



PORTUGUESE RENEWABLE ELECTRICITY REPORT

MARCH 2020



APREN Associação
de Energias
Renováveis

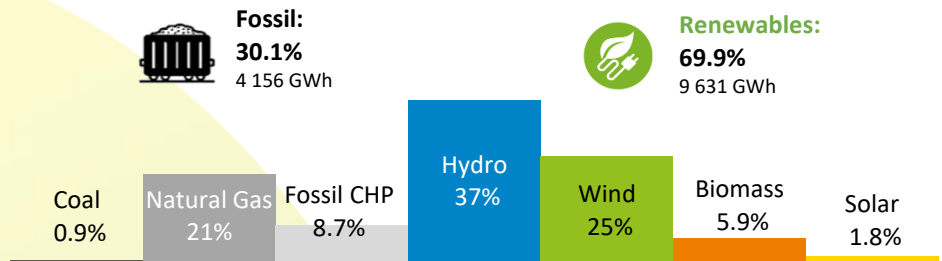
EXECUTIVE SUMMARY

69.9 %

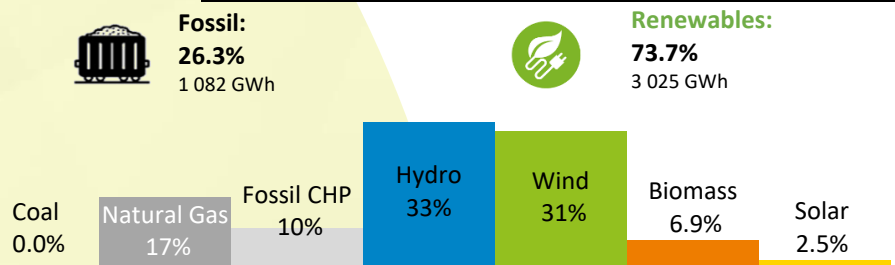
Renewable electricity generation

(January to March 2020)

CUMULATIVE ON MARCH 2020 (JAN-MAR)



MARCH 2020



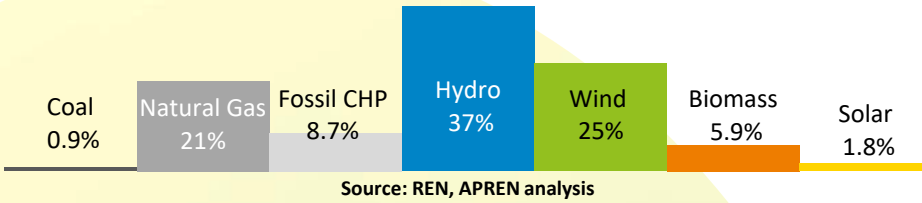
THE IMPACT OF COVID-19 ON THE POWER SECTOR


The State of National Emergency decreed in response to the Covid-19 pandemic, had serious repercussions on the power sector, such as:

- **A reduction on the electricity demand** by 1.7% compared to March 2019. The impact on demand-side is especially notorious on the 4th week of March, showing a tendency for a match between the load profiles from weekdays and weekends, with a significant reduction of the electricity demand at peak hours.
- **A significant reduction on the CO₂ emission allowances price** by 24% since the beginning of March, with a minimum daily price of 15.2 €/tCO₂, as a result of low market demand.
- **A significant reduction on the electricity price** by 32% compared to the beginning of the year, with a minimum price registered on March 31st (10.7 €/MWh from 5 am to 6 am), also due to high wind productivity.

