



NETWORKS



ESB NETWORKS RESPONSE TO CALL FOR EVIDENCE

Response to CRU's Electricity Network Tariff
Structure Review Objectives, Principles & Call for
Evidence (CRU/21/123)

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Executive Summary

ESB Networks welcomes the opportunity to respond to the Commission for Regulation of Utilities' (CRU) consultation paper on “*Electricity Network Tariff Structure Review Objectives, Principles & Call for Evidence.*”

The existing network tariff structure has been in place for circa twenty years and has worked well. It is understood by customers and has generally been perceived as a fair and appropriate basis for ESB Networks to recover the approved revenue needed to develop, operate and maintain the electricity distribution network.

ESB Networks is cognisant that the energy transition, coupled with the development of new technologies will significantly change the way in which customers interact with the electricity networks and therefore fully supports the CRU's proposed review of tariffs and considers it timely to carry out such a review.

Overall, ESB Networks agrees with the high-level approach outlined in the CRU's document and is supportive of the use of a set of assessment criteria to appropriately evaluate the different objectives of the tariff review. In ESB Network's view, any changes to the tariff structure should be fair, and protective of vulnerable customers and customers facing energy poverty. The current tariff structure is weighted towards volumetric usage and in the future, it is possible that certain customer groups, for example those without microgeneration, could potentially be penalised if the current tariff structures remain unchanged. ESB Networks supports the view that customers should pay their fair share for access to the grid and notes that the accompanying international review highlights that an increasing number of jurisdictions are moving towards increased fixed charging which helps mitigate against this issue. The current tariff structure has been robust and reliable for customers, however due to the transformative changes forecast in both the wider electricity sector and at the distribution network, ESB Networks believes that it is an appropriate juncture to review the current tariffing structure. We believe that increasing fixed charges will be an important consideration for this review.

At the same time, it is important for the review to consider whether it is possible to evolve the tariff structure to support and incentivise positive changes in consumer behaviour, that are aligned with the energy transition, and that can improve efficient investment in, and operation of, the network. In this regard, ESB Networks is mindful that network charges are one of several components of a customer's electricity bill and a balanced view may be needed regarding drivers of consumer behaviour. The

principle of simplicity may also be a key consideration to ensure that any changes to the distribution tariff are well understood by market participants and that any benefits of the network tariff structure are realised as quickly as possible. Complex changes to the tariff structure may be time-consuming to implement across both network operator and supplier systems.

ESB Networks agrees that stakeholder engagement is central to the review process and considers that a high level of stakeholder engagement is essential to ensure that any changes to the tariff structure are fully understood by stakeholders. ESB Networks also feels that stakeholders such as vulnerable customers and customers facing energy poverty should be adequately represented and included in any stakeholder engagement process.

Finally, ESB Networks is conscious that the next few years represent a critical time for the sector, and the wider economy in terms of the energy transition. ESB Networks has a vital role to play in supporting CRU with the tariff review process, including providing any meaningful learnings from engagement ESB Networks has with Distribution System Operators in other jurisdictions and industry bodies such as EurElectric relating to distribution tariff reviews.

1 Introduction

ESB Networks welcomes the opportunity to respond to the CRU consultation paper on ‘*Electricity Network Tariff Structure Review Objectives, Principles & Call for Evidence*’.

ESB Networks agrees that it is timely to review the Use of System charges. The existing tariff methodology has been in place for circa twenty years and has provided a robust and stable tariff for customers. Our customers’ needs and use of the network are changing as we move to a low carbon society. It is important that customers continue to have a stable and predictable tariff into the future. ESB Networks is committed to assisting the CRU in developing use of systems charges that are fair and equitable for our 2.4 million customers.

ESB Networks fully supports the policies put in place to underpin the decarbonisation of the Irish economy, including meeting Ireland’s 2030 climate targets as set out in the Climate Action Plan (CAP) 2021. We note the important and growing role that electricity will have in helping Ireland achieve these goals and look forward to engagement with both the CRU and stakeholders regarding the appropriate network tariff structure to support these changes.

ESB Networks appreciates the opportunity to respond to the Call for Evidence consultation and remains available to respond further regarding any elements of our response at any time.

