



In evaluating of the Portuguese Issues Monitor map, it is interesting to notice how uncertainty pervades the views of the future: the great majority of the issues appear in the upper right corner of the map. Although uncertainty is associated with technological developments yet to be found and to highly challenging policy goals, it must be related to the unpredictability of how the world will recover after the pandemic and to what the new normal in the energy sector will be.

As expected, the pandemic disturbance affected the global economy, the lives and the perceptions of the Portuguese respondents, which place as most critical uncertainties five issues related to economy: Commodity Prices, Investor Environment, Economic Growth, Market Design and Regulation and Affordability.

Commodity Prices peaked with the relaunching of economic activity, mainly due to the sluggish response of the global logistic system to the demand of the industrial chain, very dependent on 'just in time' supplies, making the recovery to 'normal' slower than previously expected. In addition, Investor Environment and Economic Growth issues have become quite uncertain, due to the unpredictable behaviour of inflation and the divergent reactions of the monetary authorities. Thus, the current economic uncertainty is delaying investment and financial decisions. Particularly, the recent electricity market price peaks seem to indicate the need to adapt the electricity marginal market design to the new generation portfolio, where renewable sources predominate and can be the main reason for Market Design and Regulation being also pointed out as a critical issue.

Regarding Action Priorities, Renewable Energies are recognised as the most prominent. This is the result of a long-term governmental strategy aiming to decarbonise and reduce the foreign supply dependence of the Portuguese energy sector, through the use of endogenous renewable resources. This policy has brought remarkable achievements, such as 2021's record of renewable electricity supply, representing 63% of the total generation and net imports (Estatísticas Rápidas, Dec 2021, DGEG).

In the Action Priorities sectors, we also find Digitalisation, Cyber Security Risks and Electric Storage Innovation, all required to guarantee future grid stability and energy demand in a country aiming for zero-carbon electricity.

Climate Change Management is also a concern in the planning and operation of the energy sector, in particular due to the increasing frequency of drought periods and of the risk of great forest fires that impair electricity generation or may damage transmission grids. In this sense, the energy sector needs to enact climate change management measures, namely increasing the hydropower electric capacity (while ensuring the water consumption needs) and implementing sophisticated fire prevention technics in forestry grid lanes.

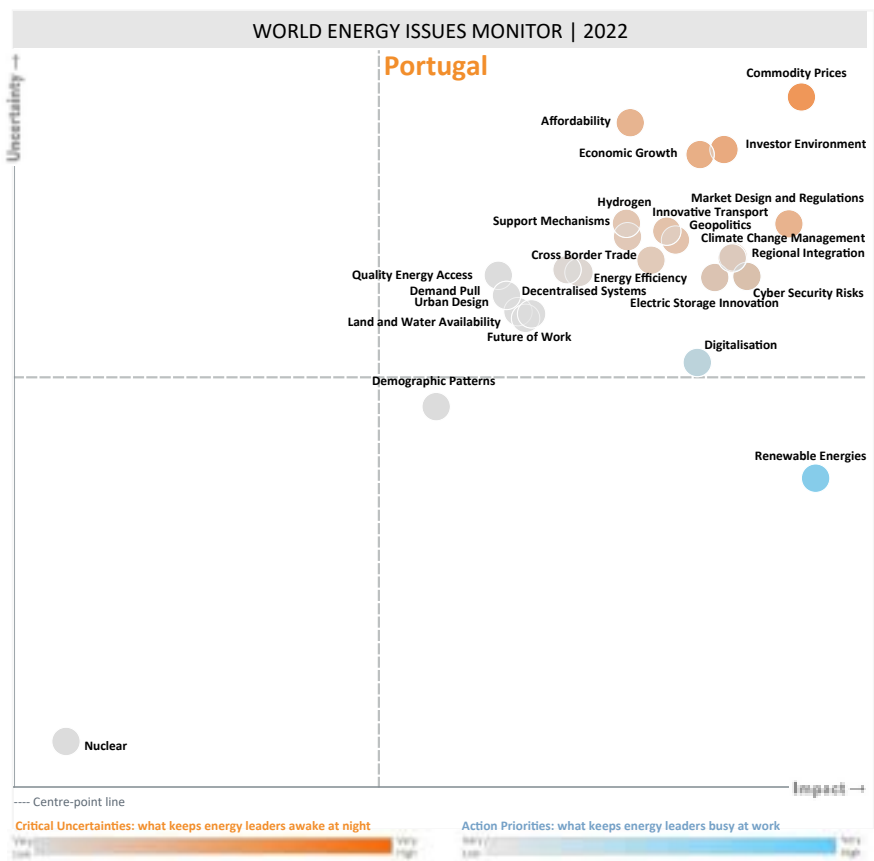
Recently, legislation encompassing all the organisation and functioning principles of the electricity sector (Decreto-Lei n. ° 15/2022) was approved, which emphasises sustainability related targets, namely the need to accelerate the smart grid concept, increase the levels of self-generation in the residential and industrial sectors and develop energy communities.

Furthermore, in 2021, the Climate Base Law (Lei n.º 98/2021) was approved, acknowledging the climate emergency. Targets were set for mitigating greenhouse gas emissions compared to 2005 values: -55% by 2030, -65% to -75% by 2040, and -90% by 2050. In addition, it states that Portugal must achieve climate neutrality by 2050, but the Government is planning to anticipate this target by 2045 at the latest. H<sub>2</sub> will play a pivotal role in the energy transition.

### TESTING PERSPECTIVES WITH THE WEC PORTUGAL MEMBER COMMUNITY

The results of the World Energy Issues Survey were discussed with WEC Portugal members in February 2022. During the discussion, the key findings regarding Action Priorities and Critical Uncertainties were confirmed and the following three theses were highlighted:

1. Challenges, mounting from economic disruptions to major shifts in technology, point to the crucial necessity to invest in the energy sector reform, mainly by implementing energy storage, digitalisation solutions, cyber security measures and adapting the marginal electricity market to high shares of RES.
2. Commodity prices are the ones with the greatest uncertainty in the Portuguese context. This result is attributed to the disruption caused by the pandemic.
3. Renewable energies are having a relevant impact on the energy transition.



## WORLD ENERGY COUNCIL

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