



Welcome and Opening Remarks

Pedro Amaral Jorge
APREN CEO

Large Scale Solar EU
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European context

REPowerEU

Scaling-up and speeding-up of renewable energy



EU Solar Strategy

- This strategy aims to bring online over 320 GW of solar photovoltaic by 2025 (more than doubling compared to 2020) and almost 600 GW by 2030.

RED III

RED III increases Member States' commitment to increasing the share of **gross final consumption of energy from renewable sources** from **32% to 42.5% by 2030**. To achieve this target, the directive incorporates new developments on several topics previously mentioned:



Portuguese context

Targets for 2030

NECP Targets Anticipated to 2026

NECP Revision Targets to 2030

14.9 GW large scale
5.5 GW small scale



Evolution of the installed capacity (with 2030 targets)

■ Fossil (natural gas and petroleum products) ■ Solar fotovoltaic ■ Concentrated solar thermal ■ Onshore wind ■ Geothermal ■ Offshore wind ■ Reversible hydro ■ Non-reversible hydro ■ Bioenergy (biomass, biogas and USW) ■ Wave

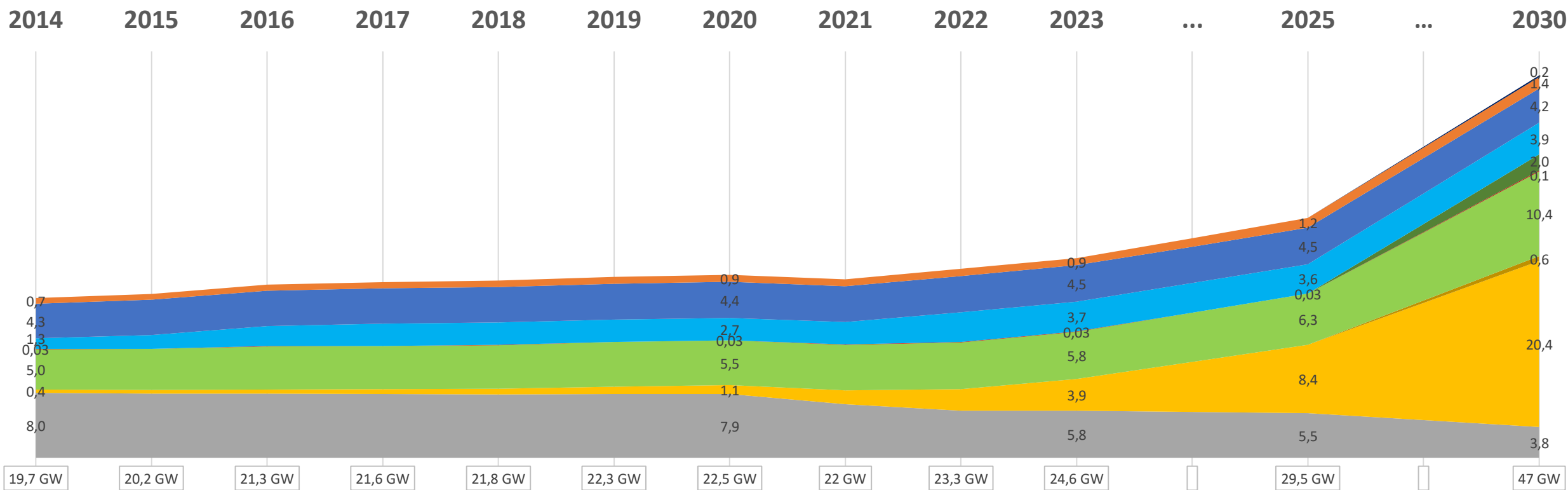


Figure 01

Source: DGEG, PNEC 2030,
Analysis APREN

Solar PV Development in Portugal 2012-2023

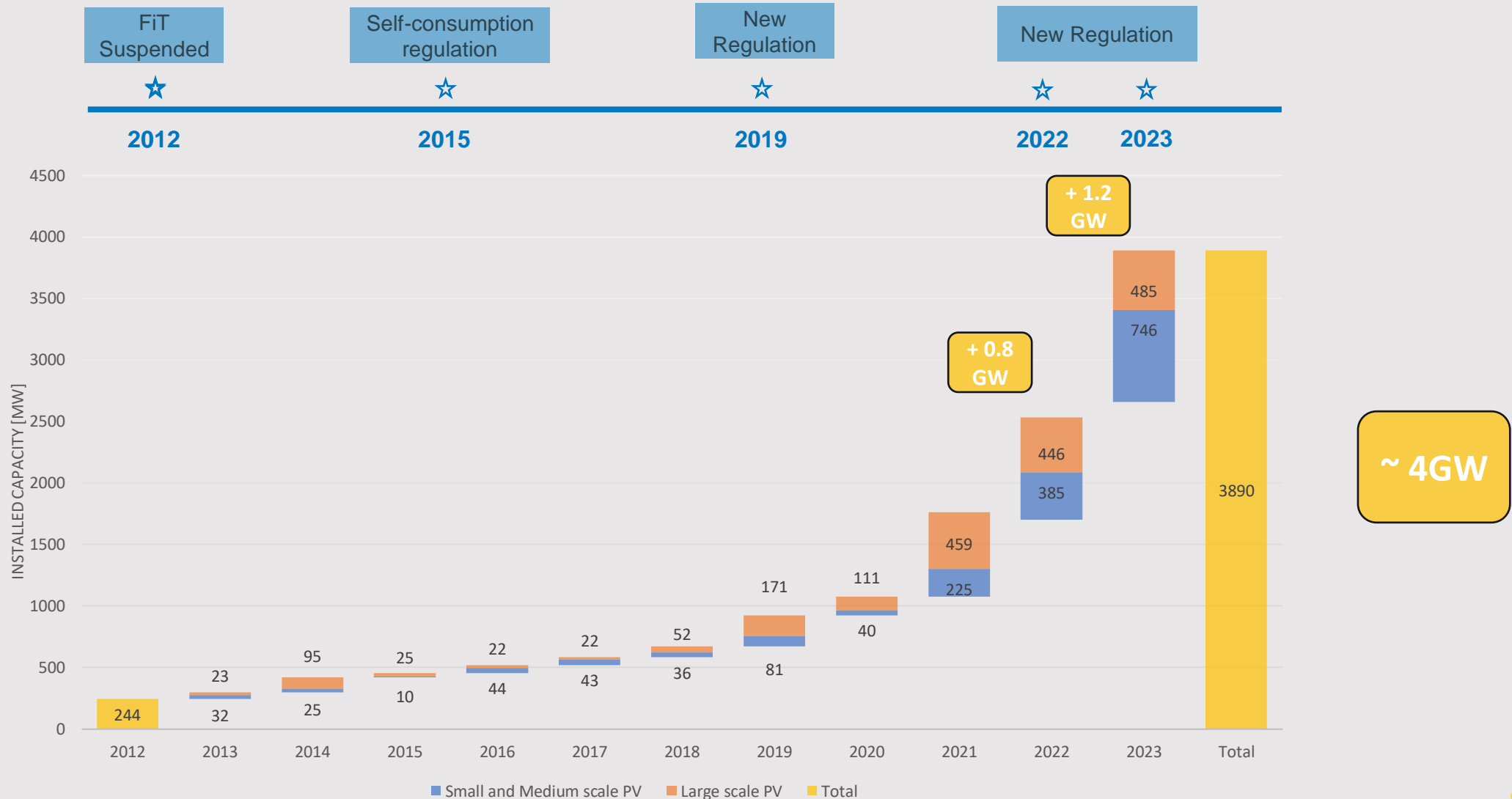


Figure 02

Source: DGEG 2024,
Analysis APREN

Spanish context

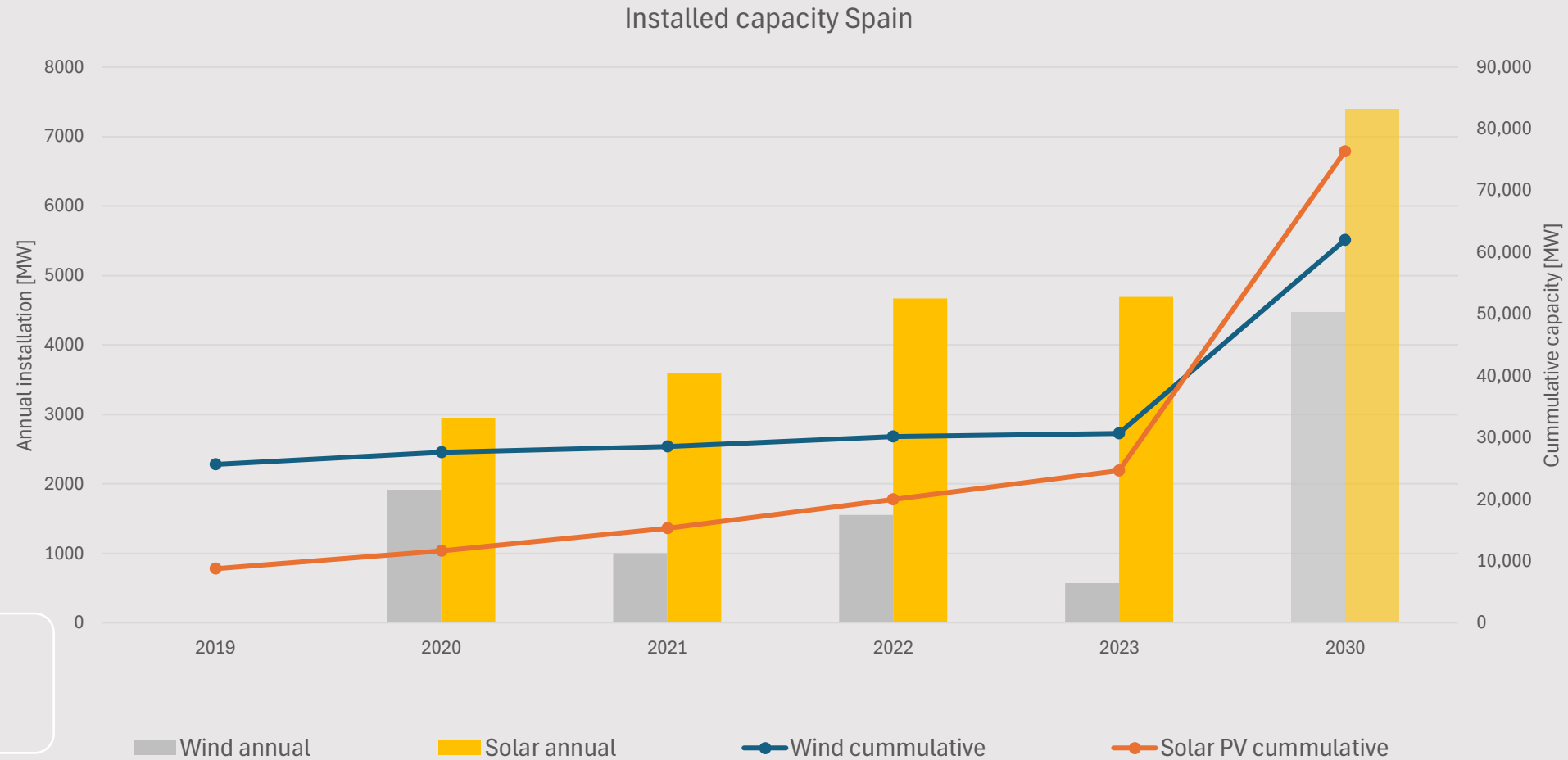


Figure 03

Source: REE; PNIEC

Market evolution and RES (2014-2023)

