



PORTUGUESE RENEWABLE ELECTRICITY REPORT

MAY 2020



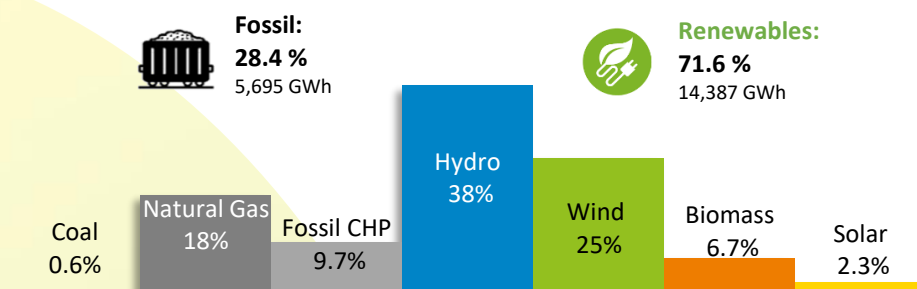
APREN Associação
de Energias
Renováveis

EXECUTIVE SUMMARY

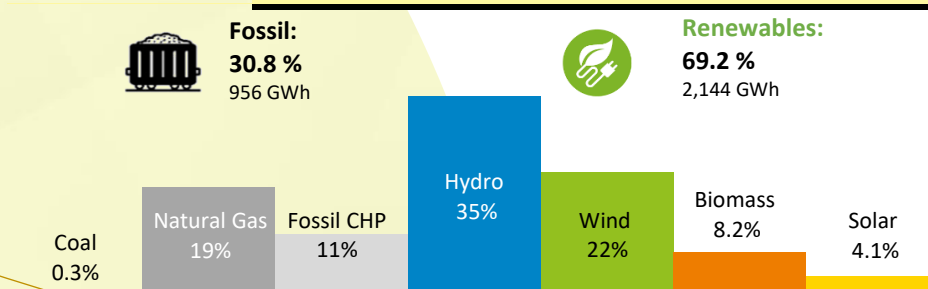
71.6 %

Renewable electricity generation
(January to May 2020)

CUMULATIVE ON MAY 2020 (JAN-MAY)







MAY 2020



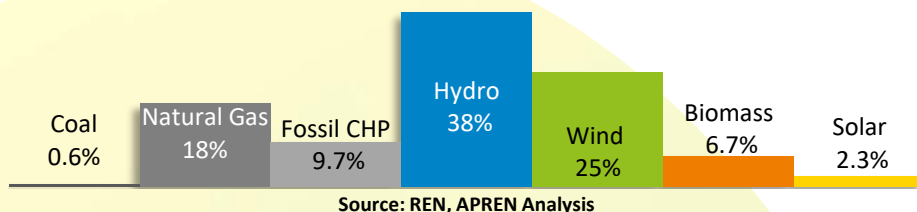
THE IMPACT OF COVID-19 ON THE ELECTRICITY SECTOR

After the State of National Emergency was decreed on March 18th and later the State of Calamity on May 4th, in response to the COVID-19 pandemic, a big part of the national businesses has stopped, which had serious repercussions in the electricity sector, such as:

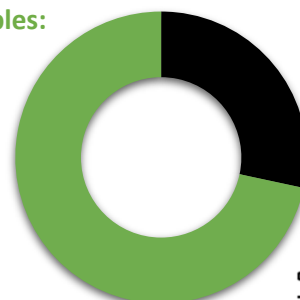
- 
A significant reduction on the electricity demand by 13.2 % compared to May 2019, considering the necessary corrections on temperature and number of working days.
- 
A significant reduction on the CO₂ emission allowances price by 22 % in comparison to May 2019. It was reached the year's minimal value of 15.2 €/tCO₂ on March 18th, as a result of low market demand.
- 
Reduction on the hourly average electricity price by 56 % compared to May 2019 (48.8 €/MWh), with periods recording prices below 5 €/MWh in the beginning of May.
- 
Reduction of CO₂ emissions in the electricity sector, having recorded, in May, a value of 111 gCO₂/kWh, about half the value registered in the same period of 2019 (213 gCO₂/kWh).

