



PORTUGUESE RENEWABLE ELECTRICITY REPORT

SEPTEMBER 2020



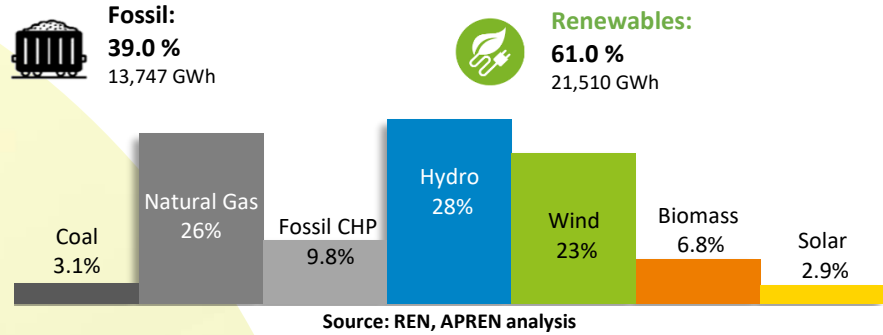
APREN Associação
de Energias
Renováveis

EXECUTIVE SUMMARY

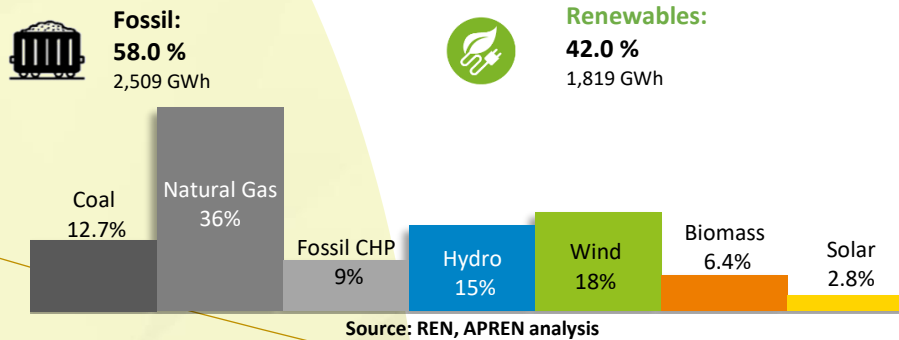
61.0 %

Renewable electricity generation
(January to September 2020)

CUMULATIVE ON SEPTEMBER 2020 (JAN-SEP)



SEPTEMBER 2020



GENERATION

30,257
GWh

CO₂ PRICE

23.7
€/tCO₂

CO₂ EMISSIONS

5.5
MtCO₂

PT MIBEL PRICE

32.1
€/MWh

IMPORTS

5,230 GWh

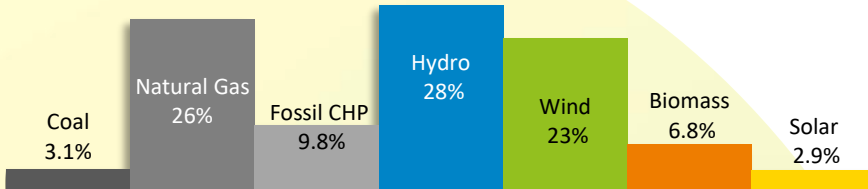
EXPORTS

2,959 GWh


Note: Cumulative values from January to September 2020.

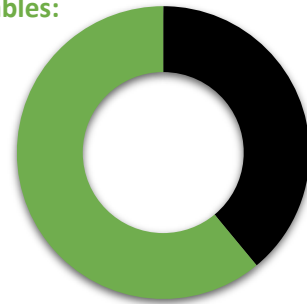
ELECTRICITY GENERATION: MAINLAND PORTUGAL

CUMULATIVE ON SEPTEMBER 2020 (JAN-SEP)