Average Annual Prices

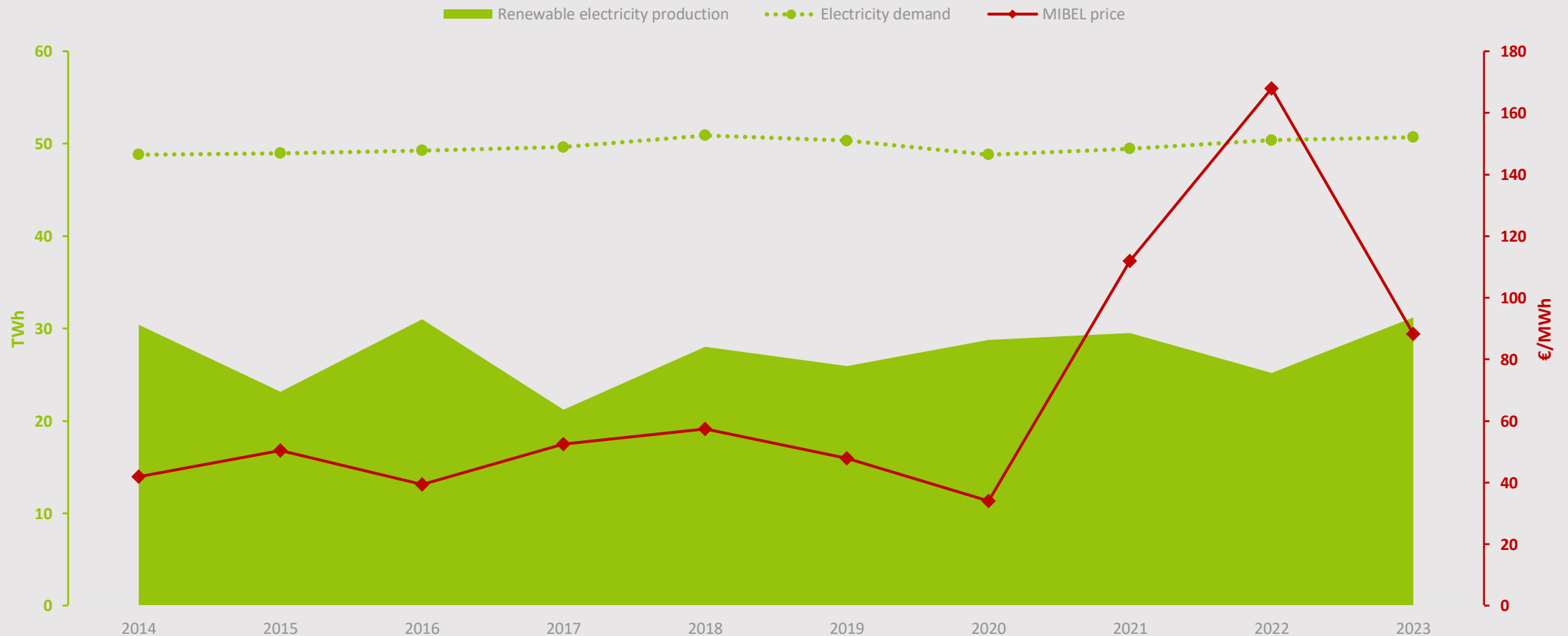


Figure Q5

MIBEL electricity price, renewable electricity production and electricity demand in mainland Portugal, in 2023.

Source: OMIE, REN, APREN analysis, Analysis APREN

Market evolution and RES (2022-2024)

