

Vol.30

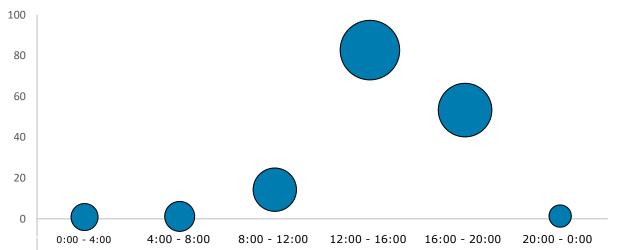
Unlocking RES Potential: Addressing Curtailments through Storage



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Vol.30 Unlocking RES Potential: Addressing Curtailments through Storage

Total Curtailed Energy (MWh) by 4-hour intervals* for the EU27, [Jan 2024 - Oct 2024]



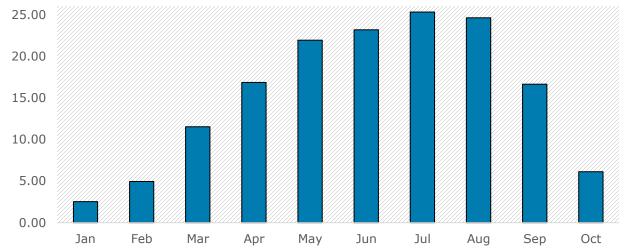
* The size of bubbles indicates the number of days there were curtailments during the year

Most curtailed energy occurs during the Solar PV working hours and the warmer months, as the need for electricity is lower relative to the winter, due to the electrification trend.

On average the wholesale electricity prices in the EU have a great range, from 12.53€/MWh to 145.19€/MWh for period from January 2024 to October 2024.

Sweden has the lowest DAM price on average, compared to Italy that has the highest DAM price on average.

Total Curtailed Energy (TWh) by month for the EU27, [Jan 2024 - Oct 2024]



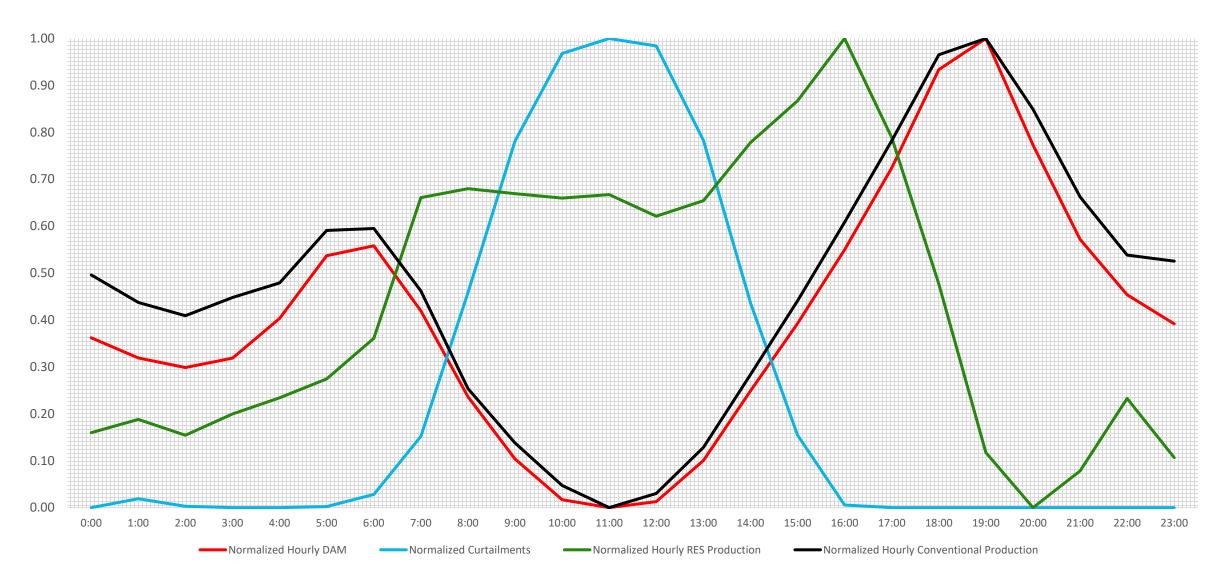
Monthly Average DAM Prices Heatmap (€/MWh) per country



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Normalized* hourly Electricity production, Normalized DAM prices and Normalized Curtailments data (CET+1) for the case of Greece,

[Jan 2024 – Oct 2024]



^{*} All values are expressed in a 0-1 range

Vol.30 Unlocking RES Potential: Addressing Curtailments through Storage Most renewable energy generation domestically comes from Solar PV. The country's load profile The curves of renewable and To achieve a sustainable follows almost an identical conventional energy energy transition, pattern to the conventional production are almost curtailed energy should complimentary to each other. production (lignite & NG). be utilized. Based on the curtailments and country load patterns the need for short-term storage is becoming obvious. The hours of the curtailments occurring in Greece DAM prices follows a compared to the EU27 are complementary curve to the slightly shifted toward the curtailments and a similar

earlier daylight hours, with

peak occurring at 11:00-12:00.

> Hellenic Association for Energy Economics Chart of the Month – vol.30

pattern the countries load.





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