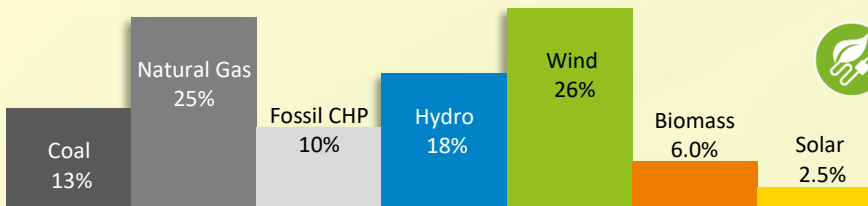
Source: REN, APREN analysis

 **Renewables:**
61.0%




 **Fossil:**
39.0%

CUMULATIVE ON SEPTEMBER 2019 (JAN-SEP)



Source: REN, APREN analysis

 **Renewables:**
51.9%



 **Fossil:**
48.1%

MAIN INDICATORS:

CUMULATIVE ON SEPTEMBER (JAN-SEP)

	2020	2019	
% renewable generation	61.0%	51.9%	↑ 9.1%
Total Generation [GWh]	35,257	34,482	↑ 2.2%
Demand ¹ [GWh]	37,528	38,521	↓ 2.6%
Wind index	0.89	0.99	
Hydro index	0.97	0.61	

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

Source: REN, APREN analysis

INTERNATIONAL TRADE

Between January 1st and September 30th of 2020, the Portuguese mainland electricity system recorded electricity imports of 5,230 GWh and exports of 2,959 GWh, resulting in an import balance of 2,271 GWh, 44 % lower than the import balance registered in the same period of 2019.

Source: REN, ENTSO-E, APREN analysis

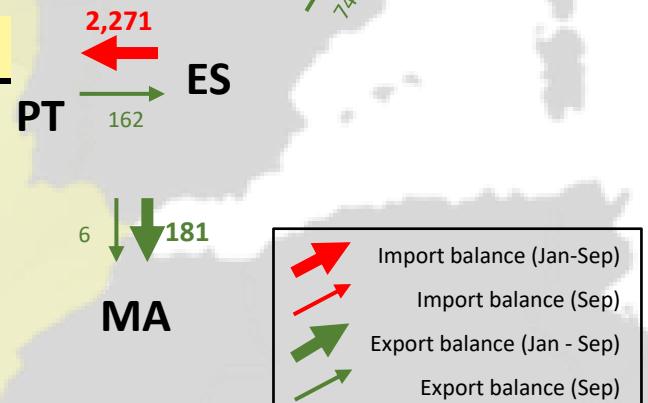


Figure 1. Import-export balance PT-ES, ES-MA, ES-FR and FR-(DE-LU) [GWh]. Source: ENTSO-E, IESOE

ELECTRICITY MARKET

Between January 1st and September 30th of 2020 the average electricity market price within the Iberian Electricity Market (MIBEL) for Portugal was 32.1 €/MWh², a reduction of 36 % in comparison to the same period of 2019.

Also, it was recorded 344 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 25.9 €/MWh.

September registered an average hourly price of 41.9 €/MWh, which was very similar to the value for the same period of 2019 (September 2019 - 42.1 €/MWh).

²Arithmetic average of the hourly prices

Source: OMIE, APREN Analysis

AND ON THE REST OF EUROPE?

