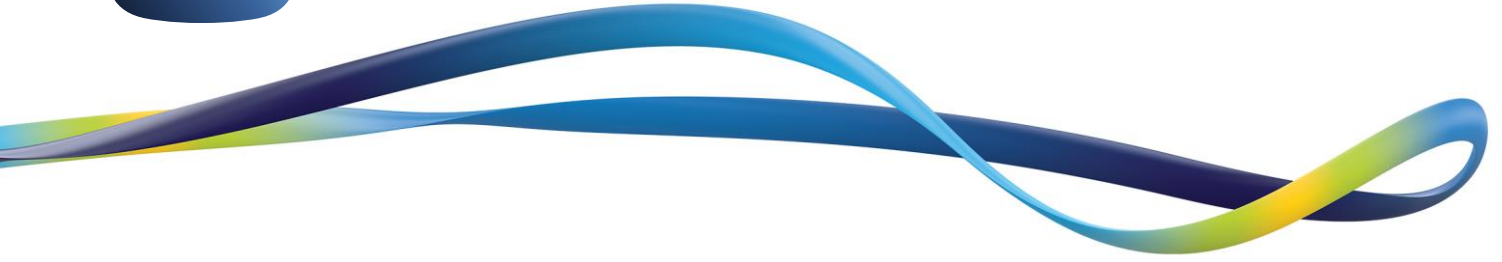




NETWORKS



CONSULTATION ON ENERGY COMMUNITIES & ACTIVE CONSUMERS

ESB Networks Response on CRU Consultation on
Energy Communities and Active Consumers
(CRU/21028)

16th April 2021

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1. Introduction

ESB Networks welcomes the opportunity to respond to this important consultation on Energy Communities and Active Consumers. ESB Networks is committed to actively supporting all Irish homes, communities and businesses in their choices and activities at this time of fundamental change in the energy sector, including facilitating energy communities and active consumers to participate in the energy market. We believe that these will be a critical part of the future energy system.

We have structured our response to give an overview of the role of ESB Networks, a description of some of our work to progress enabling active consumers and energy communities on the distribution system and provide details of our stakeholder engagement taking place to inform and help ensure that the DSO solutions are fit for purpose and best reflect the needs of energy communities and active consumers. We have provided responses to each of the consultation questions, and finally, we offer some further observations on the consultation topic, which we hope will be of use to the CRU, but which do not naturally fit under any specific question.

ESB Networks makes this submission on behalf of ESB Networks DAC in its capacity as DSO, and on behalf of ESB's Transmission Asset Owner (TAO) and Distribution Asset Owner (DAO) functions (operated through the ESB Networks business unit).

2. ESB Networks - who we are

As DSO, DAO and TAO, ESB Networks works to meet the needs of all Irish electricity customers, providing universal affordable access to the electricity system, and delivering and managing the performance of a system of almost 155,000 km of overhead networks; 23,000 km of underground cables; 640 high voltage substations; significant amounts of connected generation, including 4.75 GW of renewable generation connected to the Distribution and Transmission systems; 2.4 million demand customers; and now several thousand “active customers” – including but not limited to domestic premises with microgeneration (a rapidly increasing number), demand side management, houses with battery storage, etc.

ESB Networks also delivers a range of services to the Republic of Ireland (RoI) Retail Electricity Market servicing over 2.4 million customers. We manage relationships with market participants and provide data in a timely and accurate fashion on a daily basis. ESB Networks supports the wider RoI market through the ring-fenced Meter Registration System Operator (MRSO) and Retail Market Design Service (RMDS) and supports the wholesale Single Electricity Market through the provision of aggregated meter data.

ESB Networks has a strong history of innovation, and as a result we have and continue to develop one of the most progressive electricity networks in the world. For example, in our Dingle project, we are working with customers and other partners to implement and support active consumers to build an energy community. It is through collaborative innovation that we will develop a future electricity network which empowers our customers, delivers value for money and provides a sustainable energy system for all customers.

3. ESB Networks and Energy Communities/Active Consumers

3.1 Background

The energy industry is experiencing significant transformation, driven by climate change and decarbonisation and is enabled by various European and national policies, directives and legislation. The distribution system is evolving to become a low-carbon energy system where 70% of the electricity generated in Ireland will come from renewable sources by 2030. ESB Networks is fully committed to enabling Ireland's renewable energy and decarbonisation targets, by developing and maintaining the Irish electricity infrastructure and developing systems, products and platforms to enable this, while maintaining the security and quality of supply that our customers and system need.

Due to the growing awareness of customers and technological developments in the area of renewable energy generation and low carbon technologies, there are an increasing number of households, enterprises, public authorities, cities and municipalities which are ready to engage as active participants in the energy transition. The Clean Energy Package acknowledges the growing role of consumers and citizens in the energy transition. The different legislative proposals of the package, and more specifically the Electricity Directive and the Renewable Energy Directive, have therefore endorsed energy communities and active consumers as new market actors in the energy system.

