Position Paper on the key aspects of the reform of EU's electricity market design

The European Enterprise Alliance, in partnership with the Union of Entrepreneurs and Employers, present its insights into the reform of Electricity Market Design (EMD) regulation. As efficiently advocates for a competitive and sustainable energy market, we believe that certain aspects of the regulation require further consideration and adjustment.

The reform of the Energy Market Design is currently in progress, prompted by challenges in the EU energy market in 2022. The European Commission has presented a proposal to revise electricity market rules and enhance protection against market manipulation. The aim is to increase market resilience, reduce dependency on short-term prices, and promote long-term contracts like power purchase agreements. The proposal is now being discussed by the Council and the European Parliament.

In light of this, we propose the following key points:

NUCLEAR POWER

Nuclear power's contribution to grid stability and its ability to meet the demands of grid operators during peak demand periods should be acknowledged. Therefore, it is imperative to incorporate flexibility into the financing framework, allowing investors to explore alternative methods, such as capacity markets, that can better align with the unique attributes of nuclear power and ensure the security and stability of the energy supply. We advocate for a more flexible approach to financing new investments in Nuclear Power Plants (NPPs). While the European Commission's proposed regulation on the Electricity Market Design (EMD) emphasizes the use of Contracts for Difference (CFDs) as the sole means of supporting NPPs, it is crucial to consider the unique attributes and advantages of nuclear power that may be **better served by different financing mechanisms**. While CfDs have their merits, such as providing price stability and incentivizing low-carbon energy production, they do not fully capture the additional benefits offered by nuclear power[1]. We would like to highlights that nuclear power not only contributes to reducing CO2 emissions but also provides flexibility and

[1] "Key Principles for the Reform of the EU Electricity Market Design." Business Europe, February 2023.

grid stability through participation in capacity mechanisms[2]. This is evident in the high Corrective Availability Factor associated with nuclear power, reflecting its reliability and ability to ensure a secure energy supply, which is paramount for the stability of electricity grids. By exclusively relying on CfDs, the EMD regulation **may inadvertently overlook the inherent capabilities of nuclear power and limit the ability of investors to choose the most suitable financing mechanism** based on their specific circumstances. Recognizing the diverse needs and priorities of different economies, the European Enterprise Alliance argues for the **inclusion of alternative financing methods, particularly capacity markets**, alongside CfDs in supporting nuclear power investments. While CfDs provide long-term price guarantees and stability, as mentioned they may not fully capture the benefits of nuclear power as a baseload power source with inherent grid stability features. The proposed provision of Article 19b in the EMD regulation, if interpreted restrictively, **may unintentionally exclude nuclear technologies, including Small Modular Reactors (SMRs), from participating in capacity markets**. This exclusion would disregard the advantages of nuclear power, such as its ability to provide reliable baseload power and contribute to grid stability, while hindering the development of a sustainable and secure energy mix. Small Modular Reactors, in particular, may offer enhanced safety features, flexibility in deployment, and cost-effectiveness. Allowing nuclear technologies, including SMRs, to participate in capacity markets would enable Member States to leverage these advantages, ensuring a diversified and reliable energy system. It is vital to avoid overly prescriptive interpretations of the EMD regulation that impede the development and integration of innovative nuclear technologies into the energy market. By embracing alternative financing methods and providing regulatory clarity, Member States can foster an environment that promotes investment in nuclear power and supports the transition to a low-carbon future.

To strengthen the argument, it is essential to examine successful models that have been implemented in certain countries. These models effectively combine capacity mechanisms with CfDs to support new investments in NPPs, demonstrating a balanced approach that ensures long-term price stability while enabling participation in capacity markets. Some countries, Spain and Poland have successfully utilized capacity mechanisms in conjunction with CfDs to attract investment in nuclear power[3]. These mechanisms provide additional revenue streams for nuclear power plants, incentivizing their participation and ensuring their contribution to grid reliability and security. By combining the price stability provided by CfDs with the market-based incentives of capacity markets, these countries have created an environment that optimizes financial incentives, encourages investment, and aligns with the broader goals of a sustainable and secure energy transition.

[2] "PKN ORLEN Energy Transition: Nec Temere, Nec Timide: Neither Timidly nor Rashly." PKN ORLEN, https://www.orlen.pl/content/dam/internet/orlen/pl/en/about-company/corporate-documents/ORLEN_FFBK_EN.pdf.

