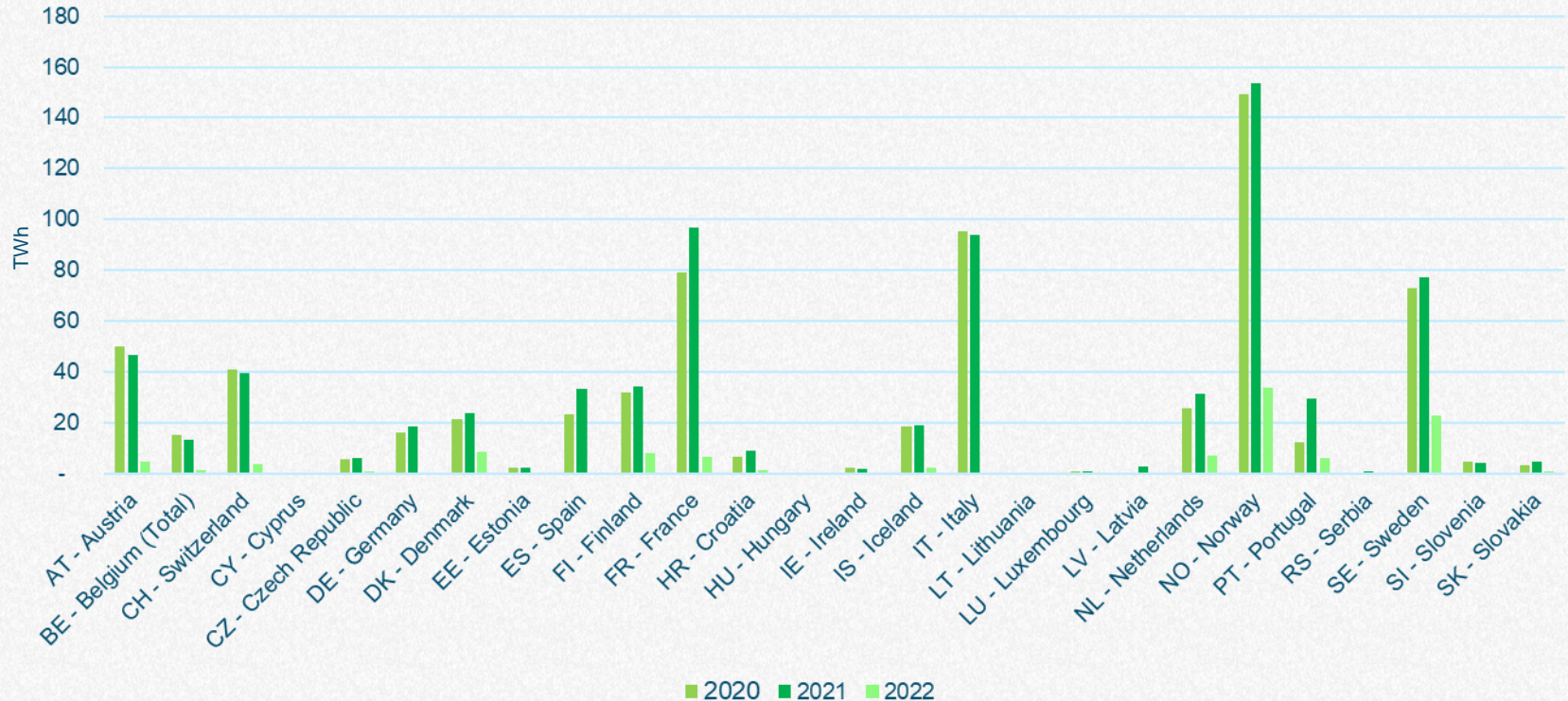


- Hydro
- Wind
- Biomass
- Solar
- Geothermal
- Unspecified Heat
- Unspecified & Other
- Renewable

- Unspec. & Other % of Total Renewable
- Unspec. Heat % of Total Renewable
- Geothermal % of Total Renewable
- Solar % of Total Renewable
- Biomass % of Total Renewable
- Wind % of Total Renewable
- Hydro % of Total Renewable