ELECTRICITY GENERATION: MAINLAND PORTUGAL

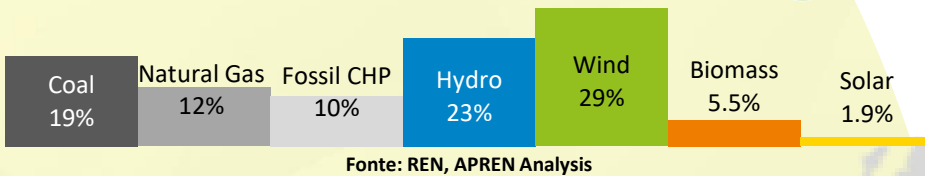
CUMULATIVE ON MARCH 2020 (JAN-MAR)




 **Renewables:**
69.9%



CUMULATIVE ON MARCH 2019 (JAN-MAR)



 **Renewables:**
58.5%



MAIN INDICATORS: CUMULATIVE ON MARCH (JAN-MAR)

	2020	2019	
% renewable generation	69.9	58.5	↑ 11%
Generation [GWh]	13,787	11,881	↑ 16%
Demand ¹ [GWh]	13,666	13,526	↑ 1.0%
Wind index	0.86	0.88	
Hydro index	0.91	0.52	

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

Source: REN, APREN analysis

INTERNATIONAL TRADE

Between January and March 2020, the Portuguese mainland electricity system recorded electricity imports of 1,354 GWh and exports of 1,475 GWh, resulting in an export balance of 121 GWh.

Source: REN, ENTSO-E, APREN analysis

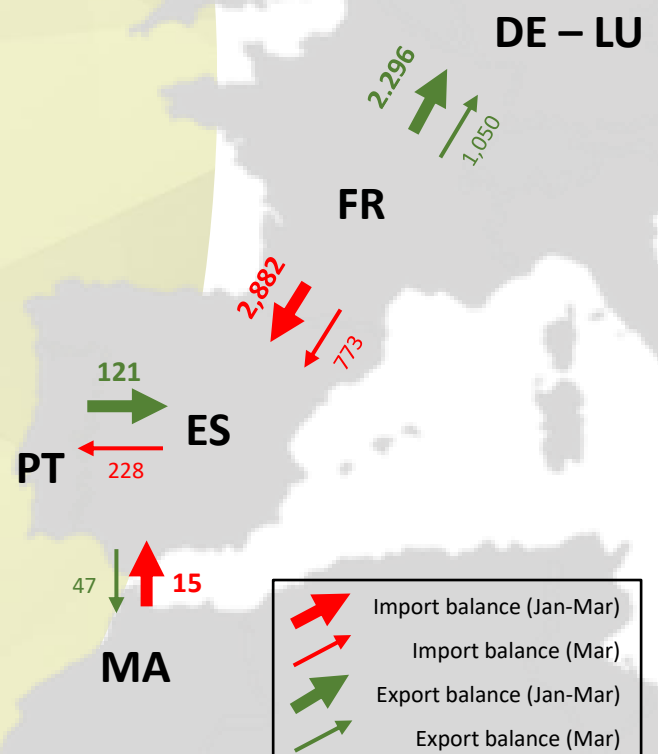


Figure 1. Import-export balance PT-ES, ES-MA, ES-FR and FR-(DE-LU). [GWh]. Source: ENTSO-E, IESOE

ELECTRICITY MARKET

Between January and March 2020 there was an average electricity market price within the Iberian Electricity Market (MIBEL) in Portugal of 34.9 €/MWh², a significant reduction of 37 % in comparison to the same period of 2019.

There were registered 198 non-consecutive hours where renewable electricity generation was enough to meet the demand in Mainland Portugal, which were characterized by an average MIBEL price of 32.3 €/MWh.

March recorded an average electricity market price 27.9 €/MWh.

²Arithmetic average of the hourly prices

Source: OMIE, APREN analysis

AND ON THE REST OF EUROPE?