ELECTRICITY GENERATION: MAINLAND PORTUGAL

CUMULATIVE ON MAY 2020 (JAN-MAY)



Renewables:
71.6 %

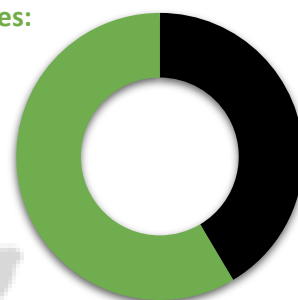


Fossil:
28.4 %

CUMULATIVE ON MAY 2019 (JAN-MAY)



Renewables:
58.2 %



Fossil:
41.8 %

MAIN INDICATORS: CUMULATIVE ON MAY (JAN-MAY)

	2020	2019	
% renewable generation	71.6	58.2	↑ 13.4%
Generation [GWh]	20,083	19,543	↑ 2.7%
Demand ¹ [GWh]	21,073	21,900	↓ 3.9%
Wind index	0.84	0.98	
Hydro index	0.97	0.57	

¹ Demand referred to the powerplants' net power generation, considering the import-export balance.

Source: REN, APREN analysis

INTERNATIONAL TRADE

Between January 1st and May 31st of 2020, the Portuguese mainland electricity system recorded electricity imports of 2,782 GWh and exports of 1,792 GWh, resulting in an import balance of 990 GWh.

Source: REN, ENTSO-E, APREN analysis

PT

ES

MA

FR

DE – LU



Figure 1. Import-export balance PT-ES, ES-MA, ES-FR and FR-(DE-LU). [GWh]. Source: ENTSO-E, IESOE

ELECTRICITY MARKET

Between January 1st and May 31st of 2020 there was an average electricity market price within the Iberian Electricity Market (MIBEL) in Portugal of 28.8 €/MWh², a significant reduction of 46 % in comparison to the same period of 2019.

In the same period, 334 non-consecutive hours were recorded in which renewable electricity generation was sufficient to meet the demand in Mainland Portugal, which were characterized by an average MIBEL price of 25.7 €/MWh.

May registered an average hourly price of 21.4 €/MWh, a decrease of 56 % compared to the same period of 2019 (May 2019 - 48.8 €/MWh). This scenario reflects the impacts of the COVID-19 pandemic, for which a summary of the main impacts is presented in the section [COVID-19: IMPACT ON THE ELECTRICITY SECTOR](#).

²Arithmetic average of the hourly prices

Source: OMIE, APREN Analysis

AND ON THE REST OF EUROPE?

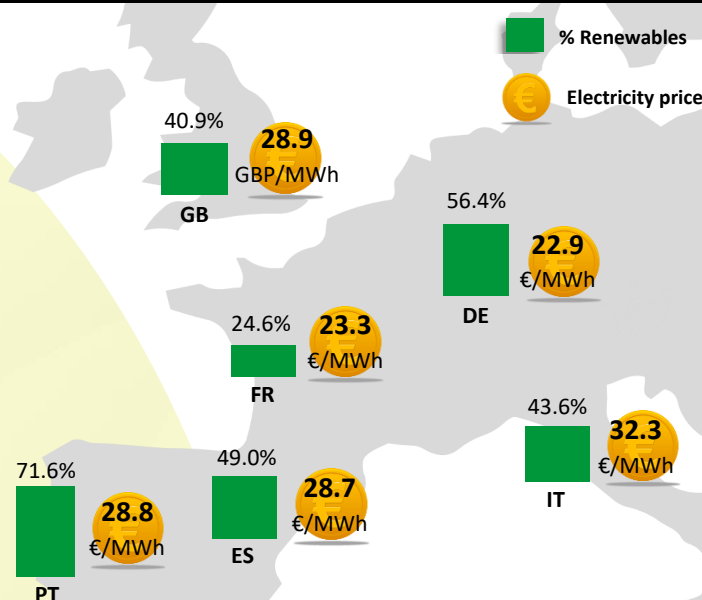


Figure 2. Renewable electricity generation share and average hourly electricity market price, between January and May 2020. Source: REN, Fraunhofer, REE, Terna, National Grid, ENTSO-E, APREN analysis