1.1 Role of ESB Networks

ESB Networks works to meet the needs of all Irish electricity customers, providing universal 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 and 640 high voltage substations.

We also have a key role in the connection of generation to our systems. Currently there is approximately 4.75 GW of renewable generation connected to the distribution and transmission systems, from small scale microgeneration and mini-generation, through to substantial amounts of distributed and transmission-connected renewable generation. We have 2.4 million demand customers and already have several thousand “active customers” – including but not limited to domestic premises with microgeneration (a rapidly increasing number), demand side management and houses with battery storage. ESB Networks is also a key stakeholder in the delivery of the National Smart Metering

Programme (NSMP) and to date, has installed over 500,000 smart meters in homes and small business throughout Ireland.

ESB Networks also delivers a range of services to the Republic of Ireland (RoI) Retail Electricity Market servicing over 2.4 million customers. It manages relationships with Market Participants and provides data in a timely and accurate fashion on a daily basis. It 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.

1.2 ESB Networks Tariff Structure

The decarbonisation of energy over the coming decades, will rely on the hundreds of thousands, and then millions, of individual decisions that Irish households, communities and businesses make about how they use energy, specifically electricity, for their heat and transport. The electricity system can be an enabler of these decisions. As such, ESB Networks welcomes the opportunity for the people and organisations who use the electricity system to contribute to the discussion regarding the way in which customers pay for an electricity system which can support a low carbon future.

The CRU determines how ESB Networks recovers the costs needed to develop, operate and maintain the electricity distribution network. This is done through a multi-annual review (or ‘Price Review’), covering a 5-year period. Currently we are in Price Review 5 (PR5)¹, covering the period 2021 – 2025. A notable difference in PR5 compared with previous price reviews is the fundamentally different scope and scale of investment in operational systems and digital capabilities. These transformative investments will ensure that ESB Networks has the capabilities needed over the coming decade to securely and efficiently manage the distribution system, for the benefit of all our customers and to enable a decarbonised society, powered by clean renewable electricity.

These investments will be critical to support the target of up to 80% renewable generation on the electricity network by 2030². They will allow ESB Networks, working closely with the Transmission System Operator (TSO), build the different capabilities and systems required to support behaviours of demand, generation, storage, active customers and communities.

¹ [Price Review 5 Distribution Network Allowed Revenues 2021 - 2025 \(CRU21053\)](#)

² [gov.ie](http://www.gov.ie) - Climate Action Plan 2021 (www.gov.ie)

Network investment is a critical component in the delivery of a safe and secure electricity system, and it is imperative that ESB Networks can earn a rate of return that supports its ability to retain uninterrupted access to debt capital markets at competitive rates.

The current tariff methodology has been in place for circa twenty years. It has been stable and robust and has successfully delivered the investments needed to support the development of the distribution network over that time. ESB Networks agrees that given the expected increase in distributed generation and the changing role of customers, it is timely to consider whether the share of total network costs that each network user pays, is appropriate for their use of the network. ESB Networks supports the CRU principles proposed for the review, with the goal of ensuring that the share each network user pays is reflective of the shared costs in the ongoing operation, maintenance and development of the electricity system.

2 Call for Evidence Questions

ESB Networks welcomes the opportunity to respond to the twenty-four questions posed by the CRU in the Call for Evidence document. The questions have been grouped by the CRU into the following areas: Stakeholder Engagement, Objectives, Proposed Principles, Scope of the Review, Future Development of the Electricity Networks and their Implications for Tariff Structures, the Current Network Tariffs, Tariff Considerations, International Review and the Interaction with other Policies. ESB Networks response to the questions in the Call for Evidence are set out below.