[3] Zachmann, G. and C. Heussaff (2023) 'Phased European Union electricity market reform', Policy Brief 06/2023, Bruegel

CAPACITY MECHANISM

It is also important to point out that We strongly support the simplification of the process for extending capacity mechanisms. It should be highlighted that the **current challenges associated with the prolonged and burdensome procedure, hinder timely investments in the energy sector**. By streamlining and optimizing this process, we can create a more efficient and predictable framework that encourages private investments and fosters a favourable business environment. Currently, the process for extending capacity mechanisms is characterized by lengthy administrative requirements and complex regulatory procedures[4]. Market participants face significant challenges in navigating through the various stages and complying with the extensive documentation and reporting obligations. These complexities often result in delays, uncertainty, and increased costs, deterring potential investors from participating in capacity markets. To address these issues, we propose a series of measures to simplify and streamline the process of extending capacity mechanisms. To begin with, **establishing clear timelines and deadlines for decision-making** would provide market participants with greater certainty and enable them to plan their investments more effectively. **Standardizing documentation requirements**, such as application forms, reporting templates, and evaluation criteria, would reduce administrative burdens and ensure consistency across different jurisdictions. Moreover, **enhanced coordination and communication between relevant stakeholders**, including regulatory authorities, grid operators, and market participants, are essential to streamline the process. This can be achieved through the establishment of dedicated platforms or working groups that facilitate information exchange, address inquiries promptly, and ensure transparency throughout the decision-making process. By adopting a more efficient and user-friendly approach to extending capacity mechanisms, we can overcome the current barriers and encourage investments in the energy sector. **A simplified process would not only attract private investors but also enhance competition and innovation, leading to improved grid reliability and resilience.** It would enable market participants to make informed investment decisions based on a clear understanding of the requirements, timelines, and evaluation criteria. Several European countries have already implemented simplified procedures for extending capacity mechanisms, serving as successful examples for others to follow. For instance, in the United Kingdom, the Capacity Market mechanism has undergone significant reforms to streamline the process, reduce administrative burdens, and enhance market participation[5]. These reforms include the introduction of prequalification requirements, streamlined auction procedures, and a more transparent appeals process. As a result,

[4] Zachmann, G. and C. Heussaff (2023) 'Phased European Union electricity market reform', Policy Brief 06/2023, Bruegel

[5] "Reforms Outlined for Britain's Capacity Market to Secure a Clean Energy Future." Press release. Department for Business, Energy & Industrial Strategy and The Rt Hon Graham Stuart MP, 9 Jan. 2023, https://www.gov.uk/government/news/reforms-outlined-for-britains-capacity-market-to-secure-a-clean-energy-future.

the UK has successfully attracted investments in new energy generation capacities, ensuring the security of its electricity supply.

ENERGY STORAGE DEFINITION

We strongly advocate for an expanded definition of energy storage in the regulation. This expansion is **crucial to ensure clarity and inclusivity, particularly by explicitly including investments in pumped hydro storage and gas storage facilities that enable energy storage for renewable hydrogen**. By addressing potential ambiguities and providing a comprehensive framework, we can facilitate the deployment of these technologies and foster a more sustainable and flexible energy system. Currently, the definition of energy storage in various regulations varies, leading to uncertainties regarding the eligibility of certain technologies. Pumped hydro storage and gas storage facilities, despite their critical role in energy storage and grid stability, are sometimes referred to as generating units or not explicitly recognized as energy storage units. This lack of clarity creates barriers to investments and hinders the full potential of these technologies in supporting the transition to a renewable energy system. By explicitly including investments in pumped hydro storage and gas storage facilities in the definition of energy storage, we can eliminate any doubts and ensure their coverage under the flexibility support scheme. Pumped hydro storage systems, for example, involve storing excess electricity by pumping water to a higher elevation and releasing it later to generate electricity during periods of high demand. Gas storage facilities, on the other hand, enable the storage of renewable hydrogen, which can be used as a clean fuel source or for electricity generation. These technologies play a vital role in balancing supply and demand fluctuations, ensuring grid stability, and maximizing the integration of intermittent renewable energy sources. By recognizing their significance and explicitly including them in the regulation's definition of energy storage, we **can provide a clear signal to investors, operators, and policymakers that these technologies are integral to the energy transition** and eligible for support under the flexibility support scheme. Moreover, this expanded definition would align with the broader objectives and principles outlined in the regulation. It would contribute to the decarbonization of the power system by enabling the efficient integration of renewable energy sources and facilitating the transition towards a more sustainable and flexible energy mix. Pumped hydro storage and gas storage facilities have proven track records and can provide valuable services, such as peak shaving, load shifting, and grid stability support, enhancing the overall reliability and resilience of the energy system.