Historically DSOs have designed and managed distribution networks through a top down approach and extensive management and monitoring tools were not required to analyse predictable electricity flows. But as increasing numbers of active consumers and distributed energy sources connect to the distribution system, this will result in more unpredictable networks flows, greater variations in voltage and different reactive power characteristics. With a view to this, in 2020 ESB Networks established the Active System Management (ASM) Project, which is responsible for putting in place the systems, processes and capabilities needed to enable distributed demand, generation and storage, and allowing energy citizens and communities to participate actively and securely in transmission, distribution and market activities. The ASM project will allow ESB Networks to continue to operate the distribution network in a secure way and to provide high quality of service to customers, as we will have much better network visibility.

3.2 Enabling active customers and energy communities

ESB Networks considers that energy communities and active consumers must play a central and critical role in Ireland's future energy system. As they adapt behaviours to become more energy efficient, by using renewable energy sources and smart energy technologies to change how they think

about and use energy, they can benefit in the transition to a lower carbon future. This is both an important step in enabling Ireland's 2030 targets in a secure, sustainable manner. To deliver a secure, low carbon system in the long term, we will need to adapt how, when and how much electricity is used on the Irish system, to better reflect and achieve the full value of our abundant, variable, distributed renewable energy resources. Doing this securely and efficiently inherently means that electricity system and market operation must become more localised. Distributed generation sources have the ability to produce electricity close to the point of consumption, which can alleviate the need to use network capacity for transport over longer distances. With the expected uptake of LCTs and increasing numbers of active energy citizens, the distribution system will be exposed to a wider variety of production and load situations. As such, we are committed to working with energy communities and active consumers, to create active, localised marketplaces which enable the electrification of heat and transport, the increased renewable energy consumption (by enabling quicker connections and then reducing renewables dispatch down).

To achieve this, however, there are a number of urgent enabling steps required. Firstly, greater awareness of the challenges and opportunities we face is needed – whilst this awareness is present at a national level, we believe that to unlock distributed flexibility, energy communities and active customers, it is critical that we can provide a shared awareness of system capacity and scarcities at a community, local and regional level. By providing this awareness, we hope to begin to empower and work with communities and active customers on how their participation in the local electricity system might support our ability to integrate renewables and electrification. To further enable this, a strong, open consultation framework is needed to ensure that there is a continuous and effective dialogue between the distribution system operator, and distribution system users, as we build future operational and local market solutions together. In 2021, led from the Active System Management Project, ESB Networks is seeking to establish this.

Secondly, to be able to participate in the electricity system and market, it is critical that the technologies that active consumers and energy communities invest in are “active ready”. Rooftop solar generation, or electric vehicle chargers, installed by individual active customers or a community, in and of themselves cannot support local system operations. To be able to, they must have the right, “smart”, functional and non-functional capabilities (for example communications and signal exchange standards, power and voltage control modes). Furthermore, without these capabilities, it is likely that conservative limits would likely need to be applied to the technologies connecting, in the absence of some means of managing how they interact with the system under different local conditions.

Internationally, led from jurisdictions where solar PV is more mature and these integration challenges have emerged earlier, advances have been made in developing and standardising requirements for smarter energy technologies. Now it is important that Irish communities and active consumers are

provided with clear and reliable guidance on what standards their technologies must comply with, so that they are able to support and contribute to the local energy system. As such, in 2021 and led from the Active System Management Project, ESB Networks is working closely with other utilities, research organisations and will be seeking to work with technology providers and energy companies, to introduce standardised requirements for these technologies in Ireland. We consider this a critical step, equipping active customers and communities with the information and the technology they need to maximise both their access to and their ability to participate in the local energy system.

Thirdly, representatives of energy communities and active customers have already reached out to ESB Networks to highlight their need for effective routes to market. Network reinforcement may be deferred if the DSO has the capability to procure flexibility from 3rd parties in order to optimise network availability to manage network conditions in an economic manner. Energy Communities and Active Consumers may be in a position to offer these services to ESB Networks. We are committed to providing this, both by providing the systems (dashboards, platforms / portals) needed to enable and empower in a practical sense, and by delivering a Flexibility Market Plan, which sets out the market framework, products and services, and their phased rollout over the coming years.

With a view to delivering a Roadmap for Dashboards & Platforms, intended to enable and empower distributed flexibility, communities and active customers' participation, we have reached out to other utilities, to technology companies, and to customer and industry representatives, as part of this, to share in their experience, and to understand their expectations. The local or regional dashboards and portals which will be delivered by the DSO will support the range of services, for example from providing localised, real-time or forecast energy and renewables information, to providing market services like registration, qualification, bid information.