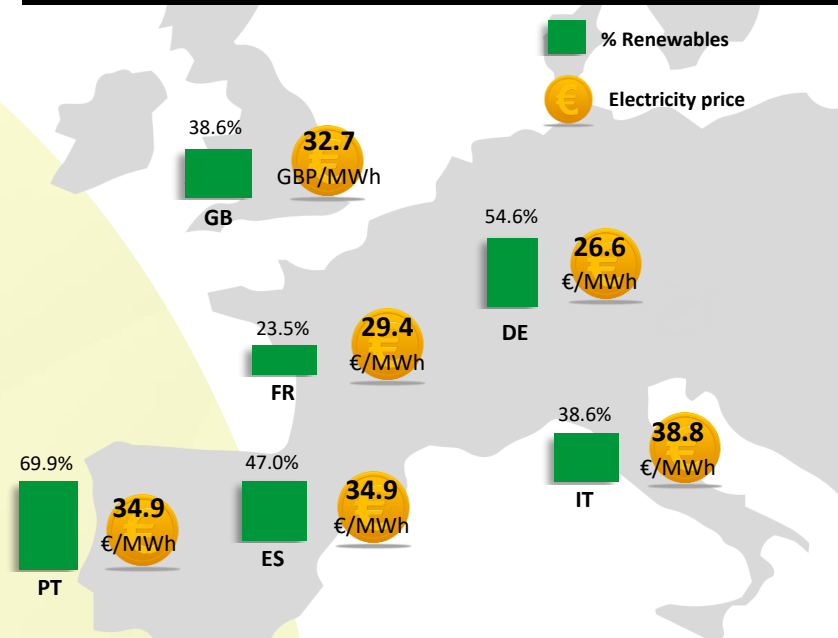


Figure 2. Renewable electricity generation share and average hourly electricity market price, between January and March 2020. Source: REN, Fraunhofer, REE, Terna, National Grid, ENTSO-E, APREN analysis

Note: Data unavailable for FR in the period from 18 to 26 March.