2.1 Stakeholder Engagement

1. How should the CRU engage with stakeholders over the course of the Electricity Network Tariff Review?

We believe that stakeholder engagement is key to the tariff review process. Stakeholder engagement is an important component of developing a just transition to a low-carbon society, where the needs and impacts on customer groups such as vulnerable customers or customers facing energy poverty³ are understood. Broad stakeholder engagement will ensure that all potential issues are identified and discussed, and this will contribute to a robust analysis which will support the tariff review process. From the proposed review approach published in the Call for Evidence, it outlines that there will be additional papers published throughout the review period and that further information will be available on this matter in Q2/Q3 2022. ESB Networks believes that published material such as updates and consultation papers will provide stakeholders with valuable information on the key areas of investigation and potential findings of the review. ESB Networks has delivered a range of webinars for a number of initiatives including but not limited to the ESB Networks Innovation Forum and the National Network Local Connections (NNLC⁴) programme, and has found webinars to be a useful method of engagement with stakeholders. The feedback from stakeholders on the webinars has also been very positive, with stakeholders finding them a helpful form of engagement⁵.

In the event of establishing a proposed Electricity Network Tariff Structure Review stakeholder group, ESB Networks believes that any potential group should consist of a balanced representation of key

³ Energy poverty was defined “as an inability to heat or power a home to an adequate degree” in the governmental *Strategy to Combat Energy Poverty Report* gov.ie - *Strategy to Combat Energy Poverty* (www.gov.ie)

⁴ *National Network, Local Connections Programme* (esbnetworks.ie)

⁵ *innovating-to-transform-the-electricity-network.pdf* (esbnetworks.ie) (Page 28)

stakeholders who can constructively contribute to the review. ESB Networks would be supportive of the establishment of a tariff review group.

ESB Networks plays a vital role in the electricity sector, connecting over 2.4 million homes, farms, communities, and businesses around the country, and have a very broad range of stakeholders. We define our stakeholders as follows; individuals, groups of individuals, communities or organisations that affect, or could be affected by, our activities, products or services and associated performance (please refer to Figure 1 below). The CRU might find this customer and stakeholder information of interest when considering possible methods of stakeholder engagement over the course of the review.



Figure 1 ESB Networks Stakeholders

2. If a dedicated Electricity Network Tariff Review stakeholder group is established, would you be interested in participating? If such a group was over-subscribed, how should the CRU limit the number of members?

ESB Networks has a central role in the network tariff review process and given our role, we believe we are a key participant in any stakeholder group that might be formed. As the Distribution System Operator (DSO) with responsibility for the management of distribution network tariffs, ESB Networks will give due consideration to the views of other stakeholders and provide constructive input and guidance throughout the process.

2.2 Objectives

3. Do you agree with the objectives of the Electricity Network Tariff Structure Review? Please state your reasoning.

ESB Networks agrees with the objectives of the Tariff Structure Review. Ensuring tariffs remain fit-for-purpose is important for the delivery of an efficient, safe and secure network for the long-term benefit of customers. Moreover, tariffs need to be robust and adaptable to the low carbon future as Ireland's energy sector and economy transition to a decarbonised society. Tariffs should also be relatively stable and provide customers with a reasonable degree of certainty.

4. Should the CRU include any other objectives? If so, please explain your reasoning.

ESB Networks does not consider that any additional objectives should be added.

2.3 Proposed Principles

5. Do you agree with the proposed principles of the Electricity Network Tariff Structure Review? Are they clearly defined?

ESB Networks agrees with the proposed principles set out in the Call for Evidence. ESB Networks notes that the CRU has acknowledged that there will inevitably be some trade-offs between principles in the assessment of different tariff options. It will be important for the CRU to carefully consider the different principles when arriving at a final view as to the appropriate tariff structure and level. In this regard, we consider that ensuring cost recovery should receive particular weight, given the importance of ensuring that the DSO is able to continue to operate and invest in the network to meet the needs of all electricity customers. We suggest a slight amendment to the cost recovery principle; the principle of cost recovery should aim to ensure that network system operators can recover efficiently incurred costs in a cost reflective manner.

ESB Networks believes that given the investment that both users and network operators will need to make to transition to a low carbon future, tariff stability is particularly important as it contributes to the predictability required by all investors to make decisions. Simplicity and transparency will also play a key role in ensuring that any changes to the distribution tariff structure are well understood by market participants. A complex tariff structure may be confusing and thus less likely to achieve the desired results.

6. In your view, should any further principles be added, or any existing proposed principles be removed? Please explain your reasoning.