Countries such as Germany, Switzerland, and Norway have already recognized the importance of pumped hydro storage and gas storage facilities by incorporating them into their energy policies and support schemes[6]. For instance, Norway's utilization of pumped hydro storage facilities has enabled the country to balance its electricity

[6] Fisher, Richard K., et al. "What Drives Pumped Storage Development in Europe and the USA?" HYDRO REVIEW, 5 Jan. 2023, https://www.hydroreview.com/world-regions/europe/what-drives-pumped-storage-development/#gref.

supply and demand, harnessing the flexibility provided by these installations[7]. Similarly, Germany's focus on gas storage facilities has contributed to ensuring a reliable gas supply and supporting the integration of renewable hydrogen into its energy system[8].

TECHNOLOGICAL NEUTRALITY OF PPAs

We acknowledge the importance of incorporating low- and zero-emission sources in Power Purchase Agreements (PPAs). However, we advocate for the principle of technological neutrality within the framework of PPAs. This approach **aligns with the EU climate regulations, which emphasize the need to consider cost-effectiveness and technological neutrality in achieving climate neutrality across Europe**. While renewable energy sources play a crucial role in reducing greenhouse gas emissions and transitioning to a sustainable energy system, it is essential to adopt a holistic perspective that encompasses all viable options. Natural gas, for instance, can still serve as a transitional energy source and facilitate the integration of intermittent renewable energy sources into the grid[9]. It offers flexibility, lower emissions compared to traditional fossil fuels, and can provide a reliable and dispatchable power supply. In accordance with the EU intermediate climate targets and the EU Climate Law Regulation, achieving climate neutrality requires evaluating the cost-effectiveness and potential contributions of different technologies. The principle of technological neutrality encourages policymakers to consider a diverse range of options based on their merits and ability to reduce emissions effectively. By excluding natural gas from PPAs, there is a risk of overlooking its role in the energy transition and potentially hindering the achievement of climate goals in a cost-effective manner. Moreover, technological neutrality aligns with the provisions of the EU Climate Regulation, which emphasizes the importance of considering cost-effectiveness and technological neutrality when implementing measures to achieve climate neutrality. This approach recognizes that different technologies have varying strengths and limitations, and the most effective pathway to decarbonization may involve a mix of renewable energy sources and transitional fuels like natural gas. By adopting a technology-neutral approach in PPAs, we can ensure that the **energy transition is guided by objective criteria and takes into account the specific circumstances and requirements of different regions and industries**. This flexibility allows for a balanced and pragmatic approach to achieving climate goals while maintaining energy security, affordability, and reliability.

It is worth noting that certain EU member states (Spain and Poland) have already embraced the concept of technological neutrality in their energy policies and support

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[7] Kristine Askeland, Kristina N. Bozhkova, Peter Sorknæs, Balancing Europe: Can district heating affect the flexibility potential of Norwegian hydropower resources?, Renewable Energy, Volume 141, 2019, Pages 646-656, ISSN 0960-1481, https://doi.org/10.1016/j.renene.2019.03.137.

[8] "The National Hydrogen Strategy." Federal Ministry for Economic Affairs and Energy, Public Relations Division, 11019 Berlin, www.bmwi.de, June 2020.

[9] Mohammad, N., Mohamad Ishak, W. W., Mustapa, S. I., & Ayodele, B. V. (2021). Natural Gas as a Key Alternative Energy Source in Sustainable Renewable Energy Transition: A Mini Review. Frontiers in Energy Research, 9, 625023. https://doi.org/10.3389/fenrg.2021.625023

mechanism[10]s. They recognize the potential of natural gas to complement renewables and support the transition to a low-carbon energy system. By including natural gas in PPAs, these countries can achieve a diversified energy mix that balances emissions reductions, energy affordability, and grid stability.

Furthermore, as we actively navigate the evolving energy landscape, we will closely monitor the development of the EU's Electricity Market Design (EMD) regulation. We recognize the importance of staying informed about regulatory changes that may impact our operations.

[10] "Technology-Neutral Auctions – Myth or Reality?" Energy. By SiteAdmin, 27 Mar. 2019, https://www.icis.com/energy-connections/2019/03/technology-neutral-auctions-myth-or-reality/.