RENEWABLE GENERATION, DEMAND AND MIBEL PRICE

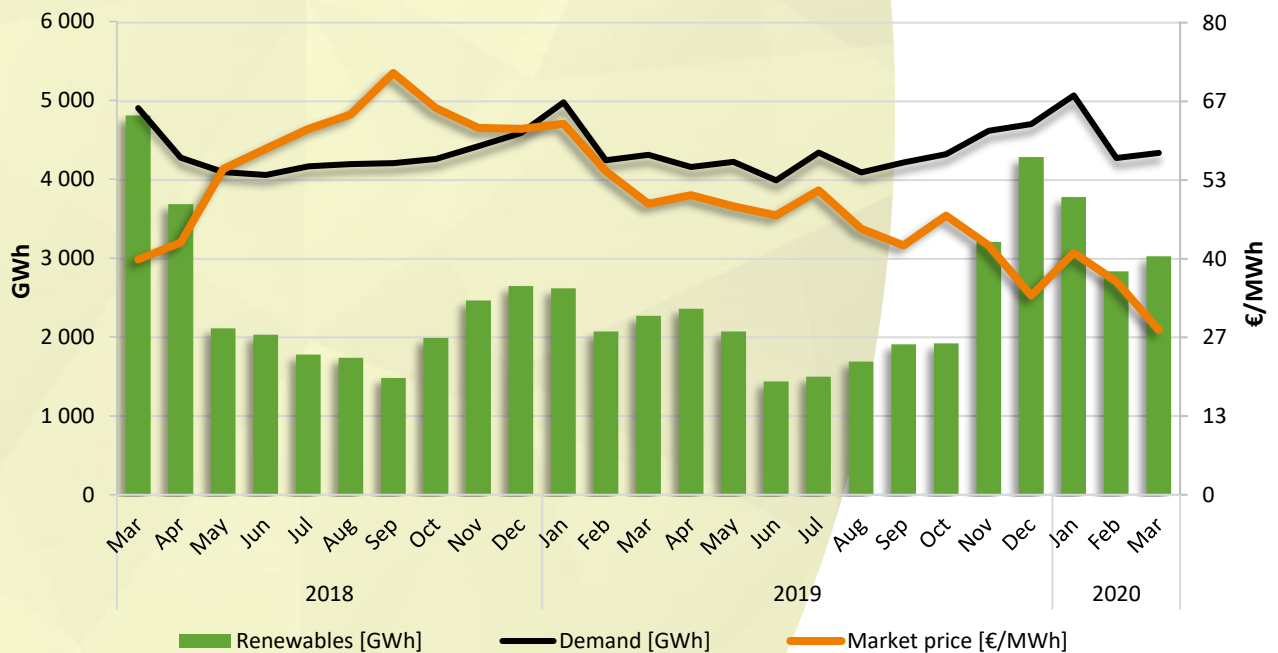


Figure 3. Market price, electricity demand and renewable electricity generation (Mar-2018 to Mar-2020). Source: OMIE, REN, APREN analysis

POWER SECTOR EMISSIONS

The table aside identifies the savings achieved from January to March 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) recorded an average hourly price of 22.8 €/tCO₂, a 3.3 % increase in comparison to the same period of 2019. However, March registered an average CO₂ emission allowances price of 19.8 €/tCO₂, a significant reduction of 19 % compared to the beginning of the year, reflecting the demand reduction that occurred during the month.

Source: SendeCO2

RENEWABLES AVOIDED...

Fossil fuel imports



206 M€

Jan-Mar

CO₂ emissions



5.4 MtCO₂

Jan-Mar

CO₂ allowances



124 M€

Jan-Mar

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

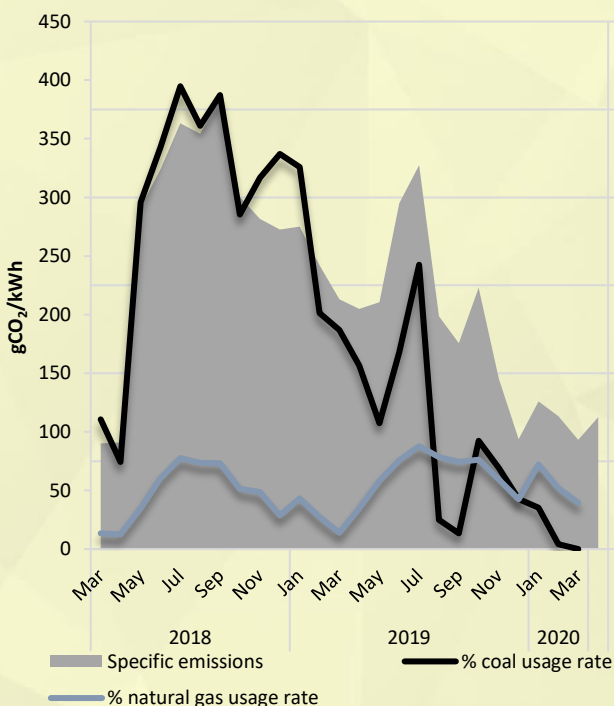


Figure 4. Specific emissions from the power sector in Mainland Portugal, % usage rate of coal and natural gas power plants (Mar-2018 to Mar-2020).
Source: REN, DGEG, ERSE, APREN analysis.