We are working to ensure that the Flexibility Market Plan developed in 2021 is effective in providing communities, active customers, and the industries which must work to support them (energy, technology) with the line of sight needed for future market arrangements. ESB Networks has reached out to representative organisations to engage on their needs, and the role that they can play. We have also agreed a joint work plan and governance with the TSO, to ensure that our activities as DSO in enabling active customers' and local participation are designed in a manner that supports and complements the activities of the TSO in maintaining overall system balance and security.

In early 2021, we have commenced high level design activities to deliver these, and are engaging with the organisations and representatives who are working to support the interests of energy communities and active customers to inform and validate our underlying design principles and assumptions. Later in 2021, we will be engaging intensively on these proposals and high level designs developed, to ensure that diverse, informed insights and perspectives are captured, so that the Roadmap for

Dashboards & Platforms, and the Flexibility Market Plan that are delivered, are fit for purpose, to activate energy communities' and active consumers' participation.

In this context, we welcome this consultation from the CRU. Energy communities and active consumers will rely on effective alignment of each party – from the CRU, to the distribution system operator, to energy companies, to organisations outside of our industry – to enable their participation. We believe that there are clear opportunities for the developments that we are designing to support the CRU's specific objectives with respect to enabling communities.

4. Observations to the Questions posed in the CRU consultation on Energy Communities and Active Consumers

Proposal One: The following list of electricity activities has been identified in attempts to clearly outline all the undertakings which new and existing market actors may engage in following the transposition of the Directives.

Q1 Do you have any comments on the approach the CRU is proposing to take to use these energy activities listed above to form the basis for which a regulatory framework is applied to market actors engaged in these activities?

ESB Networks is committed to supporting and empowering all our customers as they transition towards the greater use of low carbon technologies. We recognise the central role that active citizens and energy communities can play in achieving the national climate action plan targets. The actions of active consumers will not only see them playing an active part in Ireland's decarbonisation, but also has the potential to inspire others to follow the same path, creating even more active participants in Ireland's transition to a low carbon society. ESB Networks is committed to supporting communities who wish to connect community-led renewable energy projects to the electricity distribution network. Through proactive engagement, providing information and guidance we are here to support active consumers and energy communities on this journey. In addition to this consultation, ESB Networks will be reaching out to key industry participants, communities and customers as a key step in informing the high-level design phase of the full ASM Programme.

ESB Networks anticipates that there will be an increase in the number of customers becoming actively involved in the energy transition. The advancements in modern technologies coupled with increased awareness of the energy market will provide opportunities such as potential energy savings for energy communities and active consumers, by allowing them take better control of how they use energy and infrastructure. This improved control, knowledge and greater understanding of the power they are using, will thereby allow them to make more informed positive decisions to move towards decarbonisation.

Irish electricity users are at a relatively early stage in the transition to active energy consumption, ESB Networks are already involved in various innovation activities involving both active energy citizens and community energy projects, to understand and analyse the system benefits that increased penetration in this sector provide. Some benefits of participation in energy communities to consumers may include the contribution being made to increasing renewables penetration (by adopting low carbon demand

and generation technologies in the community), to carbon reduction, and to the benefits which come with this in terms of climate mitigation, air quality, and other environmental benefits. Additional benefits to the distribution system may include more efficient utilisation of the network, increased penetration of Low Carbon Technologies (LCTs) and Distributed Energy Resources (DER), plus provision of services to support grid stability.

As the level of active customers and energy communities increase, ESB Networks will enable these activities, while also ensuring that we continue to operate a network that provides safe and reliable connections at an economic cost for all electricity users. We have an opportunity in Ireland to utilise existing wires and infrastructure wherever possible so as to ensure that all safety standards continue to be met and adhered to and to minimise costs to all end users. There will need to be some level of regulation for energy communities, possibly proportional to the size of the energy community. For each activity there may be a need to establish kW/kVAr thresholds (such as small/ medium/ large) to support appropriate approaches to designing and implementing regulatory frameworks. We would ask how this list will be maintained going forward, for example how frequently will it be reviewed and updated, and will more definition and detail be provided for each of the activities listed?

Q2 Are there any additional energy activities which should be included in the list above?

ESB Networks recommends that the list of activities should be amended to reflect the following:

- List should state “Distribution System Management” as opposed to “Distribution Network Management” to give a truer representation of all the activities and to accurately reflect the licencing arrangements in Ireland (noting that the CRU issues a Distribution System Operator licence, and not a Distribution Network Operator licence).
- Third party services should be split into supply chain of the associated technology and energy management services.
- There should be a reference to System Services as relates to local and regional system management (for both ESB Networks’ responsibility) and as relates to maintaining overall system balance and stability (EirGrid responsibility) in which energy communities and active consumers could play an active role.
- ESB Networks would like to identify that whilst Demand Side Response (DSR) is listed as an existing market activity, the existing market arrangements are not well suited to widespread demand side response.

