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Piclo Response to Revision of the EU's Electricity Market Design

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Response

1. **Do you consider that market operators should share their liquidity also for local markets that close after the cross-border intraday market?**
    - Yes
    - No

Local markets compete with TSO ancillary services and wholesale spot markets for participation from Flexibility Service Providers as FSPs must deliver a return on investment and maximise their limited resources by prioritising low-effort, high-reward programmes. TSO and wholesale markets benefit from already being well-established, likely to be worth more financially and often do not have highly locational requirements like local flexibility services. These elements can stifle participation in local markets when developed in a silo.

As a result, revenue stacking is critical for the future of competitive, decarbonised energy markets and so the longer-term vision for energy and flexibility markets must include optimised and simple participation for FSPs across all markets. To reward the true value of flexibility, every market and every stage of the flexibility service journey must be digitised and interoperable. Consequently, the functionality and interoperability of platforms across markets will be critical for the development of revenue-stacking opportunities, including:

- Value assessment: all revenue streams must be visible to FSPs. This is a huge challenge considering the very different mandates, stakeholders and participants for each of the markets/revenue streams.
- Qualification: processes for accessing value streams need to be transparent and accessible. It should be possible for a marketplace to create something akin to a "digital passport", so FSPs can manage their access (and qualification status) to multiple services. This in turn requires a standardised approach to identify assets and FSPs that translate between all different kinds of services.
- Contract management: marketplaces can help streamline FSPs' management of contractual obligations across multiple long and short-term markets. One important element of this includes the ability of FSPs to secondary trade their obligations when needed.
- Operations and Settlement: to provide FSPs with choice, standardised approaches to key operational aspects (such as availability declaration, and dispatch) and settlement (baselining, performance verification) are essential. Otherwise, the level of bespoke technical systems needed will make it almost impossible to practically align all these markets.

2. **What would be the advantages and drawbacks of sharing liquidity in local markets after the closure of the cross-border intraday market? 2000 character(s) maximum**

In future, the advantages will include contract stacking, market optimisation and improved liquidity.

3. **What further aspects of the market design could enhance the development of flexibility assets such as demand response and energy storage? 2000 character(s) maximum**

The development of flexibility assets can be enhanced through greater coordination and access to markets and

revenue streams. For instance, the ability for distribution-connect assets to solve transmission level constraints, in addition to and in coordination with DSO markets. One example of this being implemented is in the UK, where the TSO (National Grid ESO) has established a Local Constraints Market.

In Scotland, there are large volumes of wind generation and further growth is expected. As a result, the Scottish-Anglo border has the highest constraint costs in GB and leading to National Grid ESO curtailing wind generation at high costs to consumers through the Balancing Mechanism. The aim of the LCM is therefore to reduce some of the most expensive system operation costs by harnessing lower cost flexibility from distributed energy resources. The new market will provide an alternative source of flexibility in addition to the Balancing Mechanism, inviting bids from a wide range of assets to respond at times of peak north-south energy flow, including distributed connected EVs, batteries and pumped hydro stations. The Piclo Flex platform will manage the end-to-end flexibility process for the LCM, including the operation of a day-ahead and intra-day market and the facilitation of bidding, dispatch, settlement and payment for flexibility services.

This market provides distribution-connected assets access to TSO-level markets through streamlining and removing barriers to entry that had prevented their participation in the balancing mechanism. The initial focus of the LCM in Scotland means it impacts two UK DSOs: SP Energy Networks (SPEN) and Scottish and Southern Electricity Networks (SSEN), and so coordination between National Grid ESO and SPEN and SSEN is key to the success of these markets. The LCM must focus on the impact on the distribution grid from distributed-connected assets providing services to solve transmission-level constraints, as well as ensuring the participation of assets in local markets is not impacted.

4. **In particular, do you think that a stronger role of OPEX in the system operator's remuneration will incentivize the use of demand response, energy storage and other flexibility assets?**
    - Yes
    - No
    - Do you have any additional comments (2000 characters)

Yes. It is critical that flexibility is appropriately incentivised through the System Operators' remuneration framework, with it being calculated that between €11.1 - €29.1 bn can be saved annually in distribution grid investments if demand-side flexibility is procured at a low-voltage level (smartEn and DNV, 2022). Strengthening the incentives for SOs to use demand response, energy storage and flexibility assets through their business-as-usual remuneration mechanism is key to the longer-term evolution of a SO's mindset and business models, without which the CAPEX bias will remain and the use of flexibility assets is at risk of never developing beyond innovation trials, pilots or sandboxed projects.