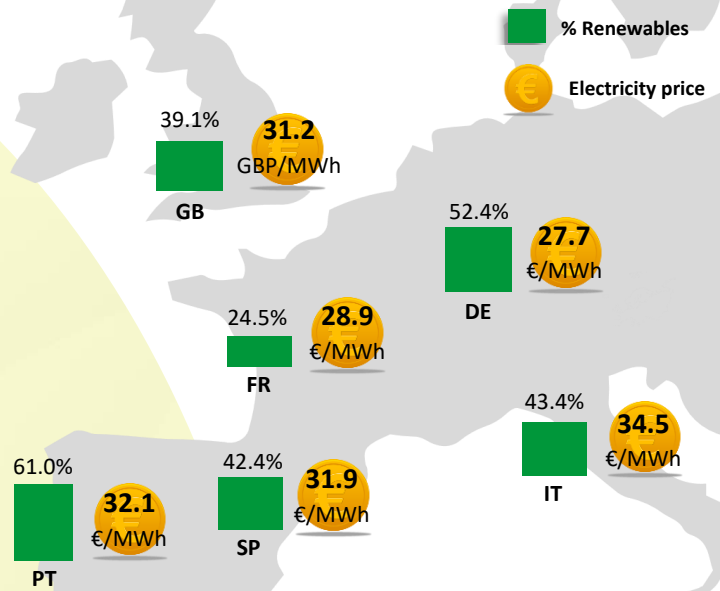


Figure 2. Renewable electricity generation share and average hourly electricity market price, between January and September 2020. Source: REN, Fraunhofer, REE, Terna, National Grid, ENTSO-E, APREN analysis

RENEWABLE GENERATION, DEMAND AND MIBEL PRICE

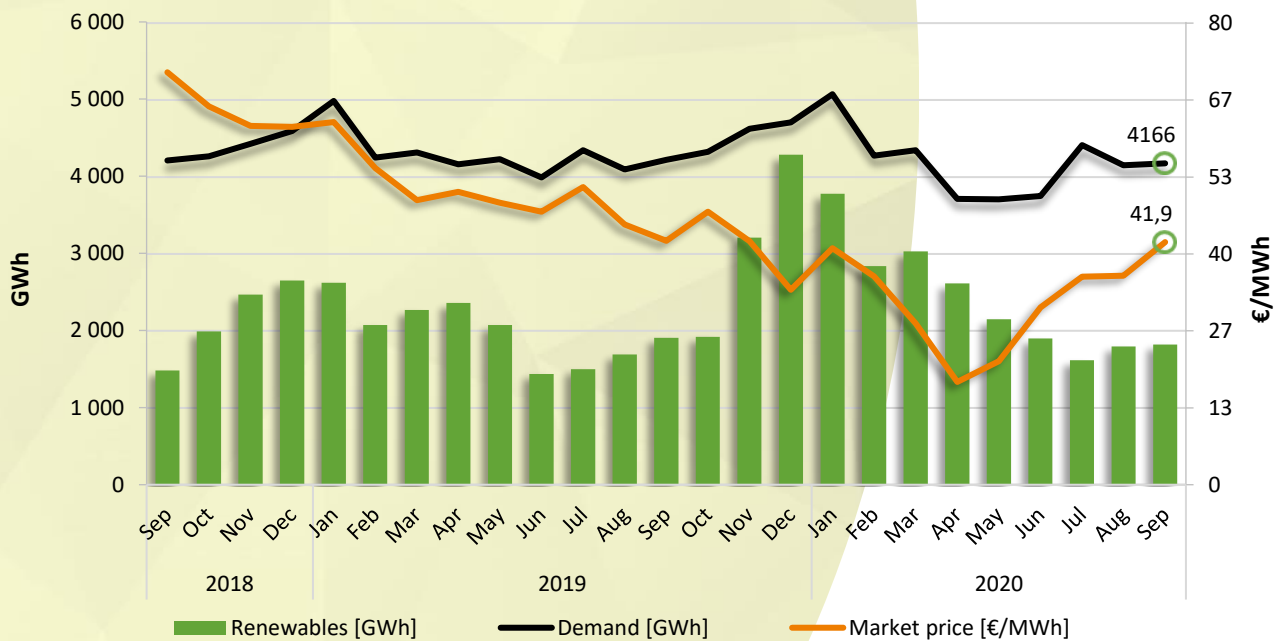


Figure 3. Market price, electricity demand and renewable electricity generation (Sep-2018 to Sep-2020). Source: OMIE, REN, APREN analysis

POWER SECTOR EMISSIONS

The table aside identifies the savings achieved between January 1st and September 30th 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 5.5 Mt of CO₂. Regarding the emission allowances, the European market for CO₂ allowances (EU-ETS) registered an average price of 23.7 €/tCO₂.

