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Piclo Response to RomeFlex Project consultation

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Areti Consultation - RomeFlex Project

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Summary of recommendations

1. **Use of existing technology:** Areti's focus on using existing technology is sensible and could be extended further than the scope of the Platone project. Platforms and marketplaces that facilitate and operate local flexibility markets exist and have already been proven. For instance, the Piclo Flex marketplace is in operation in five regions outside of Italy and has been selected by E-Distribuzione to facilitate the local flexibility market in their project EDGE. We would welcome the opportunity to be part of Areti's proposal and discuss opportunities for collaboration.
2. **Prioritisation of TSO and DSO markets:** We agree with the emphasis in the consultation on this important market development, Piclo is happy to present Piclo Flex's involvement in the UK's National Grid ESO's Local Constraint Market to inform market developments on TSO/DSO markets and coordination.
3. **Reduce process complexity:** streamline participation by reducing complexity as much as possible. This includes minimising the number of interfaces, platforms and processes FSPs have to engage with and where possible removing the need for FSPs to use specific types of equipment or interfaces such as the proposed PGUI or BSP platform
4. **Partner with FSPs:** Take a partnership approach to market development with FSPs - engage early and often to create joint ownership over processes and design, which will in turn drive engagement from FSPs to take part. In the UK, Piclo and 3 UK DSOs hosted an in-person event "Growing DSO flexibility markets to reach net zero" to drive this engagement and discuss market barriers.
5. **Develop automation through open APIs:** Drive flexibility market automation through open APIs and interoperability standards
6. **Establish quarterly project workshops:** we propose that quarterly workshops are established to facilitate alignment and share learnings on pilot project developments with all DSOs, market operators, FSPs and Arera.

Response

It is exciting to see Areti's ambitious RomeFlex project proposal for a local flexibility market pilot, which comes at a critical time for the Italian energy sector. Like many countries across the EU, the energy crisis has resulted in Italy facing increased consumer costs and system of security concerns. Simultaneously, Italy's transition to net zero has led to an increase in the deployment of technologies including electric vehicles, battery storage assets, and renewables. These developments have accelerated the need for a more dynamic and responsive energy system that optimises the use of resources at a national and local level. In response, Arera published Consultation 332/2019 (2) and Resolution 352/2021(3) recognising the new roles of distribution companies (DSOs) as the role of purchasers of local ancillary services.

Consequently, it is exciting to see the ambitious plans of leading DSOs such as Areti and E-Distribuzione and the potential of these projects to kick-start the development of local flexibility markets in Italy. However, successfully establishing competitive local flexibility markets relies on all pilot projects establishing and working towards a commonly shared vision, which includes features such as:

- **Local (DSOs) and national markets (TSO) markets are coordinated:** there needs to be optimised TSO-DSO coordination across all national flexibility markets to unlock flexibility at all levels. All market actors including System Operators (SOs), platforms, Flexibility Service Providers (FSPs), Arera and beyond have a responsibility to drive this collaboration forward
- **Low barriers and a diverse suite of Flexibility Service Providers participating:** Participation across markets must be simple, streamlined and standardised. There must be high levels of engagement and feedback to ensure the market design is fit for purpose. Learning by doing is an effective way of iteratively improving flexibility markets and has been useful in developing and building out the skills, expertise, processes, data and technologies needed to deliver competitive DSO flexibility markets at scale.
- **Cost-effective:** flexibility markets must be a cost-effective option in the transition to net zero, to ensure the least-cost route is achieved for consumers.
- **Trust and transparency:** is essential to market liquidity and must be integral to all decisions.

Areti's RomeFlex Project

It's encouraging and exciting to see Areti's market design encapsulating aspects of the above, including:

Use of existing technology: the focus on "extensive reuse of the technologies and process skills from the Platone project" is sensible to keep costs down for consumers, accelerate market development, drive coordination and progress towards standardisation. This is especially important given the focus on standardisation at a country level (and later an EU level) that European Commission-level workstreams are moving towards.

> ***Recommendation 1:*** *Areti's focus on reusing existing technology should be extended further than the scope of the Platone project. Platforms and marketplaces that facilitate and operate local flexibility markets exist and have already been proven. For instance, the Piclo Flex marketplace is in operation in five regions outside of Italy and has been selected by E-Distribuzione to facilitate the local flexibility market in their project EDGE. We would welcome the opportunity to be part of Areti's proposal and discuss opportunities for collaboration.*

Prioritisation of TSO and DSO markets: Areti has captured the importance of coordinating across DSO and TSO markets and its role in synthesising procurement and mitigation of negative impacts on networks that may otherwise occur. Piclo Flex is facilitating both TSO and DSO local markets in the UK and is establishing the basis for TSO/DSO coordination as part of National Grid ESO's Local Constraint Market. See Annex 1 for more information.

