



PORTUGUESE RENEWABLE ELECTRICITY REPORT

OCTOBER 2020



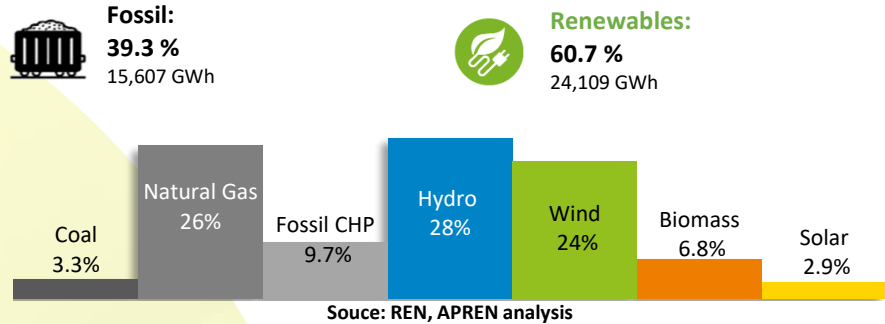
APREN Associação
de Energias
Renováveis

EXECUTIVE SUMMARY

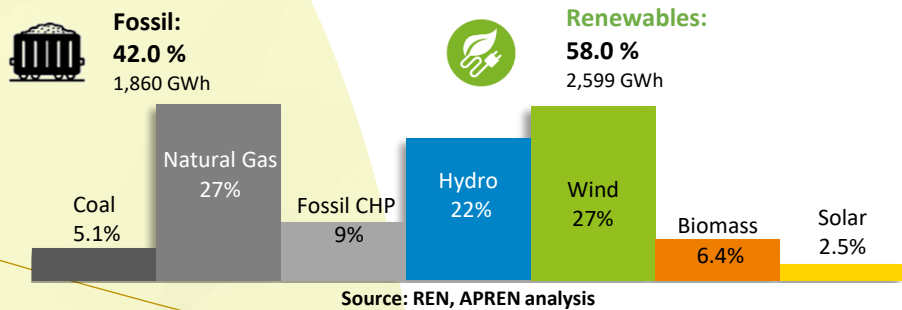
60.7 %

Renewable electricity generation
(January to October 2020)

CUMULATIVE ON OCTOBER 2020 (JAN-OCT)



OCTOBER 2020



GENERATION

39,716
GWh

CO₂ PRICE

23.9
€/tCO₂

CO₂ EMISSIONS

6.3
MtCO₂

PT MIBEL PRICE

32.5
€/MWh

IMPORTS

5,622 GWh

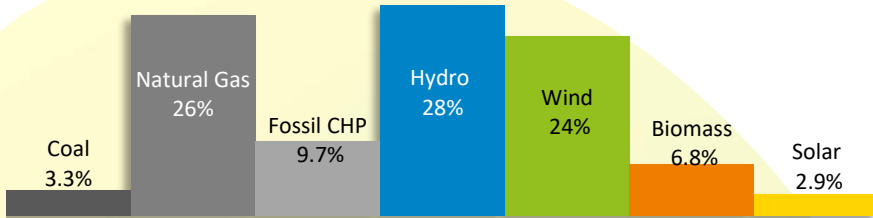
EXPORTS

3,563 GWh

Note: Cumulative values from January to October 2020.

ELECTRICITY GENERATION: MAINLAND PORTUGAL

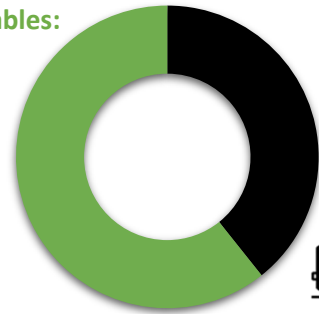
CUMULATIVE ON OCTOBER 2020 (JAN-OCT)