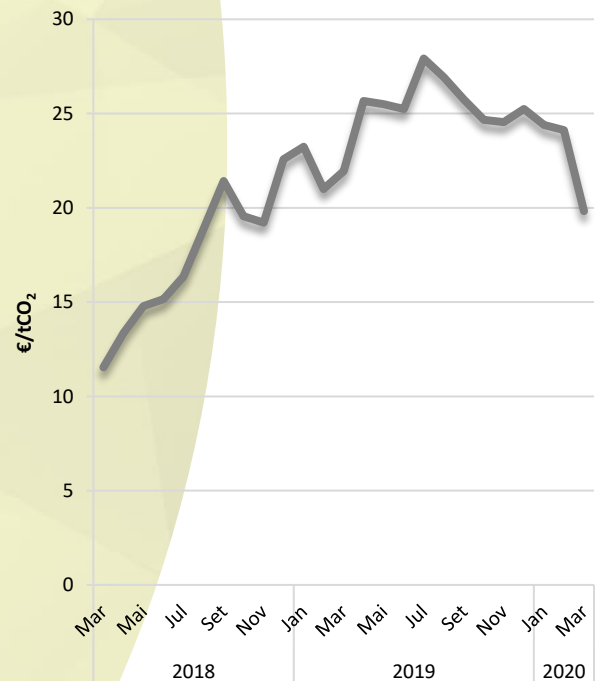


Figure 5. CO₂ allowances price (Mar-2018 to Mar-2020).
Source: SendeCO2.

MONTHLY ANALYSIS: MARCH

On March, renewable electricity generation represented 73.7% of the overall electricity generation in Mainland Portugal (4,107 GWh).

Concerning the international trade in March, we highlight import balance of 228 GWh recorded for the mainland electricity system.