> ***Recommendation 2:*** *We agree with the emphasis in the consultation on this important market development, Piclo is happy to present Piclo Flex's involvement in National Grid ESO's Local Constraint Market to inform market developments on TSO/DSO markets and coordination.*

Starting small and iterating: Areti is proposing to procure 10MW of flexibility services, utilising roughly 100 hours over the first year. This amount is ambitious but will provide the scope to learn by doing and scale quickly.

Barriers to consider: establishing market liquidity

It is critical to create an ecosystem that works together to transition to a decarbonised, flexible energy system and ensures that every home, farm, community, business, and generator can take part in local

markets. Empowering this ecosystem to participate in local markets requires centring the experience of existing, new or potential FSPs in all aspects of flexibility market development. FSPs come in all shapes and sizes. They range from those new to participating in flexibility markets, for which DSO flexibility services could be their first experience earning revenue from assets such as electric vehicles (EVs) or residential demand-side response (DSR) assets. Alternatively, FSPs might be well-established in participation in flexibility markets, such as an aggregator providing TSO ancillary services. There are many facets to establishing market liquidity including the following points:

Streamline the route to participation: RomeFlex proposes a complex web of platforms and interfaces that includes multiple processes and platforms that could confuse FSPs and act as a barrier (Flexibility Registration, PGUI installation, FSP interface, DSO infrastructure interface, local market operator, BSP platform).

> ***Recommendation 3****: streamline participation by reducing complexity as much as possible. This includes minimising the number of interfaces, platforms and processes FSPs have to engage with and where possible removing the need for FSPs to use specific types of equipment or interfaces such as the proposed PGUI or BSP platform*

Grow FSP understanding: From our experience in GB, FSPs participating in flexibility markets require a financial incentive that delivers a return on investment. This is necessary to grow their businesses in competitive markets and maximise their limited resources, such as prioritising their time on low-effort, high-reward programmes. Consequently, DSO flexibility markets will compete with alternative programmes such as TSO ancillary services and wholesale spot markets for FSP participation. These alternative programmes benefit from already being well-established, not location specific and are likely to be worth more financially. New market entrants need to be certain of why they should participate, what the financial returns are and what effort and investment are required. At all stages, FSPs need to invest widely including capabilities, understanding, necessary contracts with owners and assets, technologies and tools such as APIs. For any FSP, this is a considerable undertaking meaning the development towards business-as-usual flexibility markets is not just about Areti's own investments but FSPs must be central to every decision. For further context, we have highlighted a UK case study into market development and barriers facing FSPs in Annex 2.

> ***Recommendation 4:*** *Take a partnership approach to market development with FSPs - engage early and often to create joint ownership over processes and design, which will in turn drive engagement from FSPs to take part. In the UK, Piclo and 3 UK DSOs hosted an in-person event "Growing DSO flexibility markets to reach net zero" to drive this engagement and discuss market barriers.*

Develop flexibility market automation through open-APIs and interoperability standards: Automation is essential to unlocking the full capability of local flexibility markets and Areti proposes to guarantee total automation of all phases of the market and implementation of services. Firstly, it is essential to ensure that there are routes to market for all types of participation including manual and automated, especially in the early stages of market development. Secondly, automation must be based on Open-API and interoperable standards to ensure coordination and consistency across markets. Piclo is developing end-to-end Open-APIs for DERMs, SOs and FSPs flexibility market participation, which can be found at https://docs.picloflex.com/. We were also a key partner in the UK's Project LEO that, in an industry-first trial, automated the processes behind flexibility competition and bidding for SOs and FSPs. The new functionality integrated Piclo Flex with DSO Scottish and Southern Electricity Networks (SSEN) Neutral Market Facilitator (NMF). The trial saw the NMF automatically send details of local flexibility competitions to be advertised on Piclo Flex, FSPs bid to secure these contracts, after which Piclo Flex automatically delivered the bids back to the NMF for assessment and subsequently returned SSEN's decision to accept or reject the FSPs bids all via APIs. This has complemented the development of the end-to-end open APIs built for Piclo's project in Italy alongside E-Distribuzione, which include market competitions, operations and settlement.