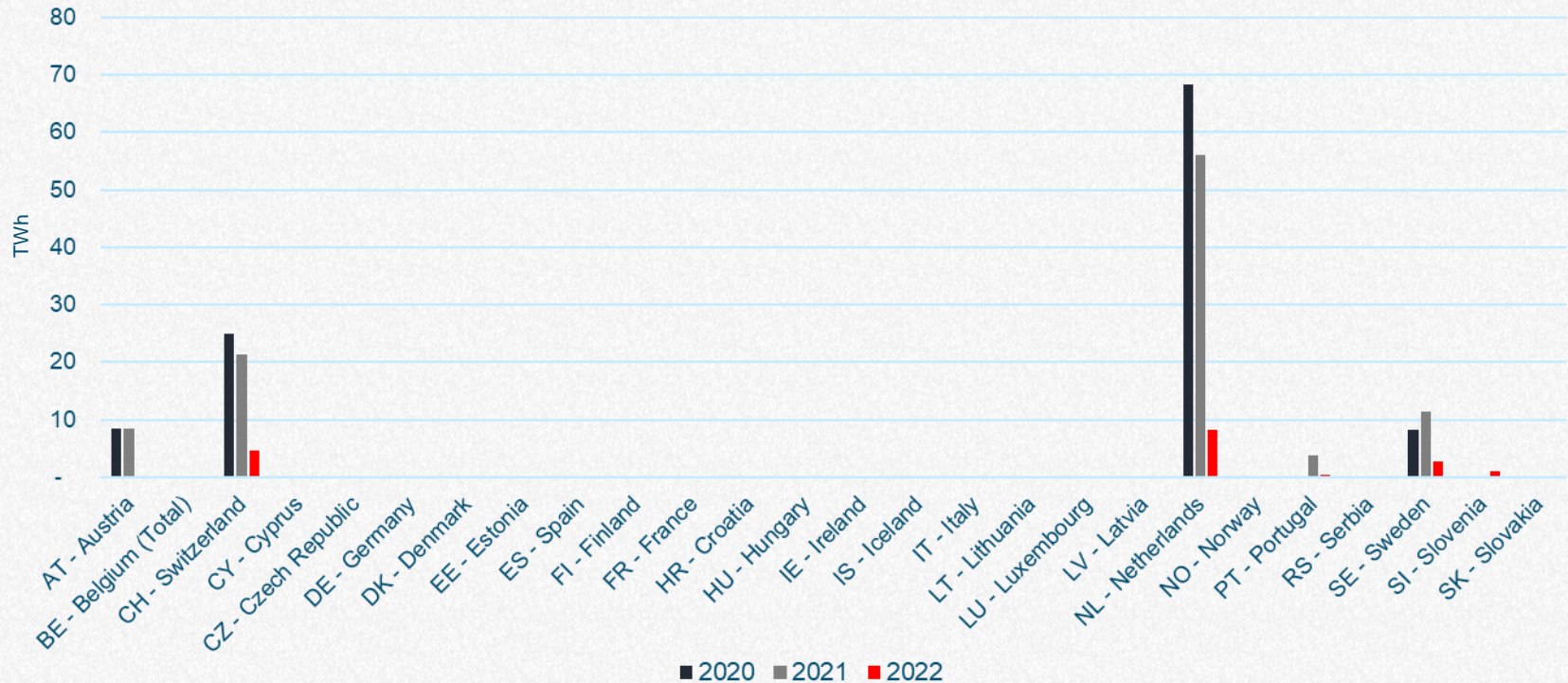
2b) Market Overview

Total EECS Renewable Production Issuance



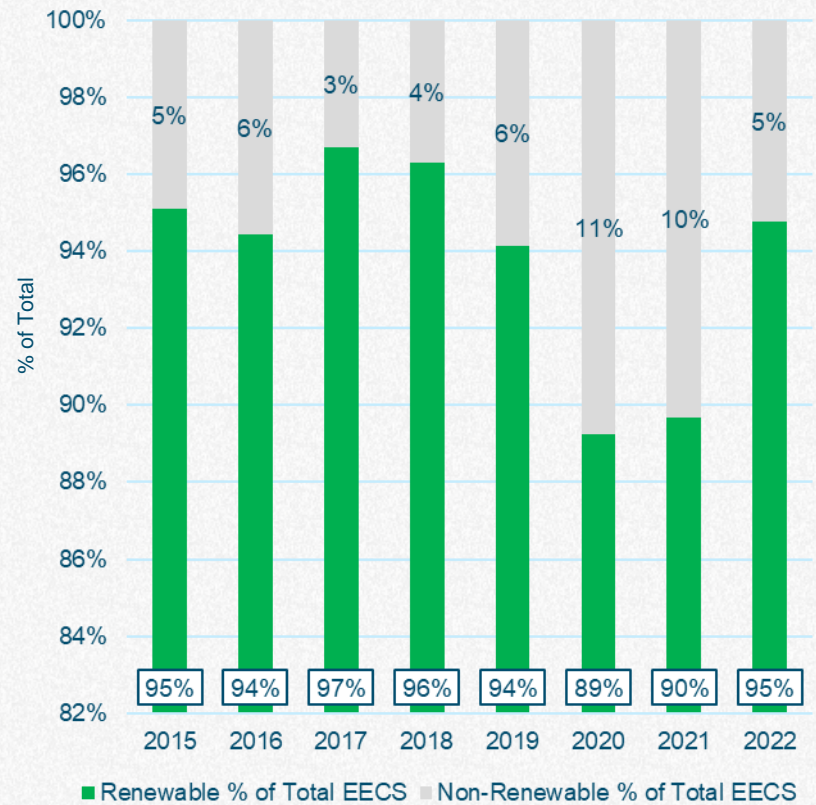
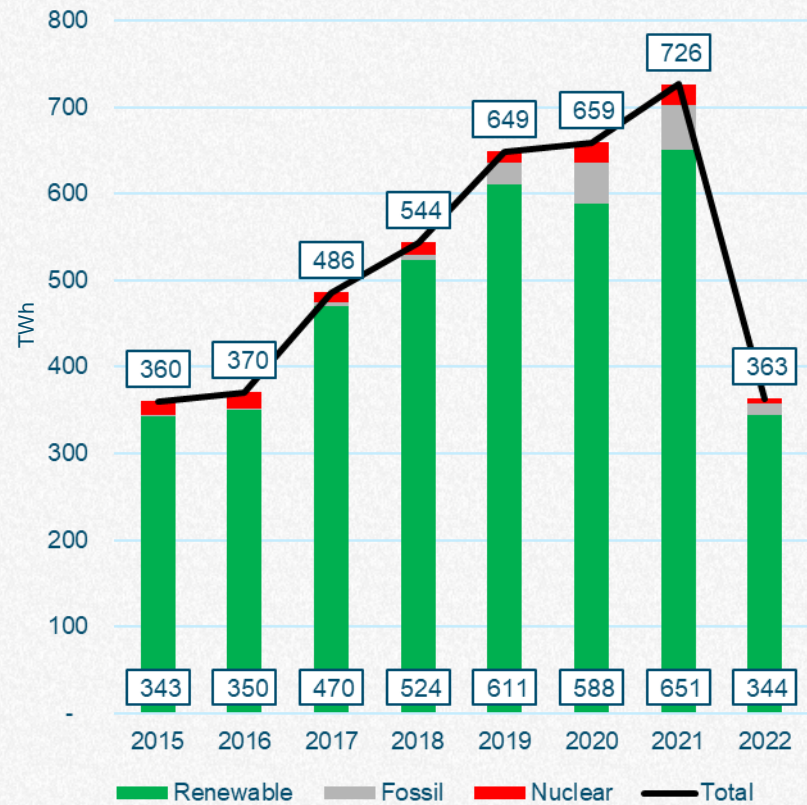
2b) Market Overview