Source: REN, APREN analysis

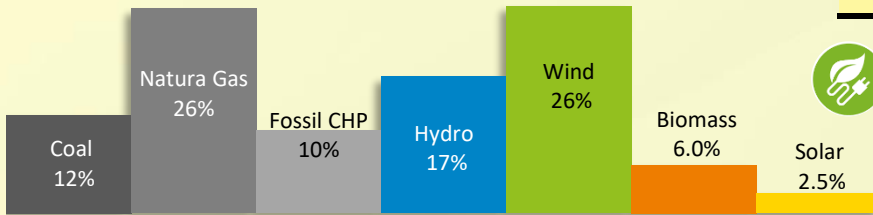


Renewables:
60.7%



Fossil:
39.3%

CUMULATIVE ON OCTOBER 2019 (JAN-OCT)



Source: REN, APREN analysis



Renewables:
51.6%



Fossil:
48.4%

MAIN INDICATORS:

CUMULATIVE ON OCTOBER (JAN-OCT)

	2020	2019	
% renewable generation	60.7%	51.6%	↑ 9.1%
Total Generation [GWh]	39,716	38,404	↑ 3.3%
Demand ¹ [GWh]	41,775	42,839	↓ 2.5%
Wind index	0.92	1.00	
Hydro index	0.98	0.60	

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

Source: REN, APREN analysis

INTERNATIONAL TRADE

Between January 1st and October 31st of 2020, the Portuguese mainland electricity system recorded electricity imports of 5,622 GWh and exports of 3,563 GWh, resulting in an import balance of 2,059 GWh, 54 % lower than the import balance registered in the same period of 2019.

Source: REN, ENTSO-E, APREN analysis

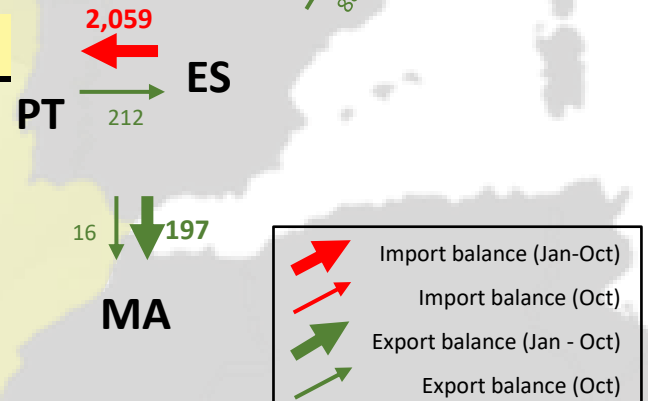


Figure 1. Import-export balance PT-ES, ES-MA, ES-FR and FR-(DE-LU) [GWh]. Source: ENTSO-E, IESOE

ELECTRICITY MARKET

Between January 1st and October 31st of 2020 the average electricity market price within the Iberian Electricity Market (MIBEL) for Portugal was 32.5 €/MWh², a 35 % reduction in comparison to the same period of 2019.

Also, it was recorded 421 non-consecutive hours in which renewable electricity generation was sufficient to meet the demand in Mainland Portugal, being characterized by an average MIBEL price of 27.7 €/MWh.

October registered an average hourly price of 36.5 €/MWh, a 23 % reduction, compared to 2019 (October 2019 - 47.2 €/MWh). There was a period of 5 consecutive hours on October 25th with an average hourly price of 1.95 €/MWh, resulting from a high wind generation. There is no record of prices this low since early May, during the State of Emergency declared due to the COVID-19 pandemic.

²Arithmetic average of the hourly prices
Source: OMIE, APREN Analysis

AND ON THE REST OF EUROPE?