- Distributed Energy Resource Management (DERM) activity should be included as a growing role which must be played by the distribution system operator and also by parties like aggregators, to support energy communities and active customers
- There may be a need to include some form of behind the meter management. DERM and DSR applications may encompass the control and supervision of apparatus behind the meter (aggregator and supplier activities) as well as in front of the meter (distribution system operator activities). Visibility of this activity may need to be available to all industry participants, and the technologies “behind the meter” may need to meet technical standards led or set from the perspective of maintaining security and enabling in “front of meter”.

ESB Networks welcomes specific advanced engagement with industry and the wider public required on each of the above activities to ensure practical solutions are implemented. We also recommend that design of all activities are considered holistically prior to any implementation plan being agreed. This will avoid re-work as a result of any design conflict between various activities.

Proposal 2: The CRU is proposing the following options for a regulatory tool to monitor market actors who engage in new energy activities outlined in the Directive. The final tool could be one or a combination of any of the options discussed or potentially an option which is presented to the CRU by a respondent to this Consultation.

Q3 Which option do you consider to be the best approach to apply regulatory oversight to market actors who offer services related to new energy activities outlined in the CEP?

ESB Networks welcome that CRU will be developing a regulatory tool to monitor market actors who engage in new energy activities as outlined in the Directive. This should be designed to meet the various requirements arising for active consumers and energy communities and we are committed to our role in supporting the development and implementation of these. Upon initial analysis of the options suggested in the proposal, Option A could potentially create barriers to new entrants, because of conditions associated with activities which exceed what a given new entrant is seeking to do. Developing a licence/conditions that enable a market actor deliver all of those activities would be a complex and lengthy process and could result in a substantial increase in processing for the CRU. We also ask how is it proposed that CRU will be funded to monitor these activities, as it will require resources to inform market actors of their obligations and for compliance monitoring?

Option B or Option C would appear to be more viable solutions. Option C might be the simplest to implement in that this approach allows these new entities (energy communities, active consumers, and market actors) in the market to form without the hurdle of existing onerous market entry requirements. There may need to be a size/ scale/ risk threshold applied, should the scale of the energy community (or similar) necessitate a licence. A Risk based approach to the selection may be the most appropriate approach to selecting a strategy.

Regardless of which option is selected, ESB Networks will work with CRU to develop and implement appropriate regulatory oversight for market actors offering services related to new energy activities. The level of oversight that market actors are subjected to should correlate to what that market actor is doing and with the risk that these activities carry. Established market participants should not be unfairly burdened with regulatory oversight in comparison to an active consumer and new market actors should not be subject to lesser standards or expectations which existing market participants abide by.

Q4 Can you identify an alternative approach to applying effective regulatory oversight to market actors engaged in new energy activities which is not outlined in this Consultation?

Whilst we are not proposing an alternative approach, ESB Networks are happy to offer our services to support or inform the conditions or guidelines associated with new licence or trusted entity status. Clear rules and regulations should be applied to these market actors such that the roles, responsibilities and prioritisation of such is clearly defined in a framework and can be consulted upon by all market participants for implementation in a timely manner and is subject to regulatory oversight. Whilst the current system services and market arrangements were not designed with a view to enabling the participation of small, distributed, community / active participants, ESB Networks look forward to supporting this being addressed while acknowledging the complexity of the retail market. As part of our Active System Management project, we are focussing on designing simple, accessible products and services, to reduce entry barriers and increase opportunities for communities to participate. We look forward to working with the CRU, industry and communities to ensure these meet the needs of community participants.

Proposal Three: The CRU proposes to establish a framework for which the Customer Care Team and Compliance and Enforcement Team can use to make consistent decisions for dispute settlements between final customers and market actors pursuing new energy activities.

Q5 Do you agree with this approach?

ESB Networks agrees with this approach proposed. Consumers must have access to some form of agreed dispute resolution with market actors. The terms of reference for a dispute settlement framework is significantly more complicated than present terms. This will need to be established with a clear set of rigorous rules and a well thought out framework in which to operate. How this level of protection can best be assured in practice will need to be considered, at a minimum, in terms of regulation of the market actors and active consumers participation in energy communities.

Q6 What do you consider to be the best format for this type of framework? (e.g. Codes of Practice, Guidelines of Best Practice, Minimum Standards for Consumer interactions, etc.)?

If market actors engaged in new activities are to be efficiently regulated, then a robust framework should be established that clearly states the roles and obligation of new market actors. ESB Networks note that there are a variety of different tools currently in use (e.g. Trading and Settlement Code, Grid Code and supplier Handbook) that are existing market structure and regulatory oversight tools. Granted, these are for much bigger actors, but have proved very effective to date. ESB Networks will work with CRU to facilitate energy communities and active consumers, regardless of whatever framework format is chosen. This will need to have clear and rigorous rules and a well thought out framework in which to operate as well as a supervisory structure to ensure the regulations are correctly applied.