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

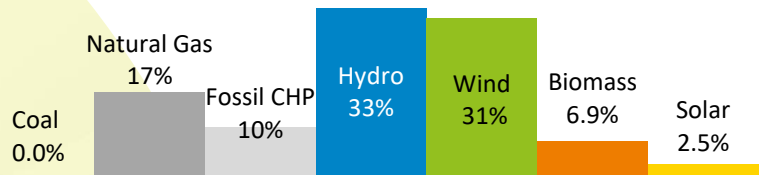
Source: REN, APREN analysis

MAIN INDICATORS

GENERATION

Total generation: 4,107 GWh

Renewables share: 73.7 %



OTHER INDICATORS

Demand: 4,335 GWh

Wind index: 0.99

Hydro index: 0.87

Source: REN, APREN analysis

LOAD DIAGRAM FOR MARCH 2020

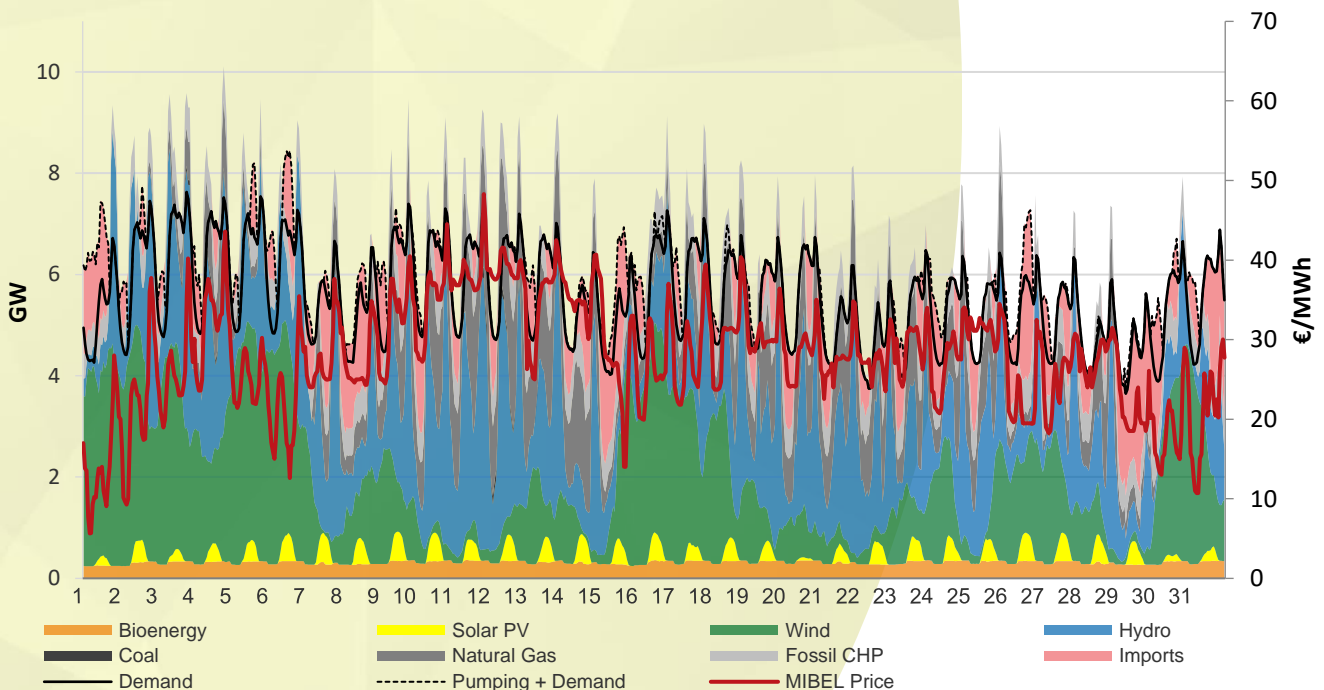


Figure 6. Load Diagram for Mainland Portugal (Mar-2020). Source: REN, APREN analysis.

COVID-19: IMPACT ON THE POWER SECTOR

LOAD DIAGRAM: 17-31 MARCH 2020

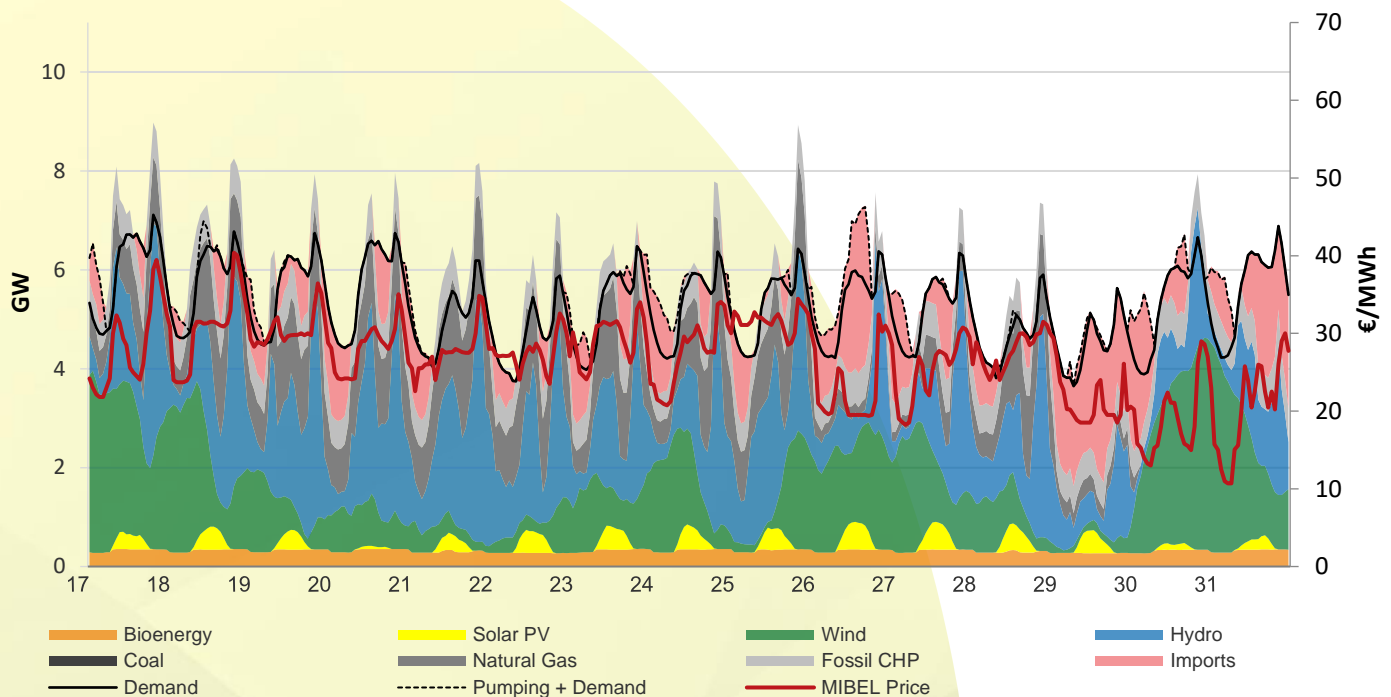


Figure 7. Load diagram for Mainland Portugal (17th to 31st March 2020). Source: REN, APREN analysis.