Average Annual Prices

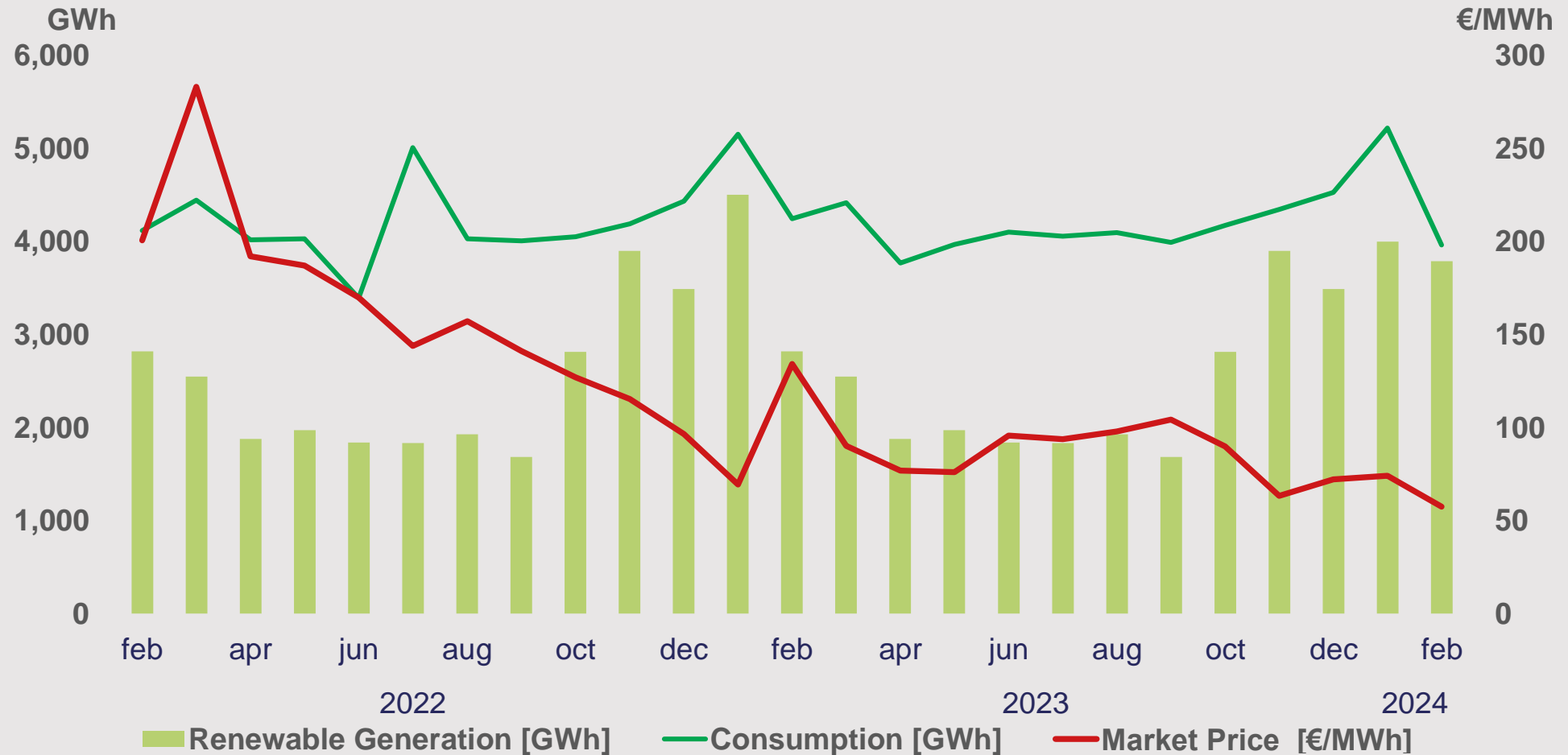