September recorded an average price for CO₂ emission allowances of 27.8 €/tCO₂, an increase of 8 % compared to September 2019. Despite the impact of the COVID-19 pandemic on the carbon market, mainly in the months of March and April, the average allowances price recovered in the following months, having registered this September the second highest peak ever, only surpassed in July 2019 (€ 27.9/tCO₂).

Source: SendeCO2

THIS YEAR RENEWABLES AVOIDED...

Fossil fuel imports



385 M€

Jan-Sep

CO₂ emissions



10.6 MtCO₂

Jan-Sep

CO₂ allowances



251 M€

Jan-Sep

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

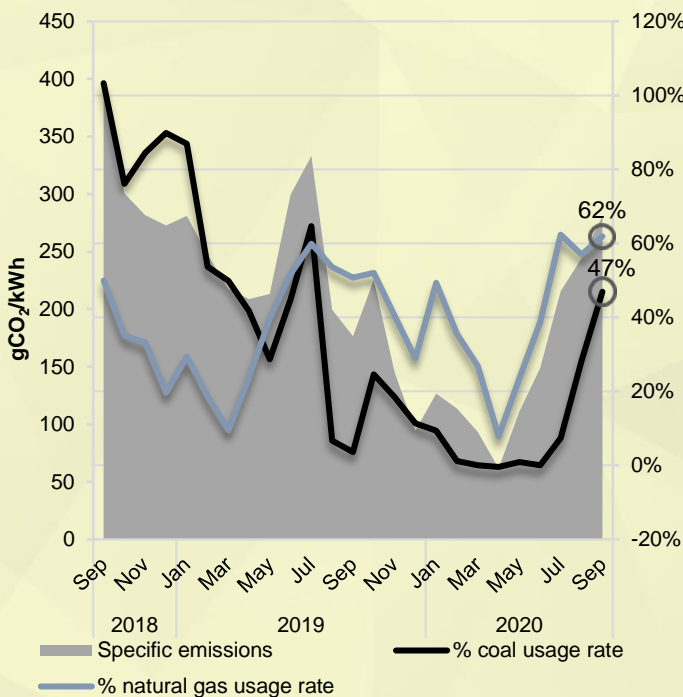


Figure 4. Specific emissions from the power sector in Mainland Portugal, % usage rate of coal and natural gas power plants (Sep-2018 to Sep-2020).
Source: REN, DGEG, ERSE, APREN analysis.

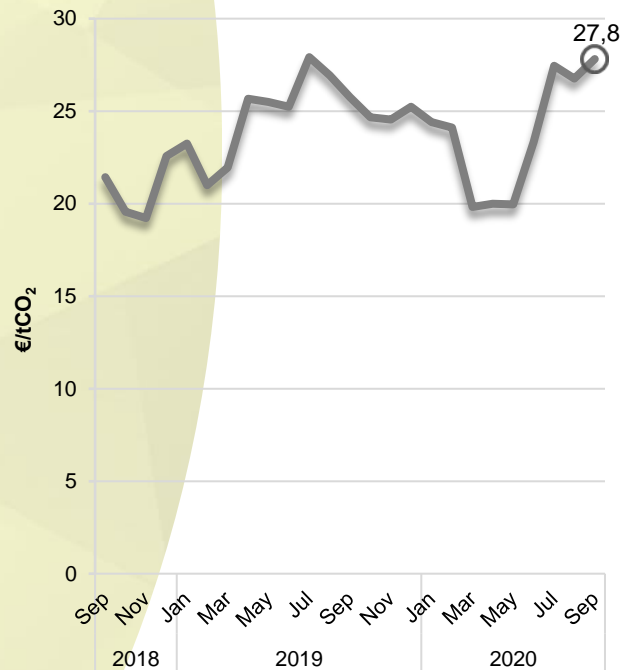


Figure 5. CO₂ allowances price (Sep-2018 to Sep-2020).
Source: SendeCO2.

