



# PORTUGUESE RENEWABLE ELECTRICITY REPORT

NOVEMBER 2020



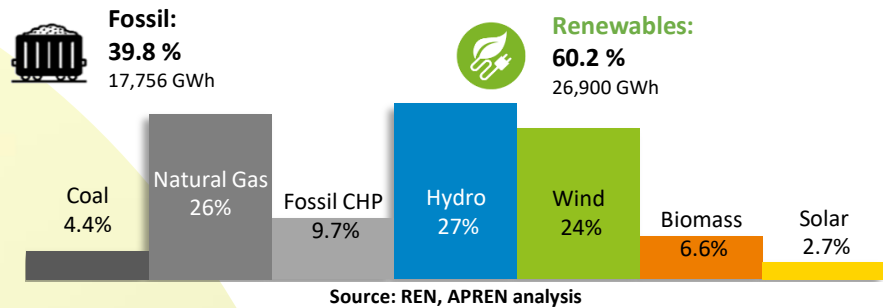
**APREN** Associação  
de Energias  
Renováveis

# EXECUTIVE SUMMARY

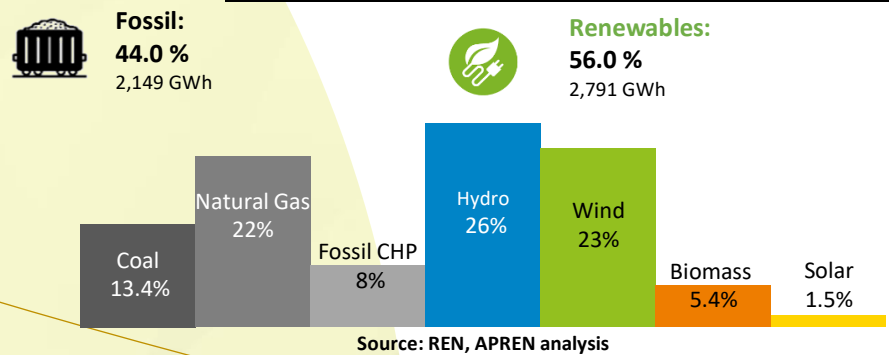
**60.2 %**

Renewable electricity generation  
(January to November 2020)

## CUMULATIVE ON NOVEMBER 2020 (JAN-NOV)



## NOVEMBER 2020



### GENERATION

44,656  
GWh

### CO<sub>2</sub> PRICE

24.1  
€/tCO<sub>2</sub>

### CO<sub>2</sub> EMISSIONS

7.5  
MtCO<sub>2</sub>

### PT MIBEL PRICE

33.4  
€/MWh

### IMPORTS

5,859 GWh

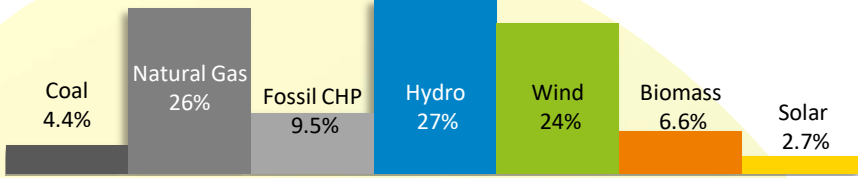
### EXPORTS

4,500 GWh

Note: Cumulative values from January to November 2020

# ELECTRICITY GENERATION: MAINLAND PORTUGAL

## CUMULATIVE ON NOVEMBER 2020 (JAN-NOV)



Source: REN, APREN analysis

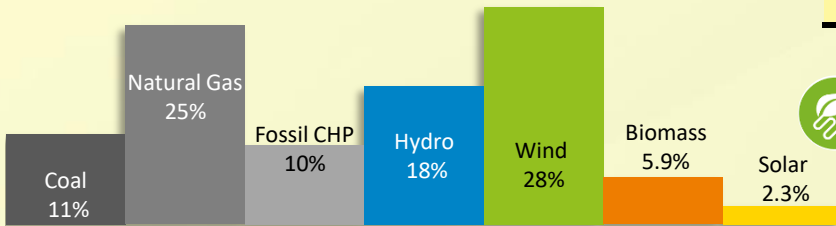


**Renewable:**  
60.2 %



**Fossil:**  
39.8 %

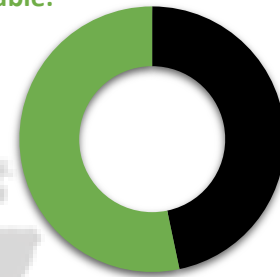
## CUMULATIVE ON NOVEMBER 2019 (JAN-NOV)