Total EECS Non-Renewable Production Issuance



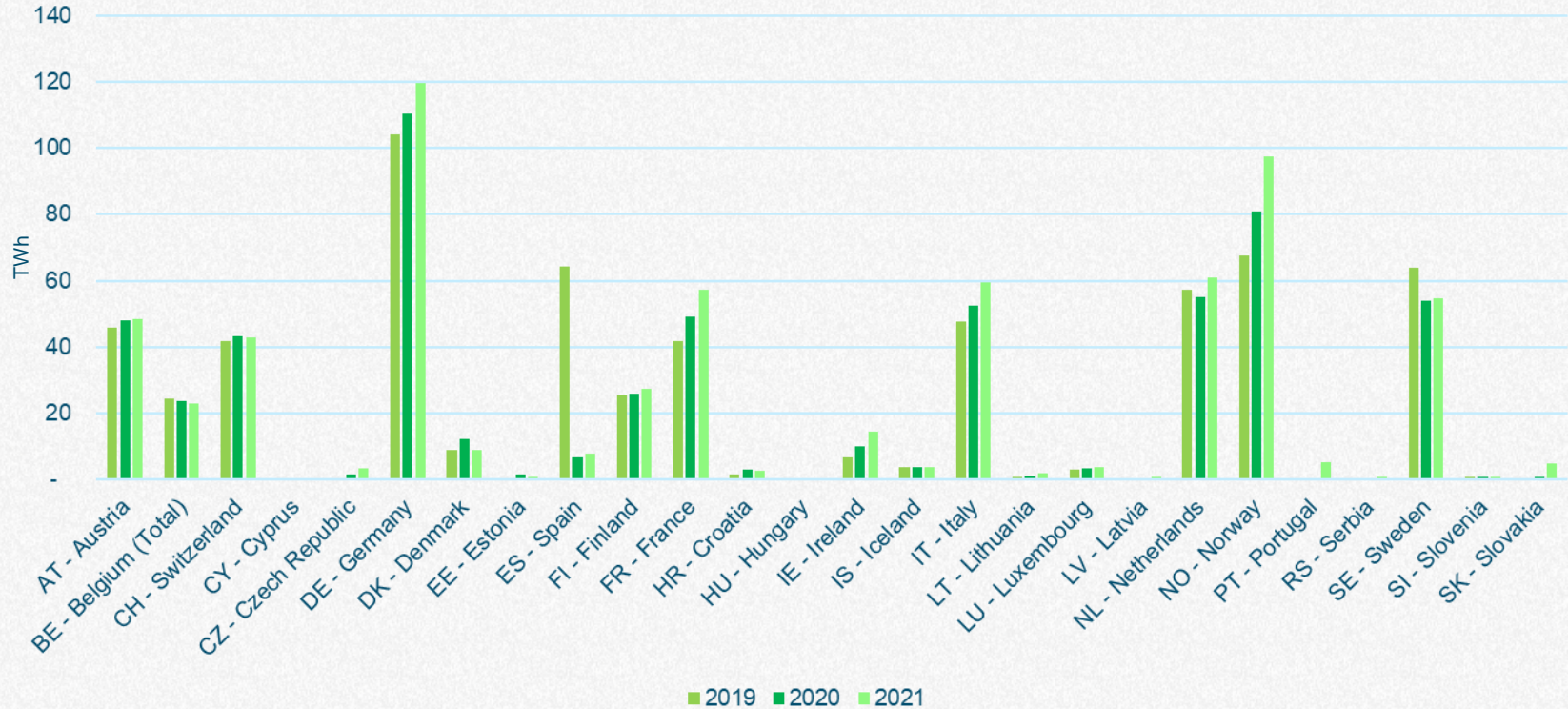
■ 2020 ■ 2021 ■ 2022

Total EECS Transaction Cancellations

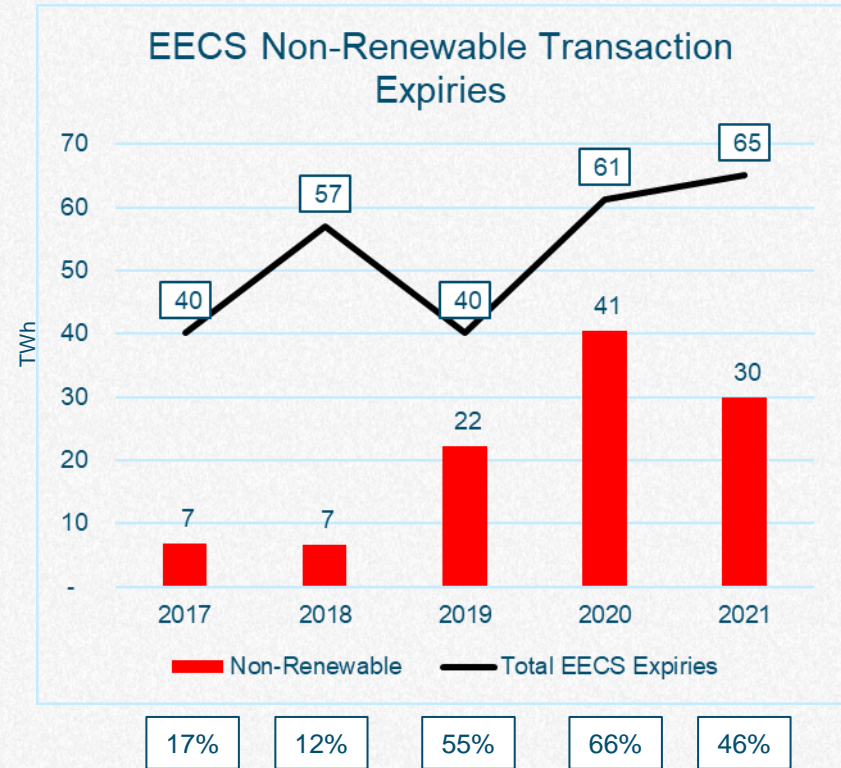
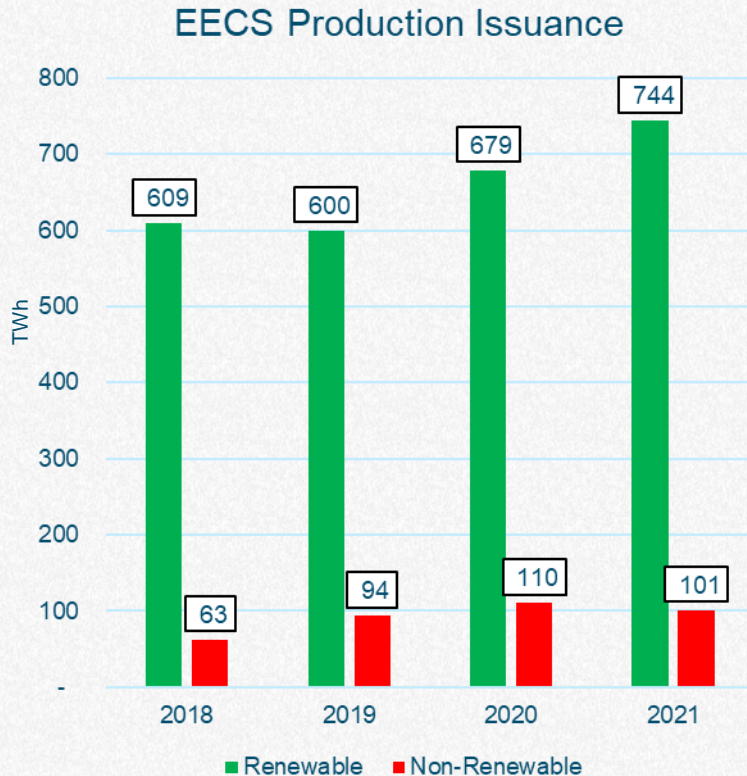