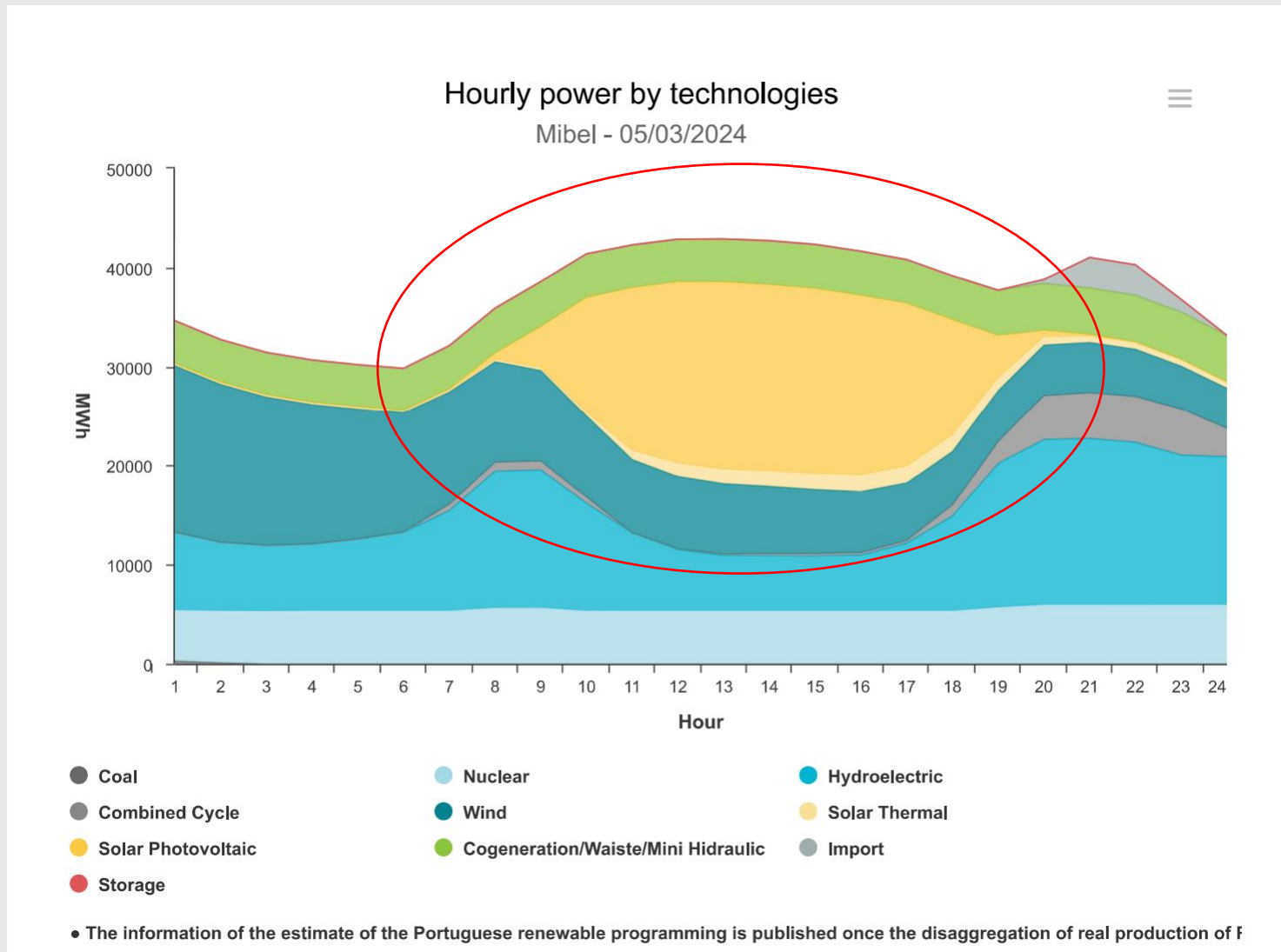