RENEWABLE GENERATION, DEMAND AND MIBEL PRICE

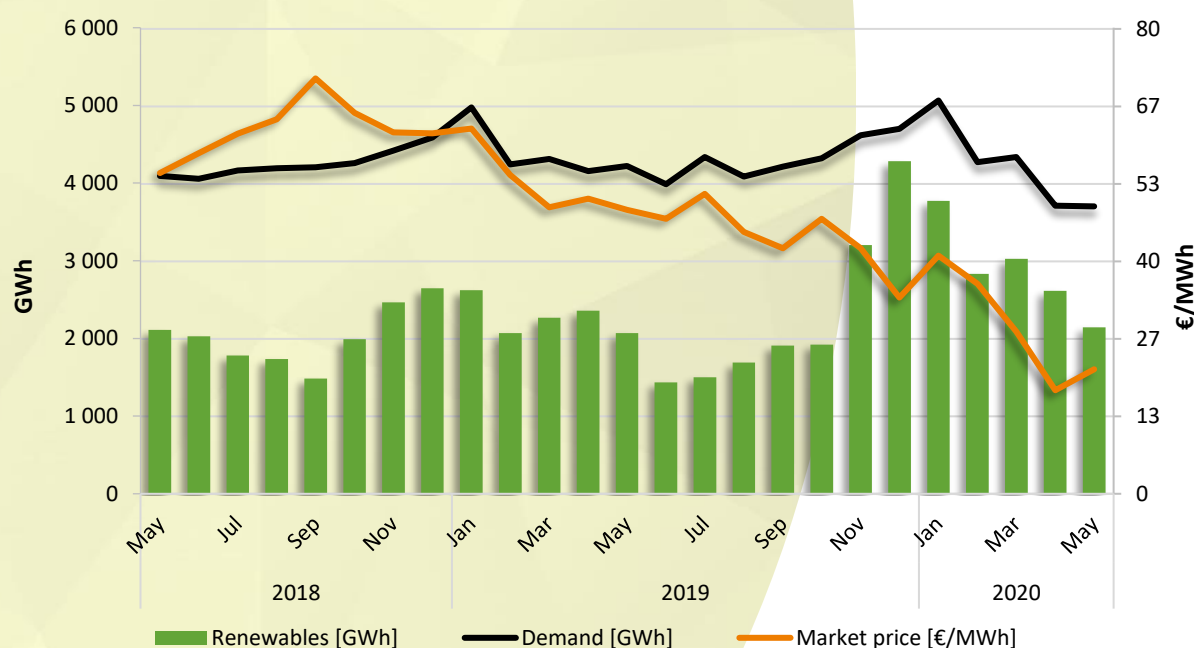


Figure 3. Market price, electricity demand and renewable electricity generation (May-2018 to May-2020). Source: OMIE, REN, APREN analysis

POWER SECTOR EMISSIONS

The table aside identifies the savings achieved between January 1st and May 31st of 2020 on fossil fuel imports, CO₂ emissions and CO₂ emission allowances, as result of the renewable electricity generation.

During this period, the European market for CO₂ allowances (EU-ETS) registered an average price of 21.7 €/tCO₂.

May recorded an average price for CO₂ emission allowances of 20.0 €/tCO₂, a 22% reduction compared to May 2019, contrary to the trend on increasing allowances prices that has been observed. This is a result of the COVID-19 pandemic impact on the carbon market. The main impacts of the pandemic are presented in the section [COVID-19: IMPACT ON THE ELECTRICITY SECTOR](#).

Source: SendeCO2

RENEWABLES AVOIDED...

Fossil fuel imports



268 M€

Jan-May

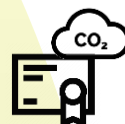
CO₂ emissions



8.5 MtCO₂

Jan-May

CO₂ allowances



184 M€

Jan-May

Source: REN, SendeCO2, WorldBank, DGEG, ERSE, APREN analysis

Note: Coal prices were considered until November 2019, due to data unavailability.