Source: REN, APREN analysis



**Renewable:**  
53.3 %



**Fossil:**  
46.7 %

## MAIN INDICATORS:

### CUMULATIVE ON NOVEMBER (JAN-NOV)

	2020	2019	
% renewable generation	60.2%	53.3%	↑ 6.9%
Total Generation [GWh]	44,656	43,218	↑ 3.2 %
Demand <sup>1</sup> [GWh]	46,015	47,455	↓ 3.1%
Wind index	0.92	1.06	
Hydro index	0.97	0.65	

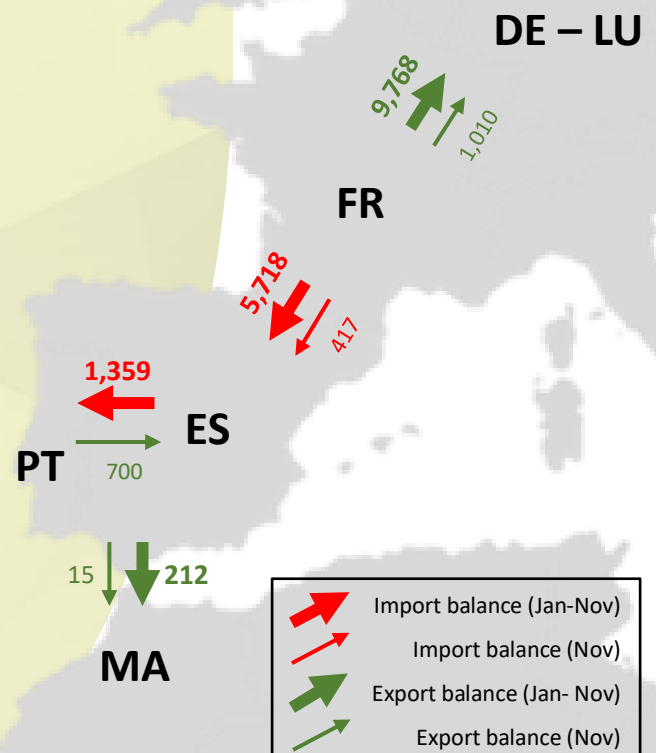
<sup>1</sup> Demand referred to the powerplants' net power generation, considering the import-export balance

Source: REN, APREN analysis

## INTERNATIONAL TRADE

Between January 1<sup>st</sup> and November 30<sup>th</sup> of 2020, the Portuguese Mainland electricity system recorded electricity imports of 5,859 GWh and exports of 4,500 GWh, resulting in an import balance of 1,359 GWh, 68 % lower than the import balance registered in the same period of 2019.

Source: REN, ENTSO-E, APREN analysis



# ELECTRICITY MARKET

Between January 1<sup>st</sup> and November 30<sup>th</sup> of 2020 the average electricity market price within the Iberian Electricity Market (MIBEL) for Portugal was 33.4 €/MWh<sup>2</sup>, a 32 % reduction in comparison to the same period of 2019.

Also, it was recorded 520 non-consecutive hours in which renewable electricity generation was sufficient to meet the demand in Mainland Portugal, with an average MIBEL price of 29.5 €/MWh.

November registered an average hourly price of 42.1 €/MWh, the same value as of November 2019.

<sup>2</sup> Arithmetic average of the hourly prices  
Source: OMIE, APREN analysis