Figure 06

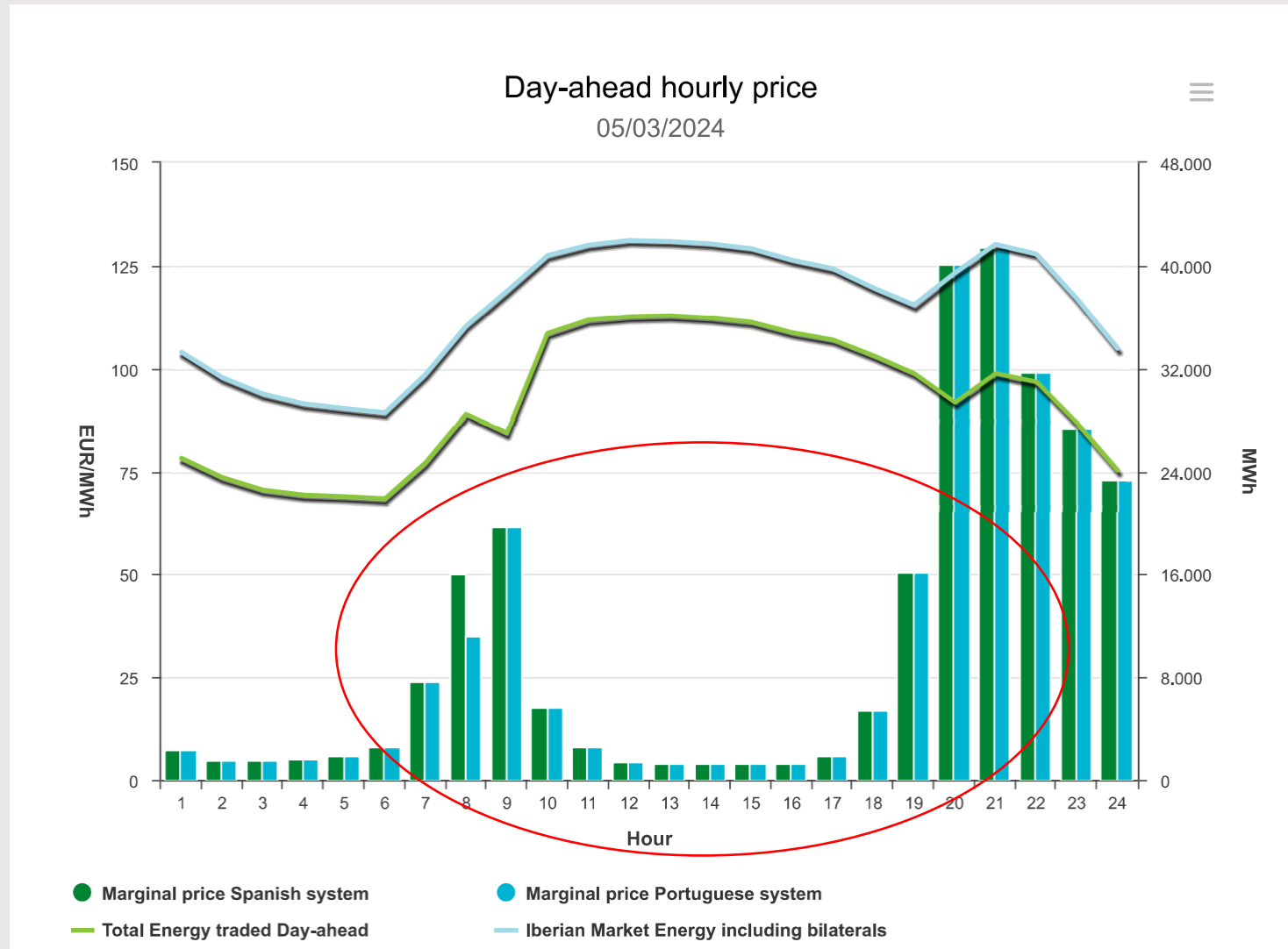
MIBEL electricity price, renewable electricity production and electricity demand in mainland Portugal, feb 2022 – feb 2024.