MAIN IMPACTS

After the State of National Emergency was decreed on March 18th, in response to the Covid-19 pandemic, a substantial part of the Portuguese business has stopped, which lead to serious repercussions on the power sector, such as:


- **A reduction on the electricity demand** by 1.7% compared to March 2019. The impact on demand-side is especially notorious on the 4th week of March (Figure 7), showing a tendency for a match between the load profiles from weekdays and weekends, with a significant reduction of the electricity demand at peak hours.
- **A significant reduction on the CO₂ emission allowances price** by 24% since the beginning of March, with a minimum daily price of 15.2 €/tCO₂, as a result of low market demand.
- **A significant reduction on the electricity price** by 32% compared to the beginning of the year, with a minimum price registered on March 31st (10.7 €/MWh from 5 am to 6 am), also due to high wind productivity.

FINAL REMARKS

National Regulation

The presentation session to promoters of the next solar capacity auction in Portugal took place on March 27th, which, in addition to maintaining the two remuneration solutions already applied in the July 2019 auction, this one will have a 3rd remuneration option for solar with storage.

In response to the Covid-19 pandemic:




On March 17th, 2020, it was published on the DGEG website, the Dispatch n.º. 26/2020 on the processes and billing of fees related to the SPU (Small Production Unit) and PUSC (Production Unit for Self-Consumption), to facilitate and simplify the administrative processes within the Public Administration.

On March 20th, it was published the Dispatch No. 27/2020, which suspends, until the end of April, new requests for the allocation of Capacity Reserve Titles; Agreements for the allocation of reception capacity in the RESP; SPU and PUSC registry; Electricity Production Permits under the ordinary regime, cogeneration and special regime; and, Permits for the establishment of network infrastructure.

ERSE, following the drop in the electricity prices at MIBEL, approved a decrease on the tariff price to be applied to the regulated market, by 5 €/MWh, which translates in a 3 % reduction on the electricity bill for consumers.

European Policy

Within the scope of the Green Deal for all Europeans, the EC continues its efforts for its implementation, assuming it continues to be a priority action regardless of parallel actions for the containment and economic response to the COVID-19 pandemic.



On March 4th, the European Commission (EC) published the proposal for the Regulation for the European Climate Law which sets the roadmap for carbon neutrality in 2050 and establishes the new target for the greenhouse gas emissions reduction by 55% until 2030, compared to 1990 values.

On March 10th, the new Industrial Strategy for Europe was published by the EC, defining its industrial strategy for 2030 to enable Europe to become more competitive and a world leader.

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.

IN RESPONSE TO THE COVID-19 PANDEMIC



Suspension of fees for SPU and PUSC

On March 17th, 2020, it was published the Dispatch No. 26/2020 on the processes and billing of fees related to SPU and PUSC.



Suspension of requests for capacity allocation and registration of SPU or PUSC

Order No. 27/2020 suspends new requests for the allocation of Capacity Reserve Titles; Agreements for the allocation of reception capacity in the RESP; SPU and PUSC registry; Electricity Production Permits under the ordinary regime, cogeneration and special regime; and, Permits for the establishment of network infrastructure.



Reduction of electricity prices in the regulated market

ERSE, following the drop in the electricity prices at MIBEL, approved a decrease on the tariff price to be applied to the regulated market, by 5 €/MWh, which translates in a 3 % reduction on the electricity bill for consumers.

Information available in:

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