Proposal Four: As means to develop a comprehensive list for the monitoring of active consumer groups participating in the electricity sector, the CRU is proposing that Energy Communities and Jointly Acting Active Consumers participating as part of a cooperative register their project with the CRU to enable appropriate monitoring of how many communities and jointly acting active consumer groups are in operation.

Q7 Do you agree with this approach?

ESB Networks support the approach that there would be a point of registration for energy communities and jointly acting active consumers. From a system operation, market enablement and metering perspective, the DSO will also require that the energy communities and jointly acting active consumers also register with the DSO.

The current smallest entity (i.e. the consumer) is registered by Retail Market Services (RMS) and (MRSO) through its MRSO service and the creation of an energy community and/or jointly acting active consumer is more easily executed for the whole industry by an expanded MRSO. In the interest of supporting the customer, increasing our ability to both support and enable them, in addition to reducing administrative barriers, implementing a single point of registration could be considered. Any expansion of MRSO service will need to be considered and worked through with CRU in more detail before being executed. Should this be the case, it will be critical that all the technical requirements and information identified by the DSO would be included in the informational/registration requirements and all solutions are kept as transparent and simple as possible.

Q8 What type of information do you think should be required to register?

ESB Networks would require key information to be provided at registration and recommend that it is captured at initial registration with CRU to facilitate a smooth process for example:

- CRO (Companies Registration Office) registration as a Legal Entity
- List of Consumers and their MPRN's that make up the energy communities and jointly acting active consumer membership
- Specific activities that the energy community/jointly acting active consumer intends to pursue
- Type and size (in kW) of technologies that are connecting to the system, and the MPRN associated with each
- Arrangements to keep information supplied up to date

- Any relationships the Entity already has with other market participants
- Any wholesale (energy, capacity or ancillary services) activities for which the energy community is qualified, and the relevant parameters (volumes contracted, specific services contracted)
- Registration system should support any consumers wishing to exit from an energy community or switching to another community, and potentially pulling back on data sharing

Q9 What initial considerations should the CRU assess to enable effective participation by aggregators in the electricity sector?

In the energy industry, data management, security and neutrality are key to ensuring customers' ability to participate and switch freely between providers, communities, aggregators and other services. As a neutral market facilitator with access to a range of data, ESB Networks is committed to providing transparent access to the relevant information in accordance with regulatory rules and requirements. Any new market actors must be clear in the obligations that they must adhere to and regulatory oversight should ensure that all customers still get the same level of service as they do currently.

Any aggregator will be filling an important role and there will need to be well defined rules around how aggregators operate in the market. The current design of the retail market is well understood by participants, but the system is out of necessity somewhat complex due to the need to interact with many customers and market participants. If the retail market design needs to change to accommodate new actors, this will require sufficient time to design and implement these changes into the retail market systems. Aggregators already exist in SEM, so CRU needs to consider whether the current rules for aggregators are appropriate for an entity that aggregates at a smaller scale. Any subsequent decisions made by the regulator will need to be updated in the market rules set. There may need to be a review in the Trading and Settlement Code or other industry structures/rules to reflect how aggregators participate in the market and provision of services.

Furthermore, as related to system services and wholesale market participation, the current arrangement has been designed primarily based on more conventional / traditional types of market participant. It will be important to adapt or extend these to appropriately account for the technical and other characteristics of smaller participants, operating on the distribution system. ESB Networks is seeking to support this process, and through the Active System Management project, to deliver appropriate technical solutions and processes.

Proposal Five: The CRU proposes that the geographic scope of an REC should be limited by a physical asset on the distribution system, such as a 38kV substation. Also, the CRU proposes that CECs can be broader in scope and are not limited by geographic or technical limits and may be comprised of one or more RECs. This proposal would mean that Active Consumers could be part of a REC and a CEC, but other members of the CEC may not be able to be a member of the same REC if they are physically located outside the scope of the physical network asset.

Q10 Do you agree with this approach to distinguish proximity requirements between CECs and RECs?

ESB Networks is supportive of the proposal of a REC being associated to a physical asset on the distribution system. We note that while physical technical limits will influence what can be achieved by a CEC and how it can participate in the system, if the CRU and/or energy communities engage early with us at the design phase, we can design and deliver solutions that can enable CECs to operate across a larger geographical area. It will be important to adapt or extend these to appropriately account for the technical and other characteristics of smaller participants, operating on the distribution system. All customers should be treated fairly, so cross subsidisation of active consumers should not occur, and any solution must meet the EU legal requirements. ESB Networks will support this process, and through the Active System Management project, to deliver the associated technical solutions and processes. We look forward to engaging with CRU as to how this can be moved to implementation.

ESB Networks note that use of the 38kV station boundary is not static and could not be considered a geographic boundary. Linking by ESB Networks Planner group (a geographic and electrical entity) might be an alternative option that could possibly be explored. Given that the margins available from CEC and REC are likely to be very small, this will generally mean that any implementations will have to be in a form that has low investment costs in terms of physical equipment per customer, the system used should be capable of being accommodated within the relevant (existing and in-development) market systems, should be software based and as simple as possible, while fit for purpose.