2b) Market Overview

Total EECS Renewable Transaction Cancellations

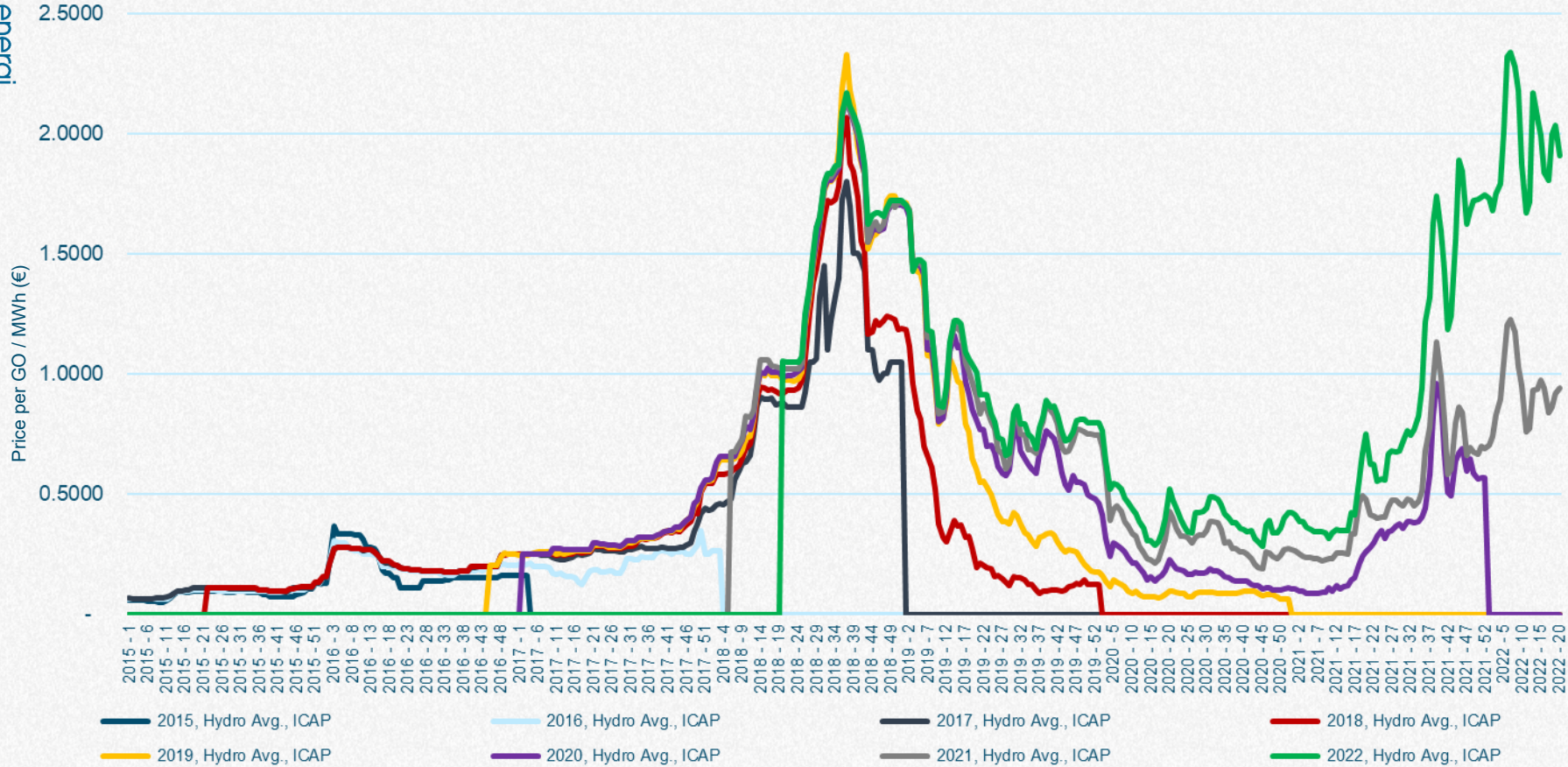


Total EECS Issuance & Expiries



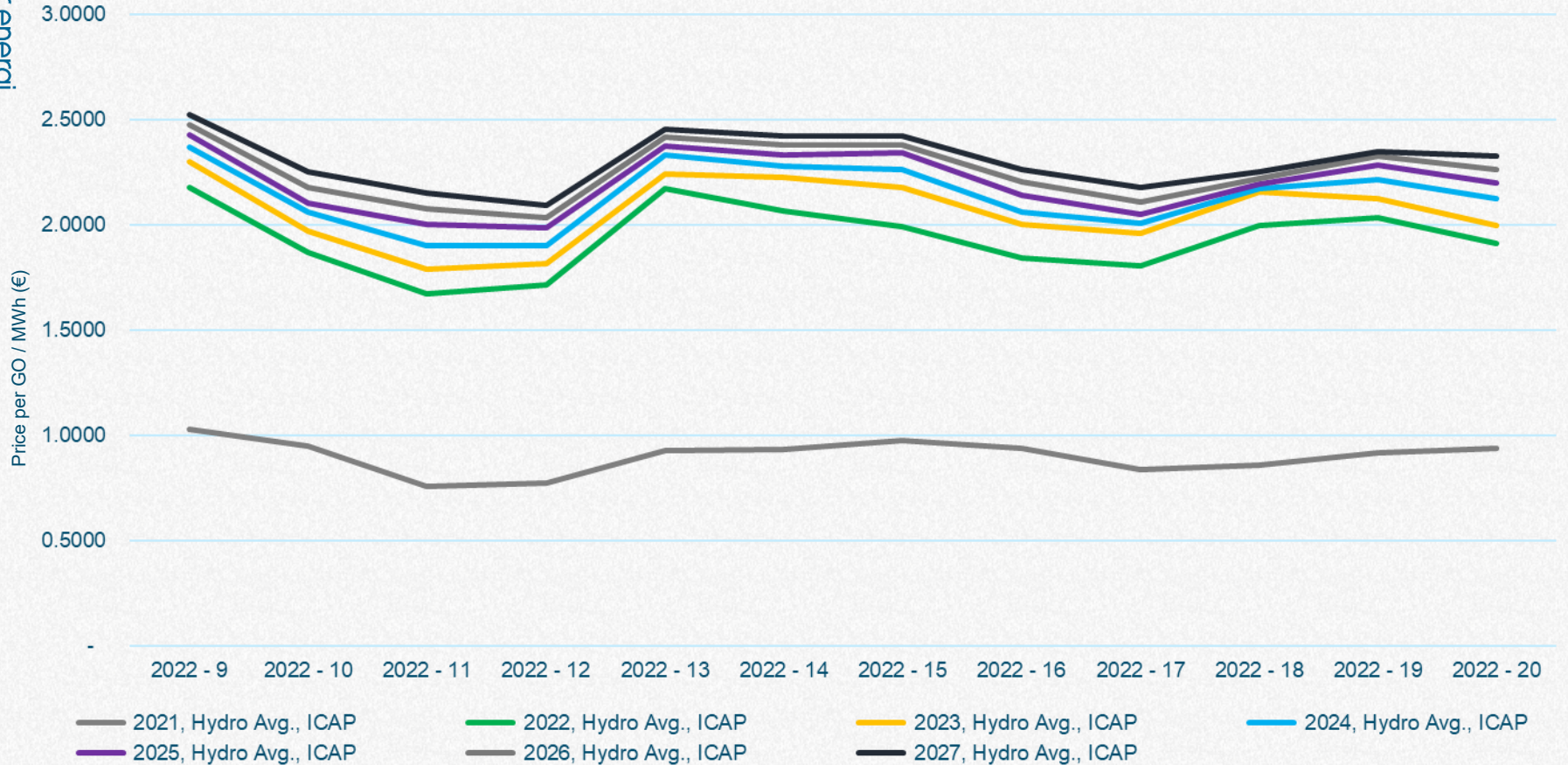