ESB Networks notes that the principle of fairness may be worth considering. Ofgem are currently undertaking a review of network charges in the UK and have included fairness as one of three core principles, with the following high-level definition, “as it applies to, and between, end-consumers”⁶. ESB Networks considers that fairness includes equitable treatment between customer groups, consideration of the impact on future as well as current customers, and protecting vulnerable customers.

The Advisor Report on International Review of Tariff Structures which accompanied the Call for Evidence, highlighted the trade-offs in fairness and efficiency in other regimes. We therefore think it makes sense to explicitly include fairness as one of the core principles for the Irish review.

2.4 Scope of Review

7. Do you agree with the areas that are identified as in-scope and out-of-scope for the review? Please state your reasoning.

ESB Networks agrees with the scope of the review as set out in the Call for Evidence;

- the electricity Distribution Use-of-System (DUoS) tariff structure
- the electricity Demand Transmission Use-of-System (D-TUoS) tariff structure

To ensure a cohesive approach, it is appropriate to consider distribution and transmission and network charges in tandem.

ESB Networks strongly supports CRU’s proposition that connection charging is outside the scope of this review due to the significantly enlarged scope that would entail as a consequence. It is accepted that connection charges and Use of System charges are interlinked. However, the network tariff review already has a very wide scope and focusing the discussion on Use of System charges will allow for detailed consideration of the different tariff methodologies.

⁶ [TCR Launch Paper \(ofgem.gov.uk\)](http://www.ofgem.gov.uk)

ESB Networks acknowledges that the quantum of allowed revenue to be recovered by the DSO is also out of scope and agrees that the focus of this review is the means by which the allowed revenue is apportioned to different customers.

ESB Networks considers that arrangements for the procurement flexibility and demand side response should also be outside of the scope of the tariff review. ESB Networks has recently launched a far reaching and ambitious programme, NNLC, to ensure that the benefits and cost savings of flexibility are delivered to the benefit of all customers. Our analysis to date strongly indicates that the most efficient and effective means of incentivising flexibility will be through short-to-medium-term location specific and time-varying time specific price signals. However, it is important that static and universal information included in DUoS tariffs does not conflict with the location specific and time specific information provided in flexibility pricing. We believe that a simple and well-designed tariff which is more aligned with fixed capacity-based charging structures might offer a complementary signal to specific flexibility incentives outside the tariff.

8. Acknowledging that resources are finite, are there any other areas that should be included in, or excluded from, the in-scope and out-of-scope areas for the review? If so, please explain your reasoning.

We consider that the most relevant areas have been included in Section 4.

2.5 Future Developments of the Electricity Networks and their Implications for Tariff Structures

9. How do you see the use of the electricity networks in Ireland changing and developing in the future?

The power sector is undergoing transformative change with the growth of low carbon technology and changing consumer preferences. European policy, such as the Clean Energy Package (CEP) and the proposed Fit for 55 Package, is driving change in consumer behaviour and supporting the decarbonisation of the European power sector. The Irish government recently published the revised CAP which sets ambitious targets to facilitate and enable the transformation to a low carbon future. This ambition includes the goal of reaching up to 80% of electricity generated from renewable sources by 2030. Renewable energy of all sizes, from large-scale to small-scale renewable generation,

community energy renewable energy projects, and microgeneration, will all play a part in contributing to Ireland's decarbonisation goals.

ESB Networks is considering the impact on the distribution network of the initiatives in the revised CAP which includes the following targets;

- 945,000 electric vehicles (EVs) (passenger cars, vans, trucks, buses)
- 600,000 heat pumps
- c.10 GW of wind and solar farms (in addition to nearly 5 GW already connected)
- up to 80% of electricity to come from renewable energy sources

Achievement of the revised CAP will mean that all of us, in our homes and businesses, will use more electricity and will use it very differently over the coming decade. How and when we use electricity will change with the growth in renewable generation, adoption of EVs and microgeneration. How customers will respond to signals is not yet well-defined. Uptake will be driven by a number of factors, including regulatory and policy developments and possible governmental supports such as the recently published Microgeneration Support Scheme. Customer interaction with flexibility services also has the potential to impact the use of electricity in the coming decade. This is an area still in the early stages of development, particularly for households, however, it could have an impact on the location and timing of electricity consumption.