MONTHLY ANALYSIS: SEPTEMBER

In September, renewable electricity generation represented 42.0 % of the overall electricity generation in Mainland Portugal (4,328 GWh). There is a slight reduction compared to the 53 % share of renewable generation registered in September 2019, for an overall electricity generation of 3,598 GWh.

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

The table aside shows the main productivity indicators for renewable generation in September 2020, highlighting the hydro productivity index, which was the second highest in 2020, although not inducing a significant impact on the monthly hydroelectricity production.

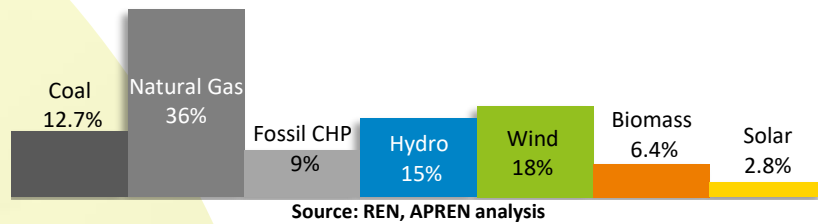
Source: REN, APREN analysis

MAIN INDICATORS

GENERATION

Total generation: 4,328 GWh

Renewables share: 42.0 %



OTHER INDICATORS

Demand: 4,166 GWh

Wind index: 1.07

Hydro index: 1.42

Source: REN, APREN analysis

LOAD DIAGRAM FOR SEPTEMBER 2020

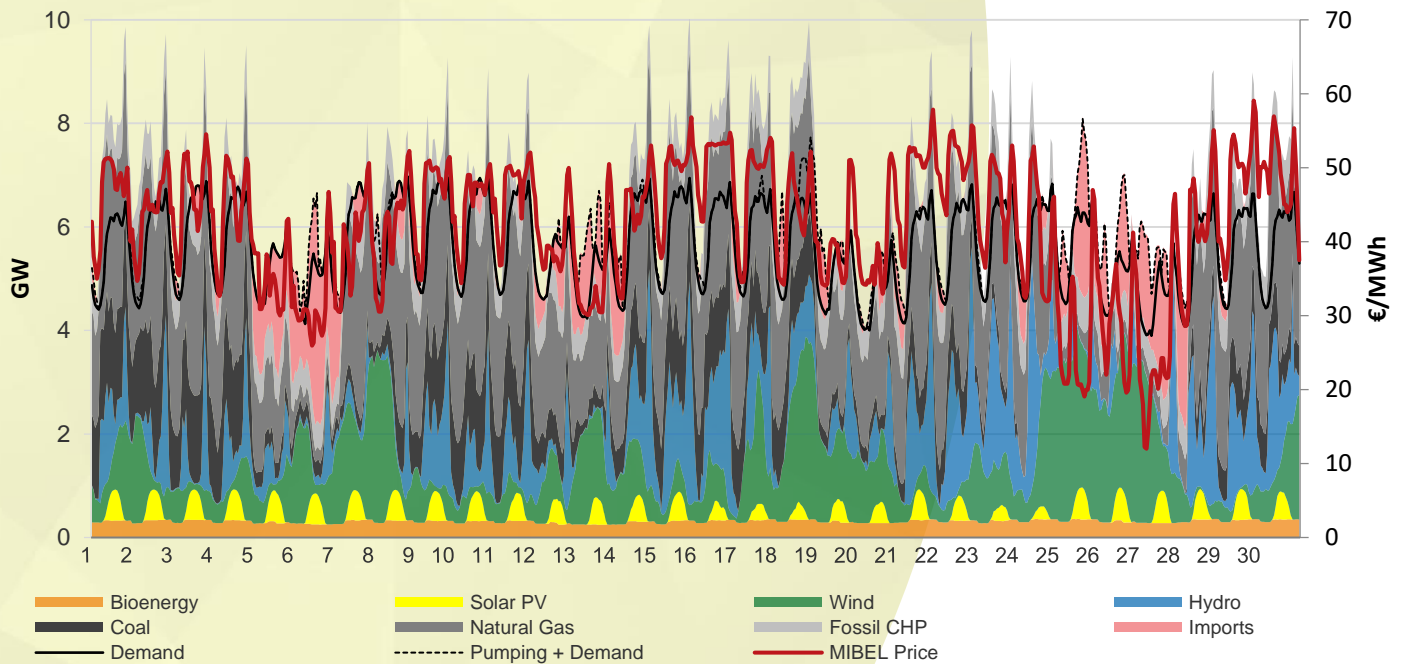


Figure 6. Load Diagram for Mainland Portugal (Sep-2020). Source: REN, APREN analysis.

FINAL REMARKS

National Regulation

Environmental Fund

On September 2nd, it was published the Dispatch No. 8457/2020, referring to the budget of the Environmental Fund for the year 2020, which establishes the total expected revenue in the amount of 578 million euros and distributes the respective revenues in specific areas of application.

Amendment of VAT on electricity consumption

On September 3rd, the Council of Ministers approved the reduction of the VAT rate from 23% to 13% on electricity, up to a certain consumption level.

Energy Efficiency

On September 10th, it was published the Decree-Law (DL) No. 64/2020 amending the DL No. 68-A / 2015, establishing provisions on energy efficiency for the transposition of the Directive (EU) 2018/2002. This diploma now considers the national indicative energy efficiency contributions established in the National Energy and Climate Plan (NECP) and determines an annual goal of reducing the final energy consumption to be met between 2021 and 2030.

Over-equipment

On September 28th, it was published the Statement of Rectification No. 36/2020 of the Ordinance no. 203/2020, which establishes the criteria for granting authorization for the installation of the over-equipment of wind power plants. This rectification clarifies the scope of action of the respective Ordinance, according to which it does not affect procedures for installing over-equipment that had already been authorized or that were pending until the date of entry into force of the Ordinance, more specifically until August 21st of 2020.