3a) Market Prices: Historic Nordic Hydro

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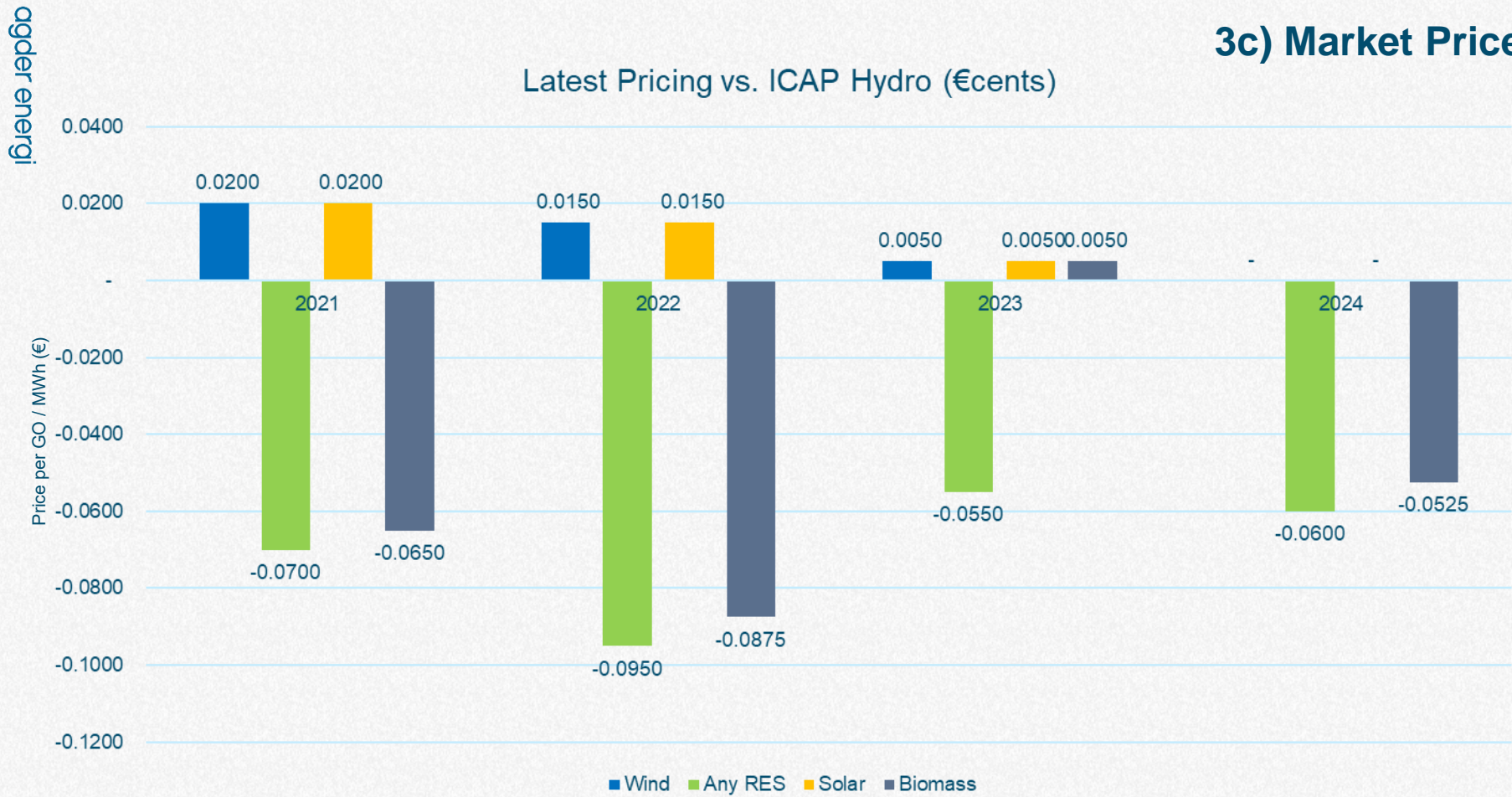
3b) Market Prices: Historic Nordic Hydro „Benchmark“