Consequently, OPEX must be adequately included and incentivised within a SOs remuneration, in addition to top-down strategic policy direction set by governments, setting the trajectory for smart, flexible energy systems. For instance, local flexibility markets in the UK have been implemented and scaled as a result of the RIIO price control, which includes a TOTEX framework. This incentivised SOs to use the most cost-effective solution (CAPEX or OPEX) to network requirements. From April 2023, the Totex Incentive Mechanism has been further supported by the inclusion of a DSO incentive mechanism, which is intended to further drive DSO skills, capabilities and outcomes - such as the use of flexibility.

Local flexibility markets in the UK would not have developed further than small-scale pilots without the TOTEX price control framework and the strategic direction towards a smart, flexible energy system set by the UK Government. We completely agree OPEX must have a stronger role in the SO's remuneration and TOTEX frameworks have proven to be one way of delivering this.

5. **Do you consider it appropriate to enable a product to foster demand reduction and shift energy at peak times as an ancillary service, aiming at lowering fuel consumption and reducing prices?**
    - Yes
    - No
    - Do you have any additional comments (2000 characters)

Yes. Efforts over winter 2022 have demonstrated that demand reduction and shifting energy at a peak is not only

a critical part of our system security and decarbonisation efforts but is capable of driving consumer engagement - these have included responses to the current obligation to reduce demand by 5% in peak hours.

However, many of the solutions quickly implemented were limited by manual, unscalable solutions with minimal rewards to consumers for participation. It is critical that demand reduction efforts are not limited to times of crisis and the momentum gained so far should be built upon to advance technologies supporting (including automation and interoperability of platforms and devices) to continue engagement and demonstrate the benefits to the consumers and systems of these efforts.

We agree that demand reduction services should be implemented. The technologies and platforms to facilitate such as market exist currently and could be swiftly implemented. In December 2022, Piclo hosted a webinar discussing one marketplace solution that could be implemented, which is available to view here https://www.youtube.com/watch?v=3uieq6mbp2o.

6. **Do you consider that some form of demand response requirements that would apply in periods of crisis should be introduced into the Electricity Regulation?**
    - Yes
    - No
    - Do you have any additional comments (2000 characters)

Business-as-usual flexibility, including demand response, should be incorporated into Electricity Regulations and market design as a priority. System Operators, Governments and Regulators must all adopt a forward-thinking approach to including demand response markets within their energy and flexibility market ecosystem longer-term. Additionally, market design and the technologies implemented to facilitate this should be capable of being adaptive and scalable in response to new situations, such as times of crisis. Consequently, business-as-usual demand response services should be prioritised and implemented first, which can later be easily adapted and called upon during times of emergency.

7. **Do you see any further measures that could be implemented in the shorter term to incentivize the use of demand response, energy storage and other flexibility assets?**
    - Yes
    - No
    - Do you have any additional comments (2000 characters)

The development of flexibility assets can be enhanced through greater coordination and access to markets and revenue streams. For instance, the ability for distribution-connect assets to solve transmission level constraints, in addition to and in coordination with DSO markets. One example of this being implemented is in the UK, where the TSO (National Grid ESO) has established a Local Constraints Market.

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8. **Do you consider the current setup for capacity mechanisms adequate to respond to the investment needs as regards firm capacity, in particular to better support the uptake of storage and demand side response? If not, what changes would you consider necessary in the market design to ensure the necessary investments to complement rising shares of renewables and to better align with the decarbonisation targets?**
    - Yes
    - No
    - Do you have any additional comments (2000 characters)

Optimised markets rely on coordination and stacking across long and short-term markets. Consequently, the ability of participants to trade their contracts to other qualified providers (secondary trade) is an important element of this vision, particularly for those who secure contractual obligations months and years in advance but also intend to participate in closer to real-time opportunities.

Within capacity mechanisms, secondary trading happens when the holders of contracts are unable to deliver their obligation. This can happen if a unit is down for maintenance, the asset goes offline due to the owner decarbonising its units or, in the case of a new build asset, there are construction delays which means it will not be operational when required. In some capacity mechanisms, providers can trade away their contracts in the secondary market to avoid a penalty for non-delivery.

Competitive secondary markets build confidence as participants know they will be able to trade these contractual obligations if needed or if they wanted to participate in shorter-term opportunities. In doing so, secondary trading can encourage smaller, decentralised assets to participate, accelerating the decarbonisation of traditionally carbon-intensive markets.

Marketplaces can help streamline FSPs' management of contractual obligations across multiple long and short-term markets, including the ability to secondary trade their obligations. In 2021, Piclo Exchange was launched which enabled Capacity Market Providers could find, bid to buy and sell existing contracts with other qualified providers in a single marketplace. Since launching, 33 Capacity Market providers have registered on Piclo Exchange, which has raised the visibility of the 35 contracts that have been advertised. The platform has facilitated competitive bidding for contracts and has successfully facilitated a secondary trade of 2.847MW.

As a result, capacity mechanisms (and other markets) should include secondary trading.