SPECIFIC EMISSIONS AND CO₂ ALLOWANCES PRICE

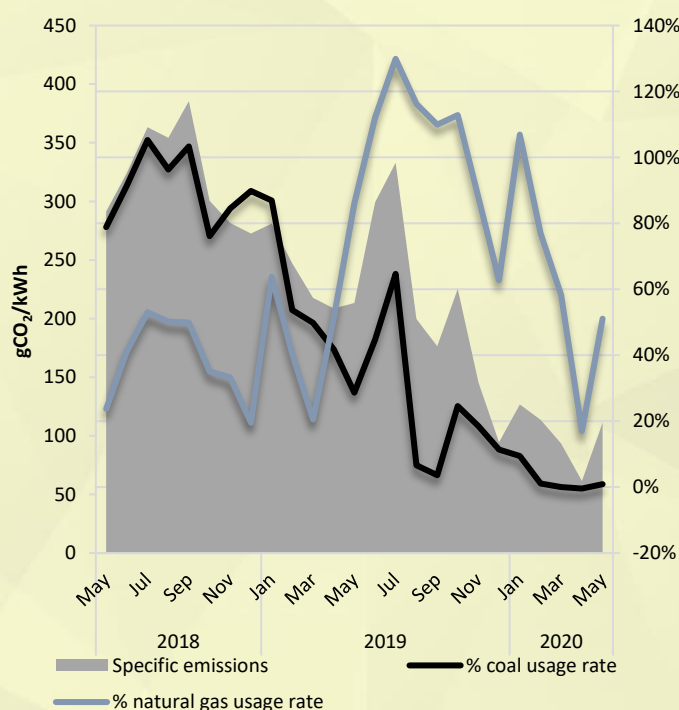


Figure 4. Specific emissions from the power sector in Mainland Portugal, % usage rate of coal and natural gas power plants (May-2018 to May-2020). Source: REN, DGEG, ERSE, APREN analysis.

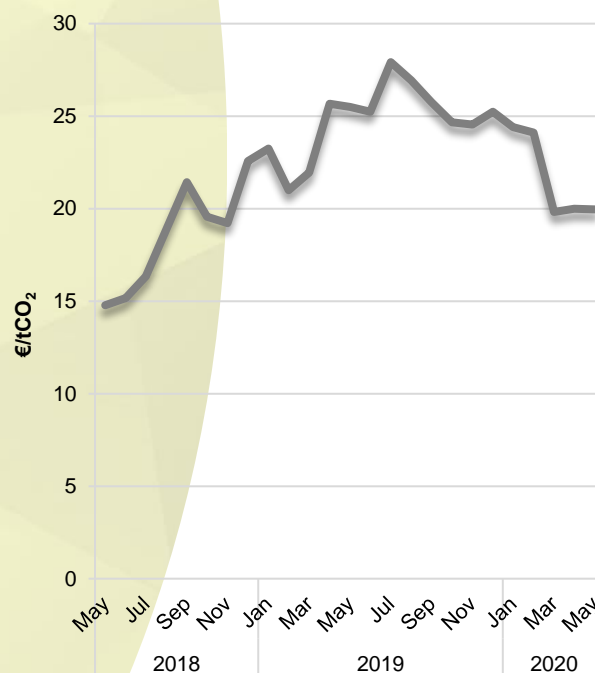


Figure 5. CO₂ allowances price (May-2018 to May-2020). Source: SendeCO2.

MONTHLY ANALYSIS: MAY

On May, renewable electricity generation represented 69.2 % of the overall electricity generation in Mainland Portugal (3,100 GWh).

Concerning the international trade in May, we highlight the import balance of 600 GWh recorded for the mainland electricity system.

The table aside shows the main productivity indicators for renewable generation in May 2020.