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3c) Market Prices

Latest Pricing vs. ICAP Hydro (€cents)



The screenshot displays the Green Power Hub website. The top navigation bar includes 'green power hub', 'GO', 'ELCERT', 'TRADE PARTNERS', and 'MARKET DATA'. The user is identified as 'William Dixon Agder Energi Vannkraft AS'. The main content area is titled 'LIVE GO INTERESTS' and features a filter menu with options like 'MARKET', 'MY', 'COMPANY', 'ANY RENEWABLE', 'ANY', 'BIO', 'GEOHERMAL', 'HYDRO', 'NUCLEAR', 'SOLAR', and 'WIND'. Below the filters, there are dropdown menus for 'EECS', 'All years', 'EUR (38 of 46)', 'Commissioned', 'Capacity', and 'Any finance'. The main content area displays the Green Power Hub logo and the text 'Green Power Hub'. A contact box on the right contains the following information:

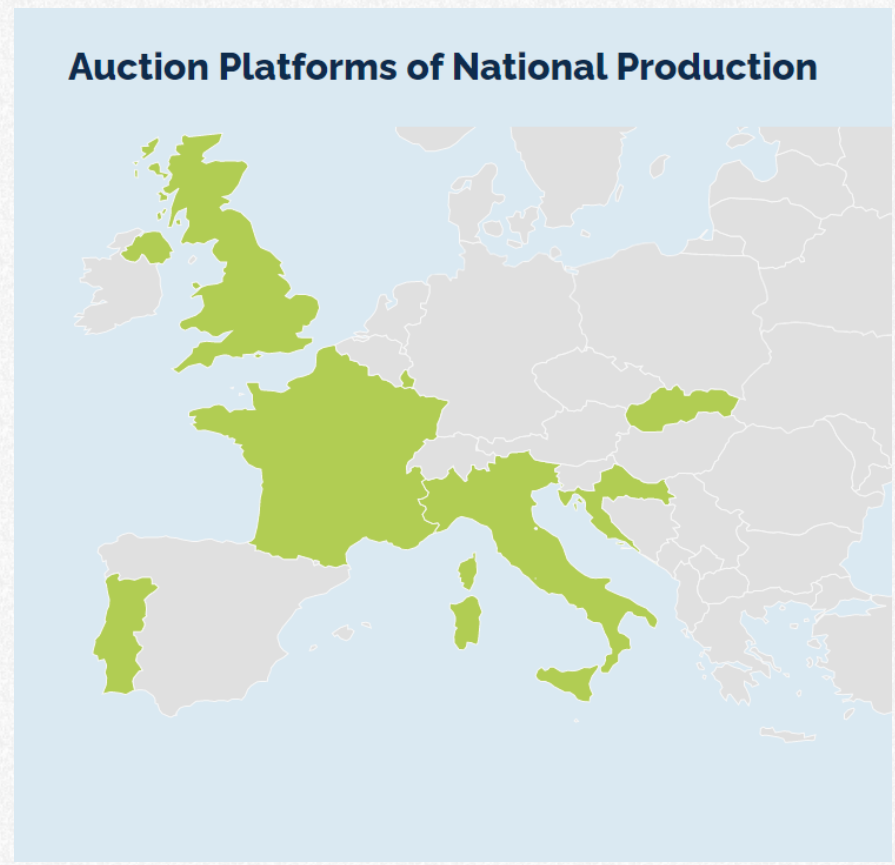
Michael Gude
 +47 413 45 660
 michael@greenpowerhub.com
 www.greenpowerhub.com

The left sidebar contains a 'LATEST NEWS' section with several news items:

- Coal | Freight**
6 hours ago
EU coal terminal stocks rise to 1.5-year high
- Gas**
6 hours ago
German Gazprom gas storage can hit targets – analysts
- Power**
6 hours ago
Spot prices in northern Sweden to remain volatile – analyst
- Gas | Coal | CO2**
6 hours ago
END OF DAY – Carbon extends losses to 5-week low
- Power | Remit**
8 hours ago
PGE delays Opole 6 (905 MW) restart to 21 June
- Power**
9 hours ago
Italy's April power demand rises 1% to 24 TWh
- Power**
9 hours ago
GERMAN – June power falls amid EUA, gas weakness
- Power**
9 hours ago
SPAIN – Spot power to drop on lower demand, more renewables
- Gas**
10 hours ago
GAS – Prices fall on mild outlook, rising storage levels