Q11 If the CRU maintained the existing data protection requirements and applied them to market actors offering new services, either through licencing or contractual arrangements, would that be enough to effectively ensure consumer's data is being protected as they engage in these new activities?

ESB Networks acknowledges that all data requirements will need to be compliant with current data protection legislation. ESB Networks appreciate that CRU will be developing regulatory solutions for the various requirements arising for energy communities and active consumers and we are committed to our role in supporting the development and implementation of these. It is critical that these are supported by the appropriate data protection measures to ensure consumers data is protected once they engage in these new activities.

Q12 Are there any other arrangements in relation to data protection that the CRU should consider to ensure the appropriate consumer protections are upheld?

The development of a data access code and its associated Code of Practice should provide clarity on the treatment of data in the retail market. CRU should consider clearly identifying the extent of CRU's powers and its roles and responsibilities regarding data protection. ESB Networks would expect energy communities and active consumers to have the same obligations and data protection requirements as a user which is not an energy community. There will need to be appropriate data arrangements in place within the energy community itself to access and process the customer data of its own members. ESB Networks highlight that the meter of record is important (i.e. the ESB Networks meter) and current data protection rules will apply for all consumers.

Q13 Do you see any further challenges associated with data access that should be considered for market actors engaged in new energy activities?

Data access and availability of information will be critical to our ability to support active energy activities. As such, it is essential that informed, respectful and customer value driven decisions are taken, while aiming to support the availability of data needed to support new activities on the system. ESB Networks suggest that there may be a need or a role for awareness and education campaigns so that customers are better able to make decisions about what information they are or are not happy to share. This could be included as part of Proposal 3 in that there may be a role for licensing

and / or trusted entity status, so that the right balance between regulation/customer protection, and ability to innovate is struck.

Q14 Do you have a view on how physical energy sharing or trading would work? If so, can you provide an example?

ESB Networks are also looking for stakeholder input on these questions as we enter the high-level design phase of the Active System Management project and would welcome stakeholder feedback on this. ESB Networks are working hard to design arrangements and put the associated systems and platforms in place, which maximise customers' and communities' ability to participate effectively in the energy system (i.e. accounting for physical and technological elements).

Whereas there is broad scope for energy sharing and trading at a community level to contribute to secure and efficient operations, this lies primarily in power markets (for example local system services markets). In retail market operations, however, it would be complex to measure physical energy sharing, and could create complex interactions between active consumers, energy communities and their Suppliers, for example the risk of any mismatch in 'double coincidence' of simultaneous sale and purchase offerings being passed on to other market participants.

ESB Networks' measure import and export on the meter of record at the network connection point. However, it is important to note that the meter of record only records volumes imported or exported to the distribution grid, it doesn't record units generated by a microgeneration unit. Hence additional meters (smart or MV90) would be required at microgen units to support customers to trade all energy generated if there were an objective to do so - not just the component that is exported to the grid.

Q15 In addition to the concepts of VPPs and peer-to-peer trading platforms, are there any other forms of virtual energy sharing or trading which you think customers would benefit from participating in?

ESB Networks is also looking for stakeholder input on these questions in the high-level design phase of the Active System Management project and would welcome stakeholder feedback on this. ESB Networks is working to develop proposed design arrangements and put the associated systems and platforms in place, which maximise customers' and communities' ability to participate effectively in the energy system (i.e. accounting for physical and technological elements).

ESB Networks measures import and export on the meter of record at the network connection point. MRSO is the meter data provider and do not settle the market. MRSO may have to expand its remit in establishing relationships between Consumer, Energy Communities, Aggregators, and Suppliers. MRSO may have to be responsible for the registration process for REC/CEC/EC relationships. Any expansion of MRSO service will need to be considered and worked through with CRU in more detail before being executed. Would smart meters be a pre-requisite for this work effectively? The national Smart meter implementation program is due to be complete by end of 2024. As mentioned previously, Smart meters only record volumes imported or exported to the distribution grid, they don't record units generated by a microgeneration unit.

ESB Networks has done lots of exploratory work in the area of energy communities, particularly in our Dingle project. We looked for but were unable to find a suitable partner to carry out a peer-to-peer trial in Dingle, so as to better understand how this would work in the market¹. This is an area that we would welcome further engagement on with CRU and stakeholders. ESB Networks endeavoured to understand the reasons for the low level of response to the request for expressions of interest to partner with it on the proposed trial. A number of common themes emerged across the suppliers that it spoke to, including uncertainty over how the Clean Energy Package would be implemented in Ireland, relevance to suppliers of the peer-to-peer model proposed for the trial and concerns over the digital platform to be used to support the trial. Despite not finding a suitable partner for the trial, ESB Networks does envisage that peer-to-peer energy services and trading, involving active consumers and energy communities on the distribution system, will be a feature in the future after the CEP-enabling market rules have been implemented in Ireland.