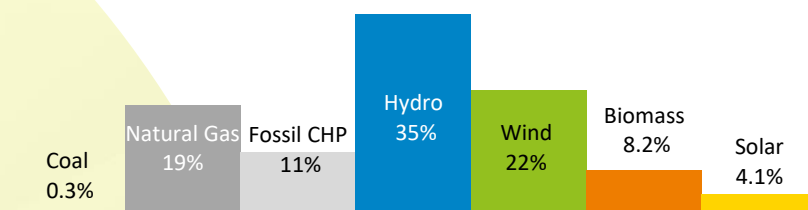
Source: REN, APREN analysis

MAIN INDICATORS

GENERATION

Total generation: 3,100 GWh

Renewables share: 69.2 %



OTHER INDICATORS

Demand: 3,700 GWh

Wind index: 0.72

Hydro index: 1.05

Source: REN, APREN analysis

LOAD DIAGRAM FOR MAY 2020

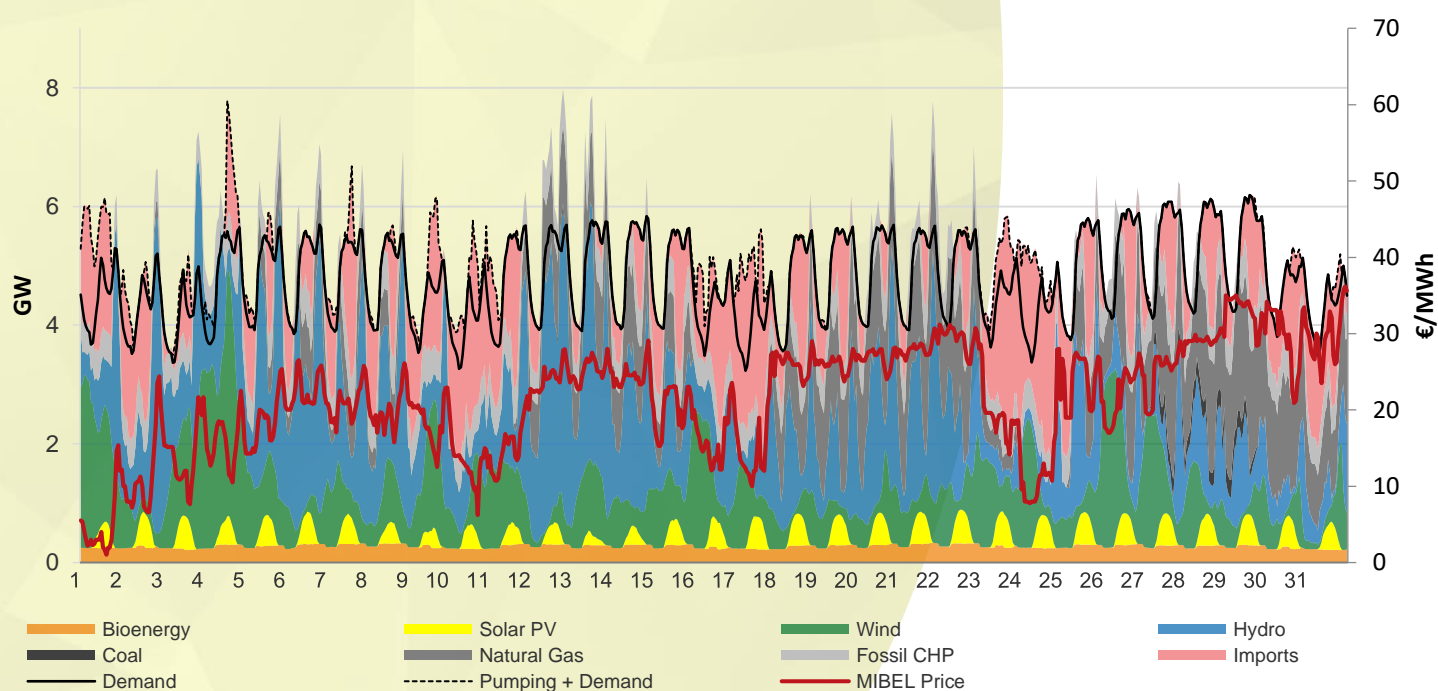


Figure 6. Load Diagram for Mainland Portugal (May-2020). Source: REN, APREN analysis.