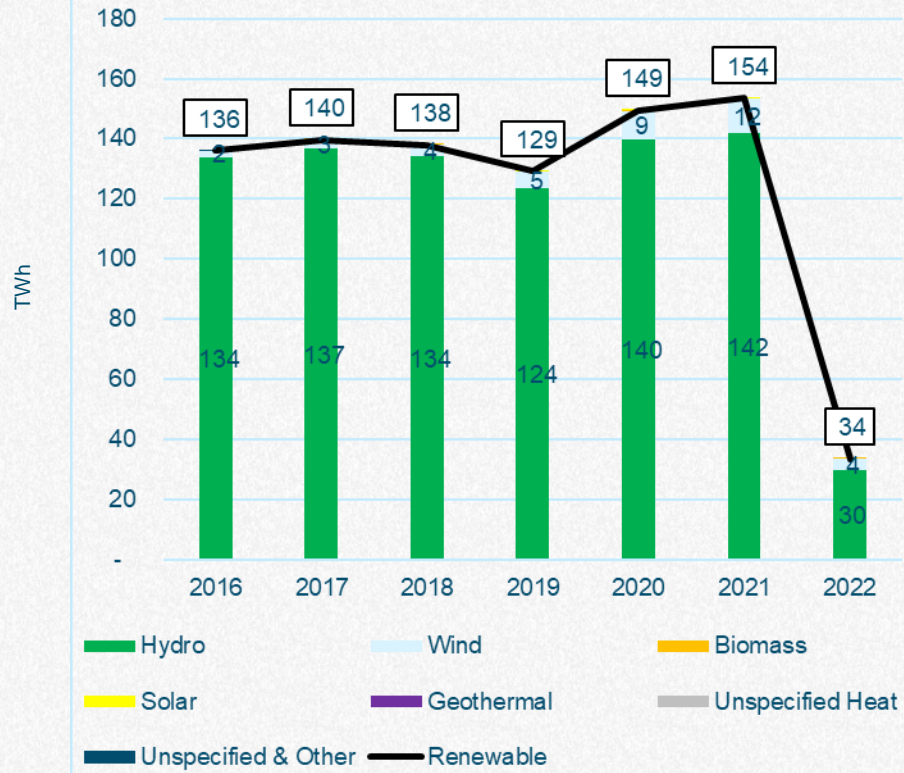
4a) Auction Platforms

- UK
- FR
- IT
- PT
- HR
- SK
- ... HU

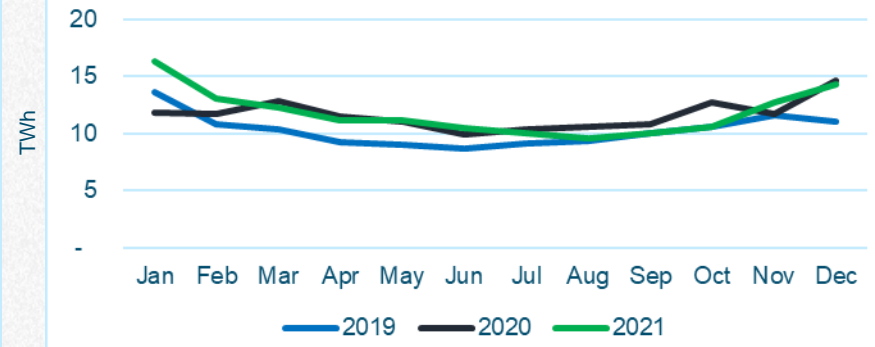


5) Case Studies: Norway

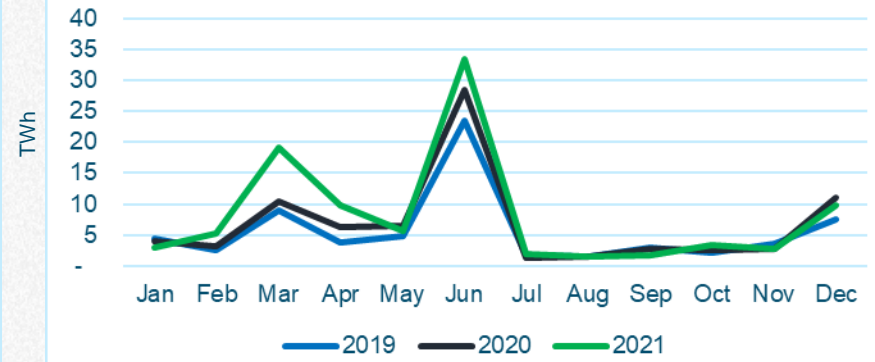
Norway Total Renewable Production Issuance