European Regulation



The assessment of the NECPs was published by the European Commission (EC), which points out the possible achievement of the 32% renewable incorporation goal in the final energy consumption. However, despite the positive assessment of the targets set, the EC stresses that Member States should work harder on implementing measures. In particular, it invites them to increase the predictability of the capacity auctions to be developed and to simplify the permitting procedures for new and repowering projects.

POLICY AND REGULATION



Energy Efficiency



On September 10th, it was published the DL No. 64/2020 amending the DL No. 68-A/2015, establishing provisions on energy efficiency transposing the Directive (EU) 2018/2002.



NECPs assessment



The assessment of the NECPs was published by the EC, which points to the possible achievement of the 32% renewable incorporation goal in the final energy consumption.



Hotline DGEG – PUSC, REC e SPU



The Directorate General for Energy and Geology (DGEG) created a telephone hotline (211 166 840) dedicated to production units for self-consumption (PUSC), renewable energy communities (REC) and small production units (SPU), available every working day from 9:30 am to 1:00 pm.



Transition to the Alternative Remuneration Regime of DL No. 35/2013



On August 7th, the DGEG published the Dispatch No. 41/2020, which establishes the transition rules for the alternative remuneration provided for in DL No. 35/2013, for wind farms with entries into operation spread over time under successive licenses.



Amendment to the DL No. 172/2006



The DL No. 62/2020 was published on August 28th, amending the Article 16 from the DL No. 172/2006 in its current wording. This amendment creates the possibility for the capacity reserve title owners to establish easements or to require the expropriation for public utility of lands to build infrastructures for network connection.



Over-equipment



On August 21st, it was published the Ordinance No. 203/2020 amending the Ordinance No. 102/2015, which establishes the criteria for granting authorization for the installation of the over-equipment of wind power plants. On September 28th, the Statement of Rectification No. 36/2020 was published, clarifying the scope of the mentioned Ordinance.

Information available in:

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