COVID-19: IMPACT ON THE ELECTRICITY SECTOR

LOAD DIAGRAM: 18TH MARCH TO 31ST MAY 2020 STATE OF EMERGENCY AND STATE OF CALAMITY

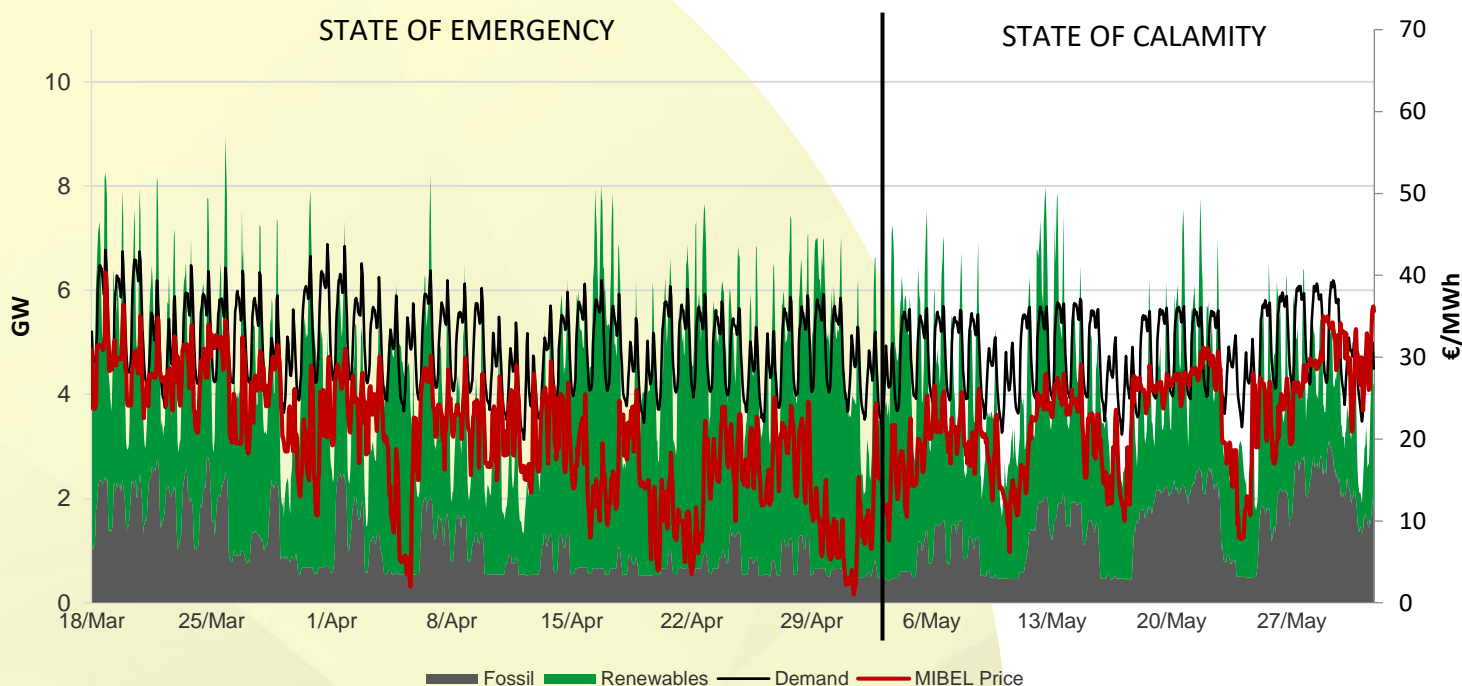






Figure 7. Load diagram for Mainland Portugal (18th March to 31st May 2020). Source: REN, APREN analysis.

MAIN IMPACTS

After the State of National Emergency was decreed on March 18th in response to the COVID-19 pandemic, a big part of the national businesses have stopped, which had serious repercussions in the electricity sector, such as:

- 
 - **A significant reduction on the electricity demand** by 13.2 % compared to May 2019, considering the necessary corrections on temperature and number of working days.
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 - **A significant reduction on the CO₂ emission allowances price** by 22 % in comparison to May 2019. It was reached the year's minimal value of 15.2 €/tCO₂ on March 18th, as a result of low market demand.
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 - **Reduction on the hourly average electricity price** by 56 % compared to May 2019 (48.8 €/MWh), with periods recording prices below 5 €/MWh in the beginning of May (Figure 7).
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 - **Reduction of CO₂ emissions in the electricity sector**, having recorded, in May, a value of 111 gCO₂/kWh, about half the value registered in the same period of 2019 (213 gCO₂/kWh).