## AND ON THE REST OF EUROPE?

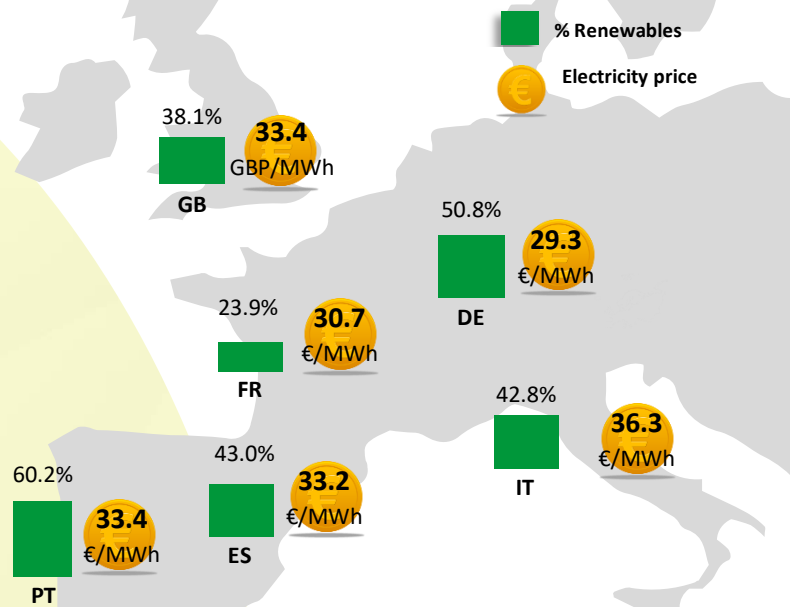


Figure 2. Renewable electricity generation share and average hourly electricity market price, between January and November 2020. Source: REN, Fraunhofer, REE, Terna, National Grid, ENTSO-E, APREN analysis

## RENEWABLE GENERATION, DEMAND AND MIBEL PRICE

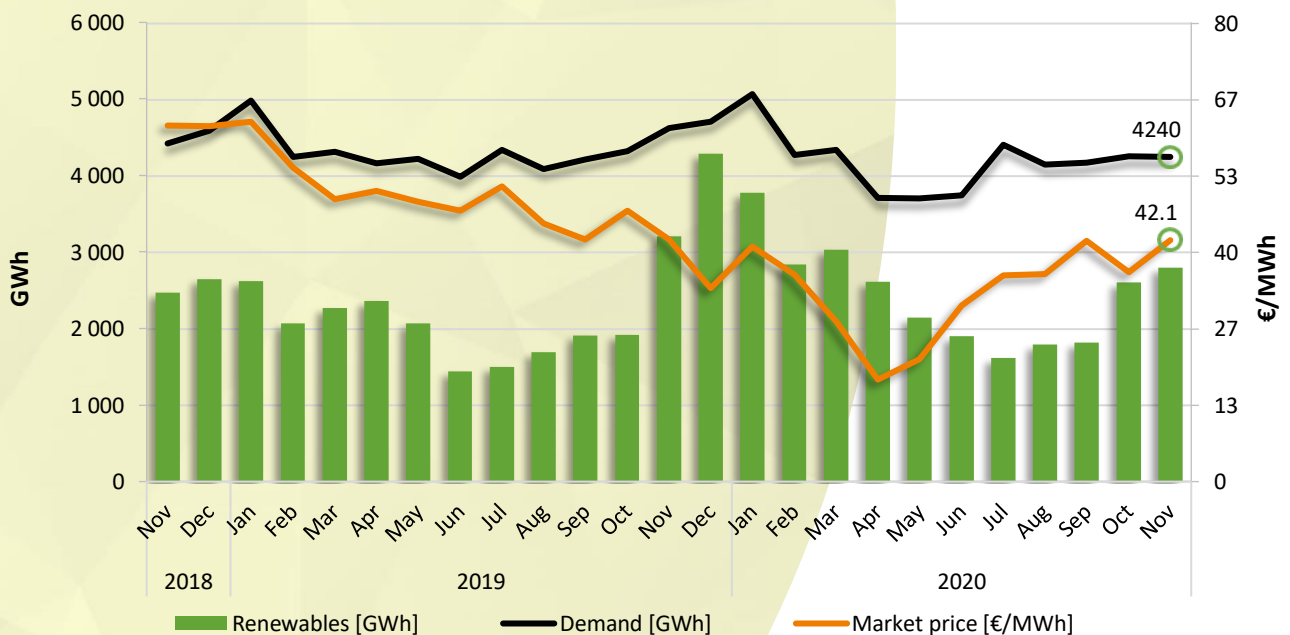


Figure 3. Market price, electricity demand and renewable electricity generation (Nov-2018 to Nov-2020). Source: OMIE, REN, APREN analysis

# POWER SECTOR EMISSIONS

The table aside identifies the savings achieved between January 1<sup>st</sup> and November 30<sup>th</sup> of 2020 on fossil fuel imports, CO<sub>2</sub> emissions and CO<sub>2</sub> emission allowances, as result of the renewable electricity generation.