Norway Hydro Production Issuance

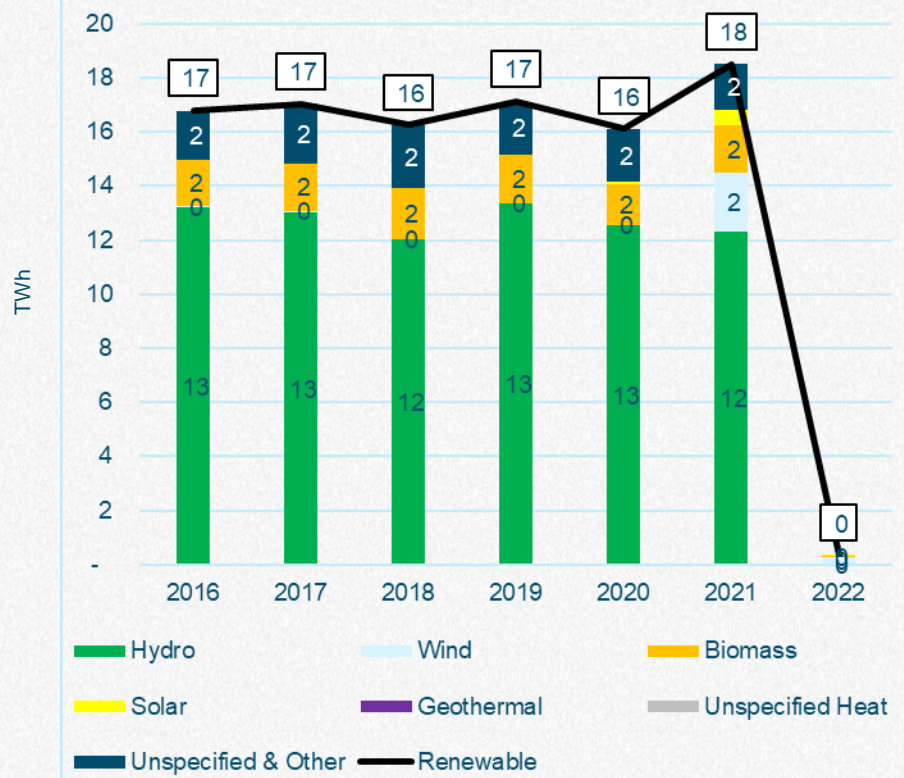


Norway Total Transaction Cancellations

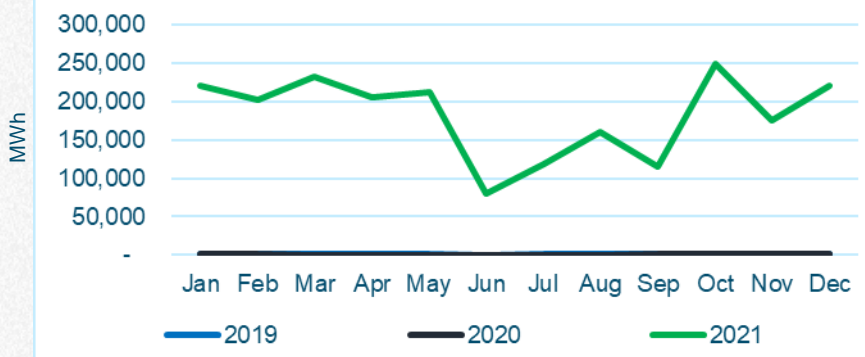


5) Case Studies: Germany

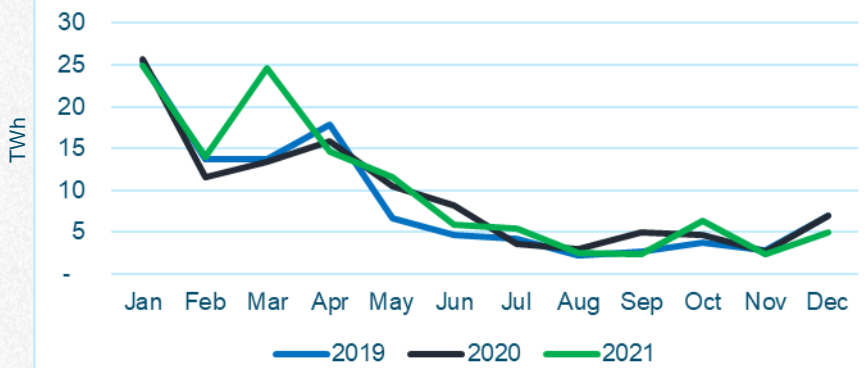
DE Total Renewable Production Issuance



DE Wind Production Issuance

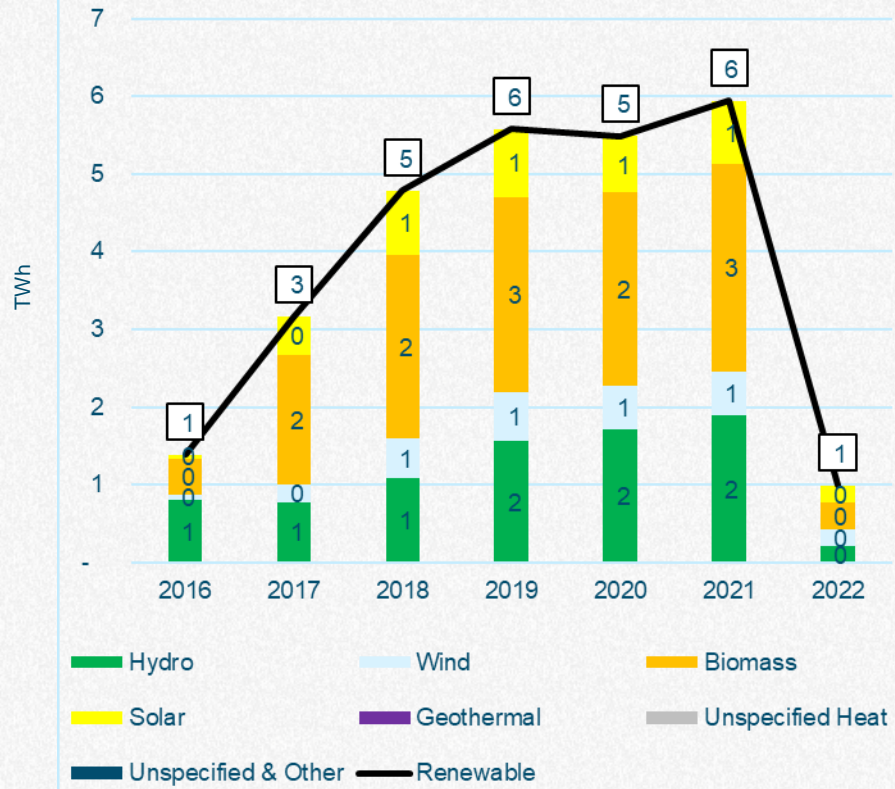


DE Total Transaction Cancellations

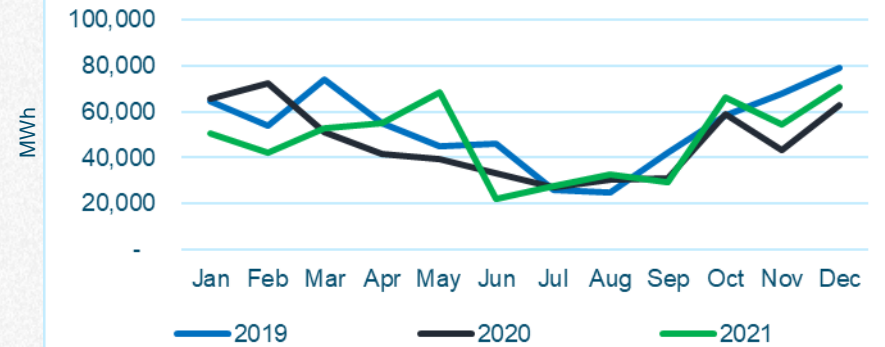


5) Case Studies: Czech Republic

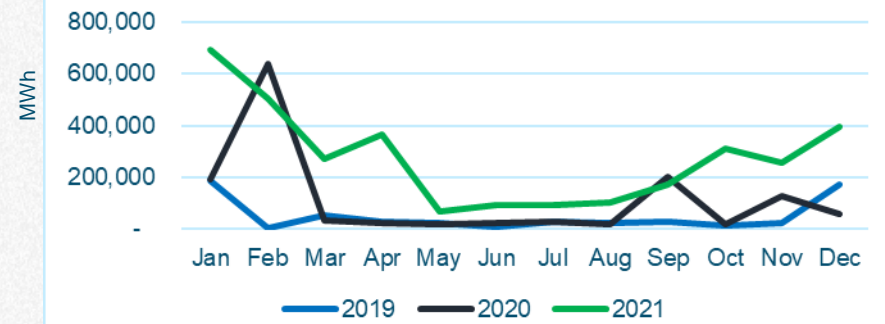
CZ Total Renewable Production Issuance



CZ Total Wind Production Issuance



CZ Total EECS Transaction Cancellations



- “**Granularity**” has traditionally been calendar year basis

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- “**Market Access**” as clearing houses adopt certificate products

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- “**Market Access**” as clearing houses adopt certificate products
- “**EU Taxonomy**” and consumer preference
- “**Full Disclosure**” adopted in further nations
- “**Regulatory Updates**” with Germany, Norway, UK

ENERGY ORIGINS .NET



6) Further Reading/Contact

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Thank you!