¹ https://www.esbnetworks.ie/docs/default-source/publications/the-dingle-electrification-project---sharing-learnings-from-the-peer-to-peer-energy-trading-objective.pdf?sfvrsn=f47601f0_0

Proposal Six: The CRU will develop a webpage on its website dedicated to informing active consumers and energy communities about getting involved in the energy sector. It will contain examples of electricity activities they can engage in, details on how to start their project, how to navigate the regulatory process in a simple manner, and what other entities may need to be involved to get their project fully realised (i.e. suppliers, network operators and if applicable, the SEAI).

Q16 Do you agree with this proposal?

ESB Networks welcomes any communications from CRU that provides clarity and direction for customers. The website should be informative and as user friendly as possible for active consumers to learn all they need to know and clear so that consumers understand exactly what they are participating in. We suggest that the website include instructions and links to all the necessary third parties that energy communities need to register with.

Q17 What information would need to be included on this webpage to fully inform active consumers of their rights, entitlements, and obligations?

This will depend on the approach to be applied, but at the very least should include technical requirements and direction to entities who active consumers need to engage with. Customers rights should not be any less than what they are currently entitled to in the existing market.

Q18 What other forms of engagement would be effective routes to inform consumers of their new rights under the CEP?

ESB Networks would welcome the opportunity to actively support the CRU's efforts in this regard and we believe that there is a role for the DSO in assisting the CRU. This will depend on the strategy selected by CRU, as to whether this will be passive or active. There are many forms of engagement that CRU can undertake to inform active consumers of their right, entitlements and obligations, and raise customers awareness including but not limited to:

- Host Webinars on the topic
- Radio Interviews
- Print media editorials

- Short Video Blogs

Q19 Describe the existing barriers to community energy and any measures you think might be helpful in addressing those barriers?

The paths to entry to community energy should be clear, transparent and not too onerous on consumers. The registration process should be straight forward, and consumers rights should be clearly defined. Some perceived barriers that currently exist to community energy include:

- Access and awareness
- Clear technical requirements
- Appropriate market design
- Initial set-up and running costs

Changes to Retail Market Service Systems and processes will be necessary and will result in a substantial increase in commercial relationships to register and coordinated. Existing processes and systems (designed for large Suppliers) may require re-design to ensure proportionate entry criteria. Please note however, that any changes to the retail market design and systems would have to be impact assessed and sufficient time would also have to be allowed to allow engagement with the Market Participants, scoping of market changes and implementation of same.

In the Active System Management programme, ESB Networks is currently working with stakeholders to address these issues. ESB Networks have found that open engagement and collaboration between different entities is helpful in addressing the challenges (for example, collaboration between SEAI and the system operators).

Q20 What are the potential benefits for the development of renewable energy communities and what would you suggest as the priorities to facilitate their development?

ESB Networks acknowledges the importance in supporting the pace and security with which we achieve our 2030 renewable targets to help the move towards decarbonisation in a manner which creates ownership, engagement and empowerment. Priority should be given to addressing the perceived barriers listed in Q19.

ESB Networks have recently published a Guide to Connecting Community Led Renewable Projects and have appointed a community energy liaison panel to help with support with project queries

regarding obtaining a grid connection. ESB Networks also have a new section on our website relating to how we are supporting community-led renewable energy projects. There is a simpler grid connection process for community energy projects whereby they pay an application fee deposit of €2,000 and in return receive a grid connection assessment which will include the connection method and costs. This will enable the community project to proceed and obtain planning permission without having to commit to the full application fee. If successful in receiving planning permission, the community project then pays the balance of the application fee and will receive their full grid connection offer agreement.

5. Further Observations

- ESB Networks strongly supports and is fully committed to the implementation of the requirements outlined in the Clean Energy Package and to delivering Ireland’s energy targets. While supporting consumers in actively participating in the decarbonisation of the energy market, as intended by the Clean Energy Package, ESB Networks believes that it is important to note that other users should not be disproportionately impacted or have to subsidise an active consumer or energy community and in particular that any rules are mindful of vulnerable customers.
- ESB Networks has actively participated in a number of international sessions with Eurelectric where the topic of energy communities and active consumers has been discussed in detail. We have engaged in information sharing with other European system operators in his area, and recently hosted a workshop for members and regulators to facilitate better understanding on the topic of energy communities. We will bring our learnings from this involvement to help develop any suitable frameworks and solutions to facilitate energy communities and active consumers participate in the market.
- ESB Networks has already collaborated with a range of stakeholders and partners on a number of Innovation projects (e.g. REACT, RESERVE, +City Xchange, StoreNet, Dingle Project) to understand the benefits and challenges that increased penetration of active consumers and energy communities will bring, so that we can ensure the future design of the distribution network can enable the future active energy citizens:
 - Our Dingle project is a prime example of this where we are collaborating with customers on an innovation project to implement and support active consumers to trial an energy community. The network and smart technologies are in place with support from the DSO and active consumers in the community, and any learnings will be shared with third parties (e.g. suppliers, aggregators, etc) to encourage them to get involved in the initiative, as it is an ideal test bed to trial all new concepts and products. The Dingle Project will draw to a close at the end of 2021 and the intention is to transition ownership of any “behind the meter” technologies to the trial participants, so the opportunities may exist for third parties to engage with the citizens in Dingle to carry out their own trials

with the community in future. ESB Networks made significant efforts to implement a trial of peer-to-peer energy trading as part of its Dingle Project².