The investments needed to reach the revised CAP targets are reasonably well understood. However, it is less clear what path decarbonisation will take after 2030 and therefore what network investment will be required. Adoption of low carbon technologies depends on several external factors such as the cost of raw materials, cost of capital, EU legislation, government policy etc. Some or all of these factors could contribute to a slower or faster rate of decarbonisation.

Through the NNLC Programme, ESB Networks is leading Ireland's journey to a low carbon future by transforming our electricity network to help Ireland deliver on its climate change goals, with more renewable energy generated, stored, and consumed within our local communities. The NNLC Programme has initiated eleven consultations on topics such as Power System Requirements and an Operational Roadmap⁷. Much of the analysis is based on changes to consumer behaviour, however,

⁷ [NNLC Programme Consultations \(ESB Networksetworks.ie\)](https://www.esb.ie/nnlc)

this remains a significant uncertainty. ESB Networks will continue to prepare for a distributed electricity network with forecasted increased electrification and non-synchronous renewable generation, however achievement of the net zero target will depend on sufficient uptake and engagement from all types of consumers.

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 get a better understanding of what the distribution network of the future may look like:

- Our Dingle project is a prime example of this where we are collaborating with customers on an innovation project to better understand some of the challenges associated with flexibility provision by residential customers and to understand the blockers and enablers of electricity consumers transitioning to active energy citizens.
- 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 network. ESB Networks 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 website re-serve.eu.

10. In your view, are there any drivers of change in the future use of the electricity networks that the CRU hasn't covered in this paper? If so, please identify them and explain your answer.

The Call for Evidence is comprehensive and captures the most significant drivers of change regarding the future use of the electricity networks.

ESB Networks would again like to note that throughout this review process, assumptions will be made regarding future consumer behaviour, and it may be preferable that the approved network tariff methodology should suit a range of consumer behaviour scenarios.

11. How do you think the roles of different parties/stakeholders across the networks will change in the coming years?

ESB Networks agrees with the CRU's view of the evolving role of network operators in the future. The role of network operators is expected to change significantly. These changes are needed to facilitate increased interaction with the electricity network by all customers, whilst ensuring the reliable, secure and safe operation of the distribution system which remains a key priority for ESB Networks into the future.

In 2018 and 2019, the EU adopted the CEP which seeks to facilitate a transition in the EU towards cleaner energy. Key activities within the CEP will drive future changes for ESB Networks including the consideration of:

- Active energy citizens
- Energy communities
- Flexible alternatives to capital reinforcements
- Smart meter rollout requirement

The distribution network will play a key role in the decarbonisation of Irish society, mainly due to the electrification of heat and transport, and citizen participation in renewable energy, for example microgeneration and energy communities. Over the coming years, technologies will change as will the energy needs of Irish homes, farms, businesses and communities. Customers will have the opportunity to interact with the network through flexibility and demand response services. ESB Networks seeks to facilitate and enhance its customers changing requirements and needs.

During this period of rapid change which is expected to increase in pace over the course of the PR5 price review period, ESB Networks will transform the role of DSO in Ireland – through increased visibility of the Low Voltage (LV) network, the full rollout of the smart metering programme, the forecasted connection of circa 2,200MW of renewable generation and the introduction of flexibility services to manage security and capacity on the distribution system.

As part of this, the ESB Networks Dingle Project, is among other things, assessing the impact that low carbon/clean energy-enabling technologies behind-the-meter in customers' homes will have on the local electricity network. The Flexibility Trials, scheduled to complete by end-January 2022 are assessing

whether devices such as EV chargers, V2G (Vehicle to Grid) bi-directional chargers, residential-scale batteries and air-source-heat pumps can be controlled to minimise any negative impact on the network and potentially offer positive flexibility support to the distribution system operator.

12. How could changes to the electricity network tariff structures facilitate and/or encourage a whole system approach to network investment, network management and system operation? Please explain your answer.