During this period, the power sector was responsible for the emission of 7.5 MtCO<sub>2</sub>. Regarding the emission allowances, the European market for CO<sub>2</sub>, allowances (EU-ETS) registered an average price of 24.1 €/tCO<sub>2</sub>.

November recorded an average price for CO<sub>2</sub> emission allowances of 26.7 €/tCO<sub>2</sub>, an increase of 8.5% compared to November 2019.

Source: SendeCO<sub>2</sub>

## THIS YEAR RENEWABLES AVOIDED

### Fossil fuel imports



**545 M€**

Jan-Nov

### CO<sub>2</sub> emissions



**16.0 MtCO<sub>2</sub>**

Jan- Nov

### CO<sub>2</sub> allowances



**385 M€**

Jan- Nov

Source: REN, SendeCO<sub>2</sub>, WorldBank, DGEG, ERSE, APREN analysis

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

## SPECIFIC EMISSIONS AND CO<sub>2</sub> ALLOWANCES PRICE

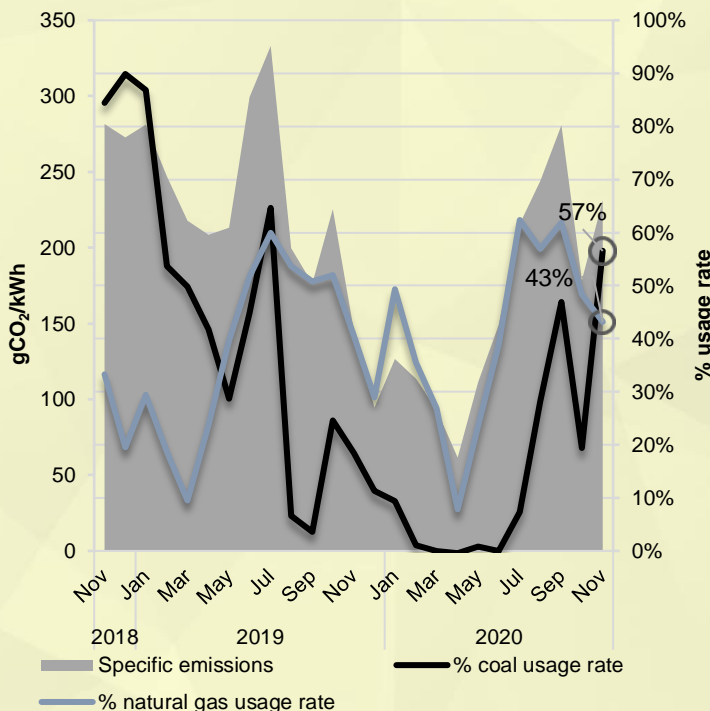


Figure 4. Specific emissions from the power sector in Mainland Portugal, % usage rate of coal and natural gas power plants (Nov-2018 to Nov-2020). Source: REN, DGEG, ERSE, APREN analysis.

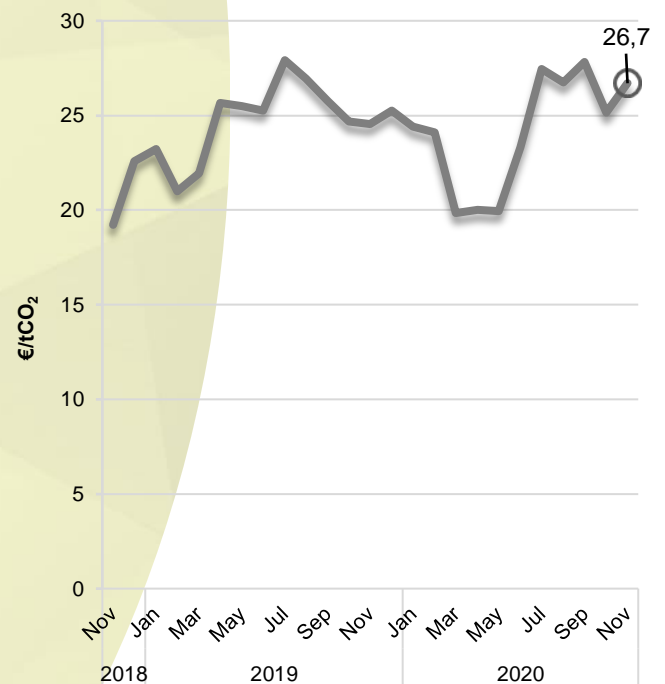


Figure 5. CO<sub>2</sub> allowances price (Nov-2018 to Nov-2020). Source: SendeCO<sub>2</sub>.