- ESB Networks are actively engaged in supporting and facilitating the StoreNet project, co-ordinated by the International Energy Research Centre (IERC), where twenty homes in Dingle, Co. Kerry, have been selected to test the potential of energy storage to compliment the use of various domestic-scale renewable electricity sources and smart connection to the Irish electricity grid. The purpose is to assess how residents who generate electricity from renewable resources on their premises can store any excess energy in a battery for subsequent use, particularly during peak times. As network and system benefits are identified, we will seek to ensure that such benefits are realised where appropriate. The project is due to end shortly and we will publish any subsequent findings.
- ESB Networks engaged in the EU H2020 funded RESERVE project with 10 other consortium partners to develop solutions capable of enabling 100% renewable generation on electricity networks³. As the sole Distribution System Operator (DSO) in the consortium ESB Networks focused on voltage control techniques which utilise inverter-based technologies to provide voltage support to the distribution network. ESB Network's expectation was to gain a better understanding of the challenges associated with the mass deployment of Distributed Energy Resources (DERs), their integration into a single control and monitoring platform, the integration of additional LV network monitoring devices and the realisation of network services by such a deployment. All project documentation published by the project is publicly available on the re-serve.eu
- ESB Networks is currently rolling out the national smart meter installation project, due for completion in December 2024. ESB Networks owns the meter of record (regardless of the number of meters at a site) and this is the sole provider of data to the Retail Market. The DSO should be notified of any data sharing agreements regarding metered data. Smart meters are a key source of data required to enable energy communities and a number of objectives of the clean energy package. A clear legal basis will be required to collect and process all necessary

² https://www.esbnetworks.ie/docs/default-source/publications/the-dingle-electrification-project---sharing-learnings-from-the-peer-to-peer-energy-trading-objective.pdf?sfvrsn=f47601f0_0

³ https://www.esbnetworks.ie/docs/default-source/publications/epr---reserve-1-0-close-down-report.pdf?sfvrsn=c06006f0_0

personal data from smart meters to support these objectives and remain compliant with regulatory and statutory obligations.

- Articles 17 and 32 of the Internal Market Directive say that the DSO work with industry and with the TSO to ensure that appropriate technical requirements and operational processes are put in place to facilitate energy communities and active consumers. ESB Networks has been engaging with the TSO and with industry in this regard, in preparation for establishing a consistent framework for consultation on these matters, through the Active System Management project. ESB Networks anticipates that the changes required will be significant and will fundamentally alter the way that consumers interact with the electricity system and the energy markets. Given the extent of the changes required in the energy market, ESB Networks emphasises that sufficient time should be allowed for implementation following the conclusion of all policy decisions relating to active consumers and energy communities.

6. Conclusion

Ireland is at an important stage in the move towards energy decarbonisation. ESB Networks welcomes the opportunity to comment on this consultation on “energy communities and active consumers”. We believe that energy communities and active consumers will play a central and critical role in Ireland’s future energy system.

ESB Networks is committed to actively managing the distribution system to support all Irish homes, communities and businesses in their choices and activities at this time of fundamental change in energy transformation. We are putting solutions in place to progress the enabling of active consumers and energy communities on the distribution system. As part of this there is ongoing and extensive stakeholder engagement, which will ensure that the DSO solutions are fit for purpose and best reflect the needs of energy communities and active consumers. Advanced engagement between industry and wider public on the range of likely energy activities is required to ensure that practical solutions are implemented. We recommend that design of all activities are considered holistically prior to any implementation plan being agreed. This will avoid re-work as a result of any design conflict between various activities.

ESB Networks has been proactively involved in a number of innovation projects and European system operator organisations to better understand the requirements, benefits and complexities that an increased penetration of energy communities will mean to the network and market. We will continue to collaborate with project partners on these initiatives and share learnings with industry and policy makers as these various workstreams progress.

We have outlined in this response the basis for our observations and conclusions and we are happy to expand on any element of same as required. ESB Networks remains available to discuss the comments provided in this consultation response and looks forward to engaging with the CRU and other industry stakeholders in the design of a framework for energy communities and active consumers to ensure that all customers can participate in energy markets and the objectives of the Clean Energy Package can be fully realised.