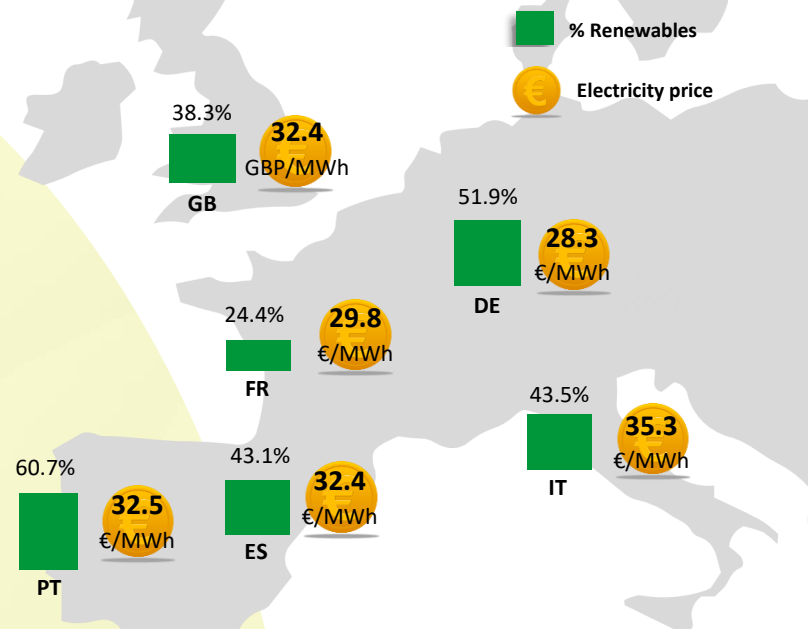


Figure 2. Renewable electricity generation share and average hourly electricity market price, between January and October 2020. Source: REN, Fraunhofer, REE, Terna, National Grid, ENTSO-E, APREN analysis