# MONTHLY ANALYSIS: NOVEMBER

In November, renewable electricity generation represented 56.0% of the overall electricity generation in Mainland Portugal (4,940 GWh). There was a decrease in the renewables share compared to the 67% from the overall electricity generation (4,814 GWh) registered in November 2019.

Concerning the PT-SP electricity trade in November, Portugal was an exporter, registering a positive balance of 700 GWh, reflecting a significant increase in electricity exports (almost the double) compared to November 2019.

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

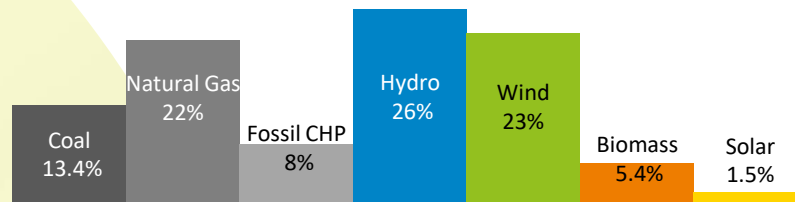
Source: REN, APREN analysis

## MAIN INDICATORS

### GENERATION

**Total generation: 4,940 GWh**

**Renewables share: 56.0%**



Fonte: REN, Análise APREN

### OTHER INDICATORS

**Demand: 4,240 GWh**

**Wind index: 0.88**

**Hydro index: 0.96**

Source: REN, APREN analysis

## LOAD DIAGRAM FOR NOVEMBER 2020

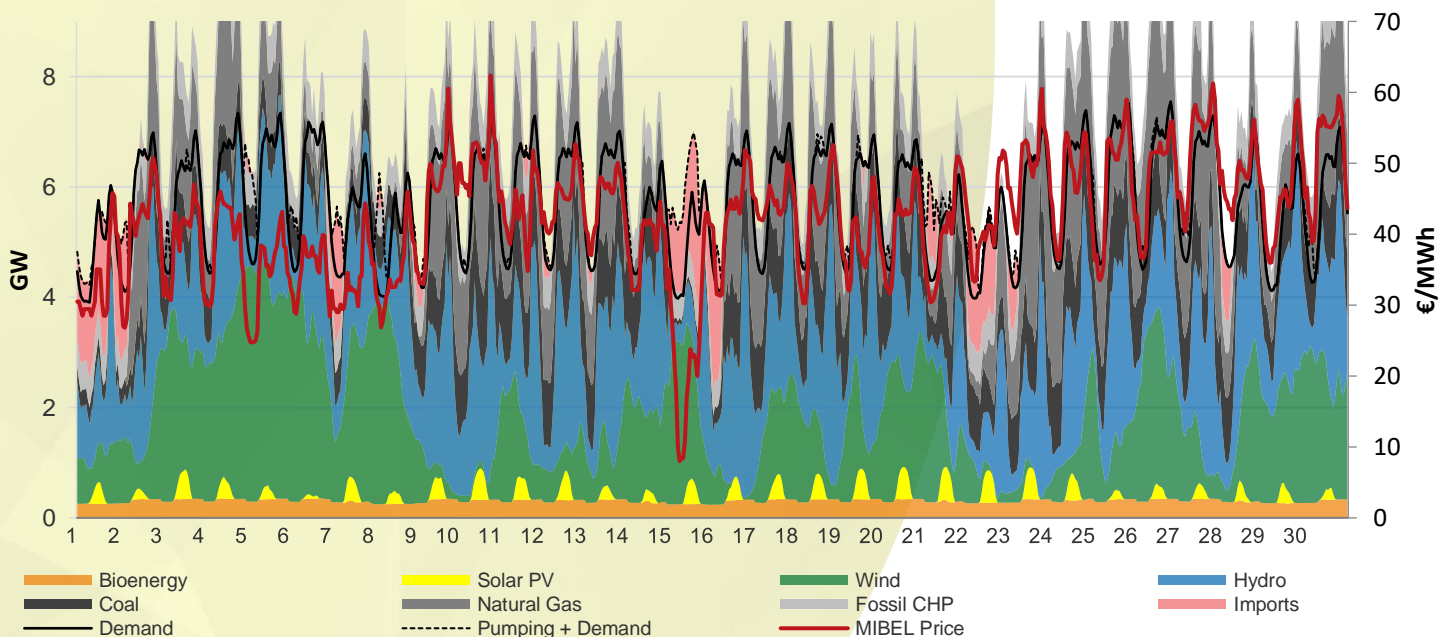


Figure 6. Load Diagram for Mainland Portugal (Nov-2020). Source: REN, APREN analysis.