Source: OMIE, REN, APREN analysis, Analysis APREN

Iberian Spot Market

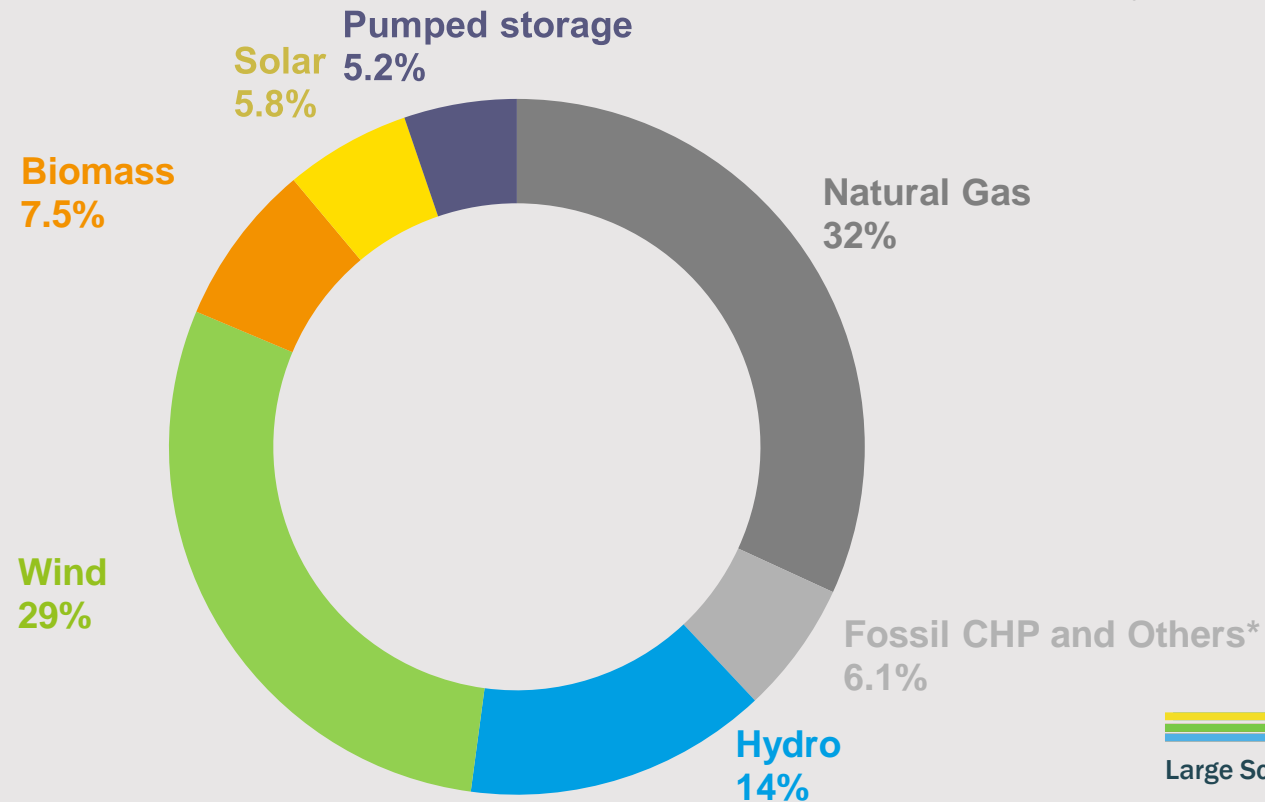


Iberian Spot Market



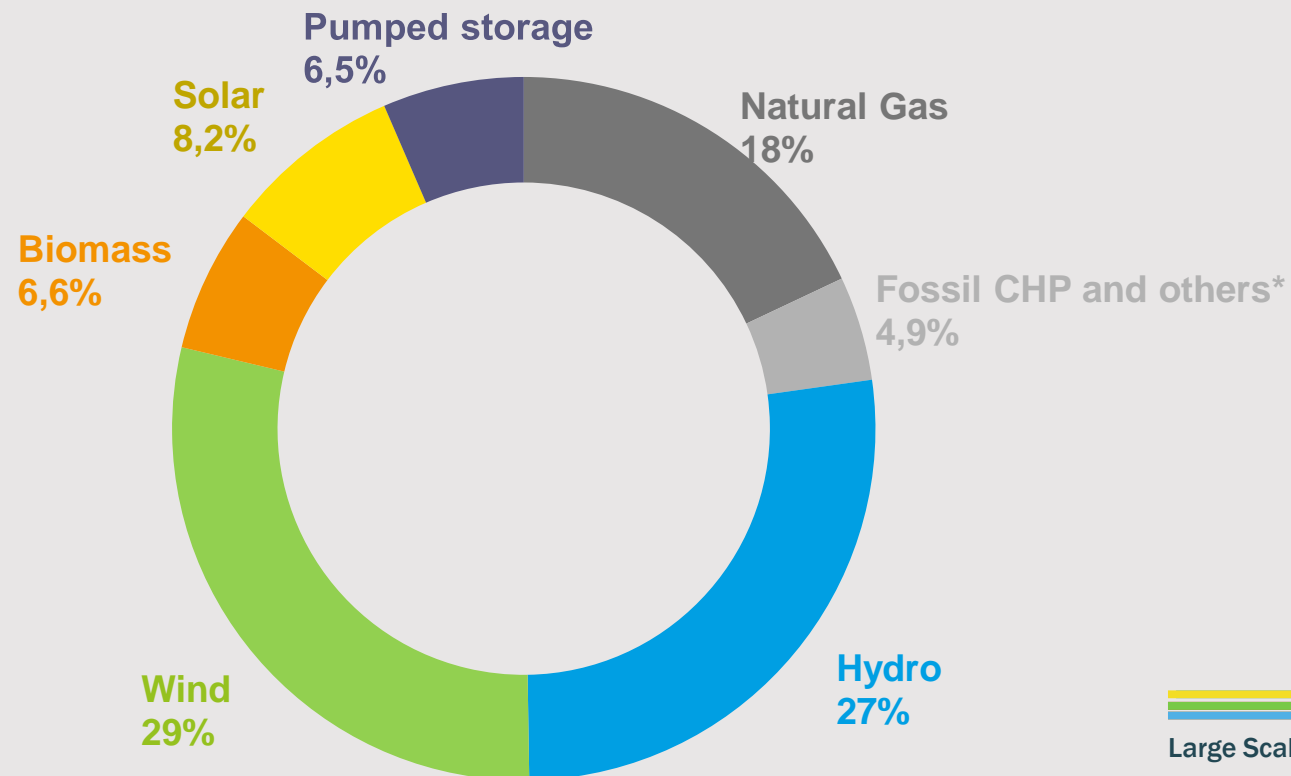
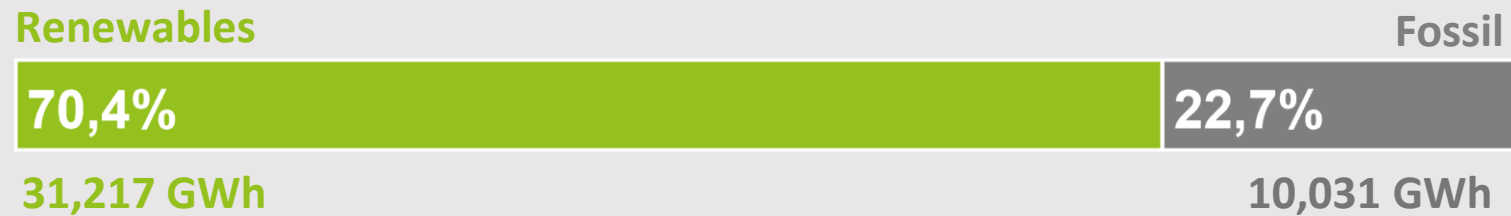
Portuguese Market Features

Accumulated December 2022 (Jan-Dec)



Portuguese Market Features

Accumulated December 2023 (Jan-Dec)



Portuguese Market Features



- Hybridization | More than 4.000 yearly hours
- Electrolysers
- Multi technology renewable power stations
- Storage

Main bottlenecks of 2023



Grid development plans

- TSO and DSO didn't publish the updated plans for grid development (2023)
- Previous grid development plans (2021) partially approved
- Lack of grid availability and transparency regarding access points continues to be one major bottleneck for new projects

Main bottlenecks of 2023



Significant delays in permitting deadlines of large-scale projects

- 400-500 MW installed per year in the last 3 years – to reach 14.5 GW until 2030, Portugal needs to install ~ 1.8 GW/year
- Few projects from solar auctions of 2019 and 2020 are operating
 - 2019: 1300 MW allocated, of which 429 MW are operating
 - 2020: 670 MW allocated, of which 0 MW are operating



Lack of updated and detailed data

- Projects in pipeline with detail regarding permitting phases
- Statistical data of small-scale projects per range of installed capacity and per sector (individual/domestic; C&I)
- No information available regarding storage projects

Achievements of 2023



The installed capacity quadrupled in 3 years despite all current barriers



Regulatory Changes

- DL 11/2023 – Environmental framework with new thresholds and implementation of the “Administrative positive silence”
- First proposal for acceleration areas (go-to areas) - Areas that may be eligible for a more streamlined permitting process



Revision of the National Energy and Climate Plan for 2023

- Increased target for solar PV of **20.4 GW** – more than the current renewable installed capacity (18.7 GW)
- New measures to speed up permitting procedures





Thank you