RENEWABLE GENERATION, DEMAND AND MIBEL PRICE

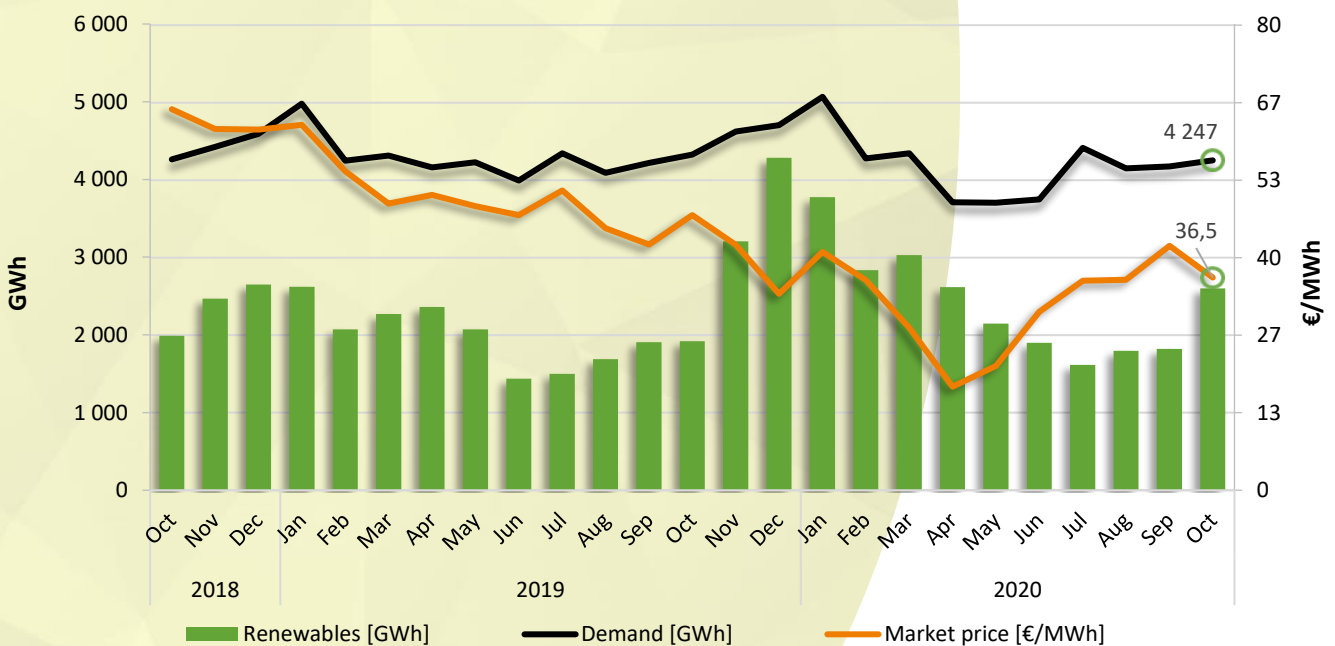


Figure 3. Market price, electricity demand and renewable electricity generation (Oct-2018 to Oct-2020). Source: OMIE, REN, APREN analysis

POWER SECTOR EMISSIONS

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

During this period, the power sector was responsible for the emission of 6.3 Mt of CO₂. Regarding the emission allowances, the European market for CO₂ allowances (EU-ETS) registered an average price of 23.9 €/tCO₂.

October recorded an average price for CO₂ emission allowances of 25.2 €/tCO₂, an increase of 2 % compared to October 2019.

Source: SendeCO2

THIS YEAR RENEWABLES AVOIDED...

Fossil fuel imports



458 M€

Jan-Oct

CO₂ emissions



11.4 MtCO₂

Jan-Oct

CO₂ allowances



273 M€

Jan-Oct

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

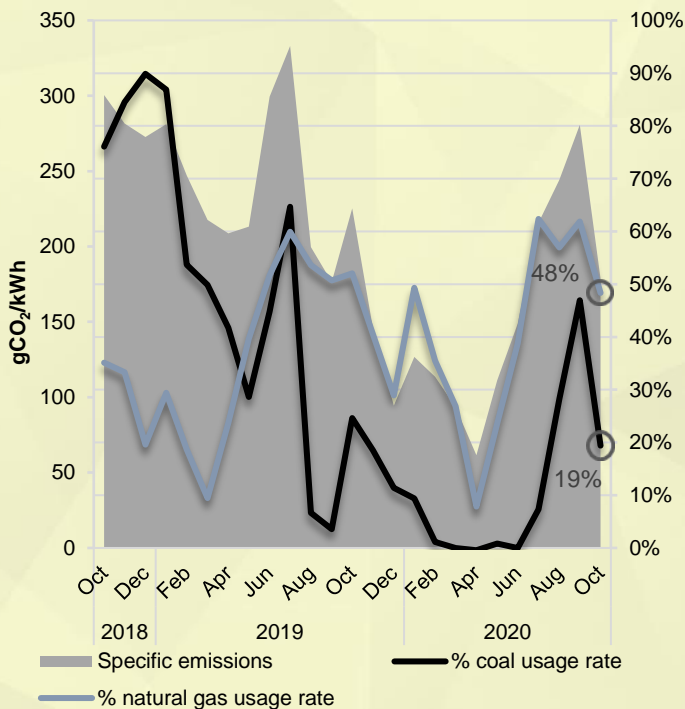


Figure 4. Specific emissions from the power sector in Mainland Portugal, % usage rate of coal and natural gas power plants (Oct-2018 to Oct-2020).
Source: REN, DGEG, ERSE, APREN analysis.