FINAL REMARKS

National Regulation

Capacity Auctions

The Dispatch No. 5921/2020 was published on May 29th, announcing the opening of the competitive auction procedure for the allocation of injection capacity reserve, together with the Procedure Programme and the Auction's specifications. Proposals can be submitted under the general regime (market), through three different models: Variable premium for differences; Fixed Compensation to the National Electricity System and Fixed Premium for Flexibility. The application period will run from June 8th to July 31st. The respective documents can be downloaded from the official portal: <https://leiloes-renovaveis.gov.pt/>. On the same day, a new public session was held on the auctions, where existing doubts and some specifics of the procedure were clarified, namely the identification of the 12 available lots, adding up to a total of 700 MVA, which can already be consulted on the official portal.

National Hydrogen Strategy

Following and complementing the government's intentions for the decarbonisation of the Economy as reflected in the National Energy and Climate Plan 2030 (NECP 2030) and the previously published Roadmap and Action Plan for Hydrogen, the National Hydrogen Strategy was published for public consultation. The public consultation process will be open until July 6th and can be accessed through the [Portal Participa](#).

Guarantees of Origin (GOs)

It was published on the Directorate General for Energy and Geology (DGEG) Portal the Communication regarding the registration of renewable energy or cogeneration producers on the electronic platform for issuing guarantees of origin from the Issuer of Guarantees of Origin (EEGO), which provides some clarifications to the operationalization of the GOs and establishes the target date for registration (June 30th) for producers where registration on the EEGO platform is mandatory.

Small Production Units (UPP)

Two power allocation sessions were held on May 15th and 29th, as provided for in Dispatch No. 32/2020, published on April 30th, and in the Dispatch No. 37/2020, published on May 21st.

European Policy

On May 27th, the European Commission presented the awaited European Strategy for the economic recovery in response to the crisis and recession caused by the COVID-19 outbreak. This strategy is essentially made up of two distinct elements, a new European Union Budget for the period 2021-2027 and a new economic recovery fund, the "Next Generation EU", which add up to a total investment of 1.85 trillion euros.

POLICY AND REGULATION



Proposal for the Regulation on the European Climate Law

On March 4th the EC published the proposal for the Regulation for the European Climate Law which sets the roadmap for carbon neutrality in 2050.



Published the New European Industrial Strategy

On March 10th, the new Industrial Strategy for Europe was published by the EC, defining its industrial strategy for 2030.



Capacity Auctions

On May 29th, the Dispatch No. 5921/2020 was published announcing the opening of the competitive auction procedure for the allocation of injection capacity reserve, together with the Procedure Programme and the Auction's Specifications.



National Hydrogen Strategy

On May 21st, the Council of Ministers approved the National Hydrogen Strategy. The public consultation process will be open until July 6th and can be accessed through the Portal Participa.

IN RESPONSE TO THE COVID-19 PANDEMIC



Economic recovery package for the EU

On May 27th, the European Commission presented the awaited European Strategy for economic recovery in response to the crisis and recession caused by the COVID-19 outbreak. This strategy is essentially made up of two distinct elements, a new European Union Budget for the period 2021-2027 and a new economic recovery fund, the "Next Generation EU", which add up to a total investment of 1.85 trillion euros.



Suspension of administrative procedures

The Dispatch No. 27/2020 suspends new requests for the allocation of Capacity Reserve Titles; Agreements for the allocation of reception capacity in the RESP; UPP and UPAC registry; Electricity Production Permits under the ordinary regime, cogeneration and special regime; and Permits for the Establishment of network infrastructure. The suspension period was extended by the Dispatch No. 33/2020 until the end of May.

Information available in:

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