We are keen to use our experience developing APIs in the UK and for international clients across Europe and the US to drive flexibility market API standardisation efforts. You can read more about Piclo's approach to APIs in these two blogs:

- Let's connect: why APIs are the next step for flexibility markets
- Developing flexibility market APIs: a spec-driven approach

> ***Recommendation 5**: Develop flexibility market automation through open-APIs and interoperability standards*

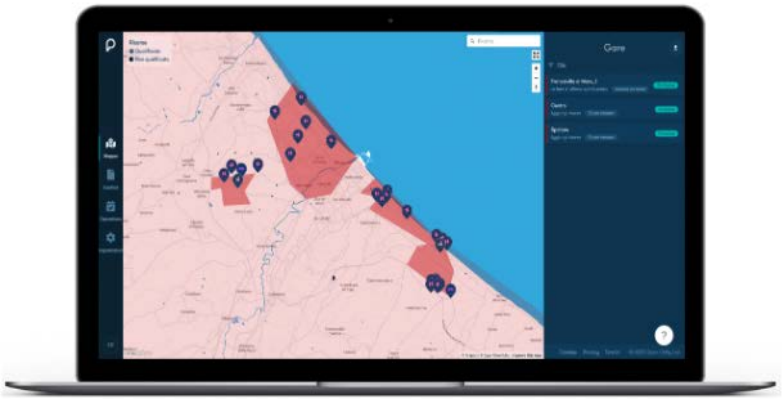
Drive standardisation swiftly: Consolidating learnings and standardising where possible will be important across pilots. For instance, already there are different market designs and requirements with E-Distribuzione and Areti having different kW thresholds for participation and different processes to participate.

> ***Recommendation 6:** we propose that quarterly workshops are established to facilitate alignment and share learnings on pilot project developments with all DSOs, market operators, FSPs and Arera.*

Annex 1: About Piclo

Piclo develops software to make electricity grids smart, flexible and sustainable. Piclo is playing an integral role in supporting electricity networks' to better access and value flexibility resources, integrating low-carbon technologies and reducing long-term network infrastructure costs for consumers. Piclo has been deeply involved with the UK energy transition across networks, generation and retail over the past 6 years, and operates Piclo Flex, an independent flexibility marketplace that is active across the UK, Europe and the US.

Piclo Flex is an end-to-end marketplace that facilitates the procurement, operations and dispatch of short and long-term flexibility needs, with full suite automation optionality via open Application Programme Interfaces (APIs). We provide an integrated "marketplace-as-a-service" to help our SO clients deliver on their flexibility requirements. We are a customer-centric and experienced team and work in partnership with our clients to deliver a scalable and cost-effective solution.



DSO markets: Piclo currently supports three UK DSOs with their business-as-usual flexibility procurement: UK Power Networks, SP Energy Networks and Electricity North West alongside National Grid in the US, ESO in Lithuania and E-Redes in Portugal. Over £55million of local flexibility contracts have been awarded via Piclo since launching our commercial service in 2019. Volumes are continuing to grow year on year, with 667MW of capacity procured across multiple product types.

E-REDES · ESB NETWORKS · electricity north west · eso · nationalgrid · SP ENERGY NETWORKS · UK Power Networks

Piclo in Italy: Piclo Flex is supporting E-Distribuzione's Project EDGE. The System Operator E-distribuzione (E-D) will adopt Piclo Flex as the independent marketplace for DSO flexibility services, providing end to end services enabling the procurement, operations and settlement of flexibility services. The market will enable the active management of the distribution network using third party flexibility assets such as generators, battery storage, demand-side response and electric vehicle smart charging.

TSO markets: Piclo supports the UK TSO's newly established Local Constraint Market to help manage increasingly constrained transmission boundaries and reduce costs to consumers. The Piclo Flex platform will manage the end-to-end flexibility process for National Grid ESO, including operating a day-ahead and intra-day market and facilitating the dispatch, settlement and payment for flexibility services at the transmission level. The project will establish the basis upon which TSO-DSO coordination will function.

nationalgridESO

Annex 2: UK Market Liquidity Case Study

SP Energy Networks (SPEN) has used Piclo Flex to procure their flexibility services for 3 years since 2019. In 2019, SPEN ran two smaller-scale pilots to trial flexibility procurement, after which their procurement tenders were rapidly scaled up in 2020, with SPEN seeking nearly 100MW more compared to the year before.

Whilst the number of FSPs participating and the MWs of flexibility contracts awarded in 2020 increased, the level of participation was less than expected. Feedback received from FSPs about participation found FSPs were participating with fewer assets to trial the market and build confidence before fully committing on a larger scale. By comparison, 2021 was been by far SPEN's most successful year of flexibility procurement. This success is in part due to the market confidence established by SPEN repeatedly signalling to the market their dedication and ambition with procuring flexibility and a high level of joint engagement between Piclo and SPEN. Consequently, it has attracted new FSPs to the market and built trust that it is worth FSP's resources and commitment.

SPEN	2019	2020	2021
FSPs awarded contracts	3	7	9
Cumulative Capacity Signposted	119.7	221.9	949.6
Cumulative Capacity Contracted	86.3	139.6	555.1
Spotlight on EVs: asset growth success story	0 assets, 0MW	40 assets, 2.24MW	2,202 assets, 284MW