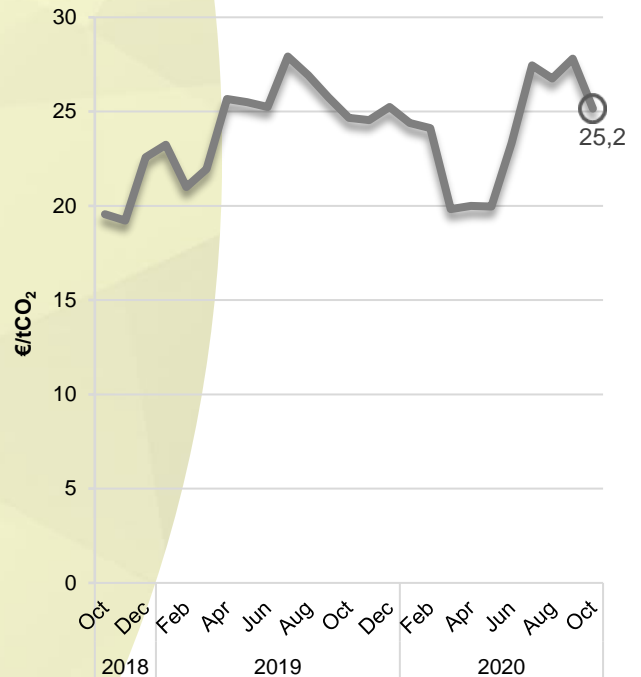


Figure 5. CO₂ allowances price (Oct-2018 to Oct-2020).
Source: SendeCO2.

MONTHLY ANALYSIS: OCTOBER

In October, renewable electricity generation represented 58.0% of the overall electricity generation in Mainland Portugal (4,459 GWh). There was an increase in the renewables share compared to the 49% (3,922 GWh) registered in October 2019.

Concerning the PT-SP electricity trade in October, Portugal was an exporter, registering a positive balance of 162 GWh, reflecting a significant increase in electricity exports (almost triple) compared to October 2019.