## FINAL REMARKS

### National Regulation

#### Nisa Municipality

On November 3<sup>rd</sup>, the Notice No. 17833/2020 was published, which changes the Regulation and Table of Municipal Fees for the Municipality of Nisa. This Notice added new municipal fees, which aim to discourage the installation of photovoltaic solar powerplants.

#### Guiding Principles and Operating Structure for European Funds

On November 13<sup>th</sup>, the Resolution of the Council of Ministers No. 97/2020 was published, which establishes the guiding principles and the operational structure of the European funds programming period for cohesion policy for 2021-2027. The climate transition and resource sustainability is one of the three thematic guiding principles on the Mainland to be followed by the operational structure of the cohesion policy funds: European Regional Development Fund, Cohesion Fund and European Social Fund.

#### Portugal 2030 Strategy

On November 13<sup>th</sup>, the Resolution of the Council of Ministers No. 98/2020 was published, approving the Portugal 2030 Strategy, which is guided by the following agendas: a) People first; b) Digitalization, innovation and qualifications as main development drivers; c) Climate transition and resource sustainability; d) A competitive country externally and cohesive internally.

#### Solar Capacity Auction

On November 24<sup>th</sup>, by Dispatch from the Secretary of State for Energy, it was decreed the conclusion of the competitive procedure for allocation and reservation of injection capacity in the Public Service Electricity Network (PSEN) for solar photovoltaic electricity. This Dispatch, in addition to closing the Application Portal and the activities of the Procedure Jury, also frees the reception capacity at network points that was not assigned in the auction process.

#### Drafts Disclosure

On November 24<sup>th</sup>, the Directorate General for Energy and Geology (DGEG) announced:

- The “Contract for Small Production Units (SPU)” draft;
- The “Electricity Purchase Agreement” draft;
- The “Market Share Procedure and Settlement of Deviations” draft.

### European Regulation



On November 19<sup>th</sup>, the European Commission (EC) published a Communication on the “European Union (EU) Strategy to harness the potential of offshore renewable energy for a climate-neutral future”, according to which the EC aims to reach 300 GW and 40 GW of installed capacity in offshore wind and ocean energy, respectively, by 2050.

## POLÍTICA E REGULAÇÃO

### State Budget 2021 (OE 2021)



In November, the State Budget for 2021 was approved, which includes a long-awaited measure in the energy sector, the reinforcement of HR in the administrative entities DGEG and APA for 2021. Mainly, 93 workers are expected to join DGEG in 2021.

### EU strategy for offshore renewables



On November 19<sup>th</sup> the EC's Communication on the "EU strategy to harness the potential of offshore renewable energy for a climate-neutral future" was published, according to which the EC aims to reach 300 GW and 40 GW of installed capacity in offshore wind and ocean energy, respectively, until 2050.

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On November 13<sup>th</sup>, the Portugal 2030 Strategy was approved, which is guided by the following agendas: a) People first; b) Digitalization, innovation and qualifications as main development drivers; c) Climate transition and resource sustainability; d) A competitive country externally and cohesive internally.

### Solar Capacity Auction



On November 24<sup>th</sup>, a Dispatch was published, stating the end of the competitive procedure for allocation and reservation of injection capacity in the PSEN for solar photovoltaic electricity. This Dispatch frees the reception capacity at network points that was not allocated in the auction process.

### Nisa Municipality



On November 3<sup>rd</sup>, the Notice No. 17833/2020 was published, which changes the Regulation and Table of Municipal Fees for the Municipality of Nisa. This Notice added new municipal fees, which aim to discourage the installation of photovoltaic solar plants.

### Curtailment



The Dispatch No. 10835/2020 was published, determining that 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.

#### Informação disponível em:

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