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

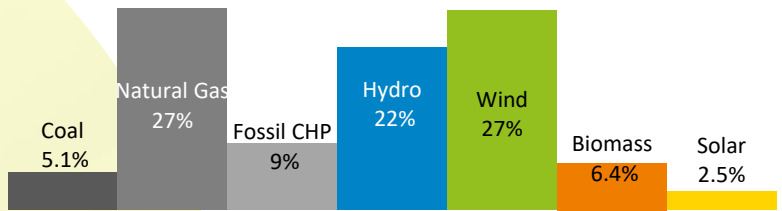
Source: REN, APREN analysis

MAIN INDICATORS

GENERATION

Total generation: 4,459 GWh

Renewables share: 58.0%



Source: REN, APREN analysis

OTHER INDICATORS

Demand: 4,247 GWh

Wind index: 1.18

Hydro index: 1.01

Source: REN, APREN analysis

LOAD DIAGRAM FOR OCTOBER 2020

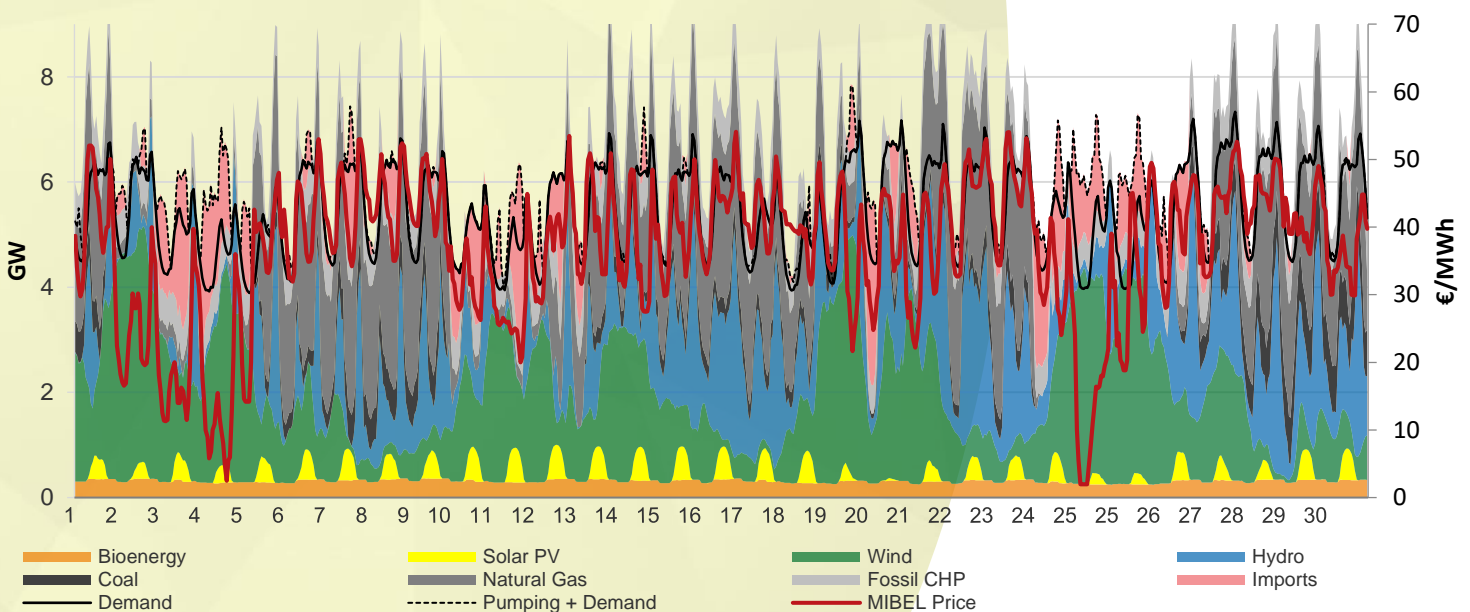


Figure 6. Load Diagram for Mainland Portugal (Oct-2020). Source: REN, APREN analysis.

FINAL REMARKS

National Regulation

Smoothing Mechanism for the cost of energy

On October 1st, it was published the Decree-Law No. 79/2020, which extends the application of the smoothing mechanism for the cost of energy purchased from producers under special regime, which is now applied for a maximum period of five years.

Network access fees for PUSC with CGEI exemption

On October 7th, it was published the Directive No. 15/2020, which approves the network access fees to be applied to production units for self-consumption (PUSC) for renewable electricity generation through the Public Service Electricity Network (PSEN) applicable to projects that benefit from exemption to the Costs of General Economic Interest (CGEI) charges.

Municipal Solid Waste

On October 15th, the Ordinance No. 244/2020 was published, which sets the remuneration for powerplants that use urban waste as a source of electricity production in energy recovery facilities, for burning undifferentiated urban solid waste from Urban Waste Management Systems.

Clawback

On October 22nd, it was published the Dispatch No. 10177/2020, which determines the final compensation to be applied for the year 2019 per unit of energy injected in the PSEN, within the scope of the competitive balancing mechanism, in the amount of 2.24 €/MWh for renewable powerplants covered by this mechanism.

Curtailement

On November 4th, the Dispatch No. 10835/2020 was published, on the reduction of production capacity under special regime that benefits from a guaranteed remuneration scheme or other subsidized support scheme. According to which, the capacity auction projects are now included in the first position on the list of powerplants required to curtail production whenever security in the production-demand balance or network congestion is at stake.

State Budget 2021

In October, the Portuguese Government announced the State Budget proposal for 2021 (OE 2021), which includes a long-awaited measure in the energy sector, the reinforcement of human resources (HR) in the administrative entities DGEG and APA (Portuguese Environmental Agency), for 2021. In particular, 93 workers are expected to join DGEG in 2021.



European Regulation



On October 7th, the European Parliament approved the proposal for a new update of the European Union's climate targets for 2030, which provides for a 60% reduction in greenhouse gas (GHG) emissions, compared to the current 40%.

POLICY AND REGULATION

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EU's climate targets



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NECP Assessment



The European Commission (EC) has published its assessment on the Portuguese NECP. In it, the EC states, among other recommendations, that Portugal should apply a higher target, both for GHG emissions reduction and for renewables incorporation in the heating and cooling. It also recommends the country to consider more ambitious measures towards energy efficiency.

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Information available in:

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