In general, electricity network tariffs have the potential to signal to users when/how to make better use of the electricity distribution network, which could lead to more optimal network investment, management and system operation. However, their ability to influence consumer behaviour is limited as network tariffs (both distribution and transmission) are only one component of a customer's bill, currently representing approximately 30% of an average domestic customer's bill.

Although a whole system approach is preferable, some system issues may best be resolved through other charging structures such as connection charges and payments for flexibility. The network tariff structure is one of several charging structures that together contribute to a whole system approach to network investment, management and system operation.

Overall network tariff structures should be reflective of costs and should not undermine the recovery of network costs.

13. How do you foresee the increasing uptake of behind-the-meter generation for the purpose of self-consumption changing the load profile of electricity consumers, particularly domestic electricity consumers, in the future?

Behind-the-meter generation, such as rooftop solar microgeneration, has the potential to play a key role in the decarbonisation of the electricity sector, and will impact the overall level of demand and the shape of the daily demand curve. Under the current tariffing structure, which is highly dependent on volumetric charging, behind-the-meter generation has the potential to transfer additional cost recovery onto customers that do not or cannot afford to install this type of technology. For this reason, ESB Networks believes that the impact of behind-the-meter generation on different types of customers should be considered over the course of the tariff review – for example a typical domestic customer with behind

the meter generation in comparison to a typical domestic customer with no behind-the-meter generation. The review should take a balanced view of behind-the-meter self-consumption and the associated impact on network tariffs.

Many factors will affect the timing and scale of the uptake of behind-the-meter generation including Irish Building Regulations, the cost of low carbon technologies and available government supports such as the recently announced Clean Energy Guarantee (CEG) and Clean Export Premium. CRU's recent publication regarding an interim CEG solution for remuneration of exported electricity for renewable self-consumers⁸ provides clarity to customers with behind-the-meter generation. Consumer engagement will also be key in driving changes to the load profile of electricity demand.

14. What are your views on the impacts of future changes identified in this Section and their implications for electricity network tariffs?

ESB Networks broadly agrees with the CRU's assessment of future changes and their impact on electricity networks. Overall, the objective of the tariff review is to ensure that the network tariff structure is appropriate given the significant changes in network usage that are likely to arise as part of the energy transition over the coming years. ESB Networks considers the following future changes as key to the discussion regarding the network tariff review;

1. Decarbonisation: Increase in total demand and increasing electrification

On the electricity distribution system, increased demand will be driven by a number of areas such as, the increased uptake of EVs and heat pumps in households as well as the development of large energy users. To accommodate this growth significant further investment in network capacity will be required. In particular, it is likely that peak demand could increase due to the electrification of heat and transport. It will be important to therefore ensure that tariffs incentivise, as far as possible, efficient use of the network and are recovered in a way that fairly reflects the costs imposed on the network by different user groups. At the same time, it will be important to ensure that tariffs are not set at a level or in a structure that undermines the energy transition and the ambitious targets set out in CAP 2021.

⁸ [Remuneration of Renewables Self-consumers for exported electricity - Commission for Regulation of Utilities \(cru.ie\)](https://www.cru.ie/en/reports-and-publications/publications/2022/04/remuneration-of-renewables-self-consumers-for-exported-electricity/)

2. Decentralisation: Increase in distributed generation and changes in demand profiles

New technologies will further change the profile of demand. As we move forward, many more customers will generate and store their own electricity. Customers can export their electricity back to the grid and an increase in active energy citizens may see a consequential increase in the electricity exported to the grid. These changes in customer interactions with the grid will affect the nature and direction of energy flows. Again, this gives rise to important considerations for how the network must evolve to support these developments.

3. Digitalisation: Increase in the availability of data to drive decision making

Over the coming years, consumers will have access to more data than ever before. Real time data will support consumers decisions about when and how they use electricity. Businesses are already developing apps and smart devices to respond to real-time price information. This has the potential to have a noticeable effect on the distribution system. For instance, if many customers choose to take the same action at the same time, this could lead to a surge in electricity demand. The review should take into consideration the role of digitisation in supporting changes in consumer behaviour.

15. Do you think that there are implications or issues that need to be addressed for electricity network tariffs that we have not mentioned in this paper? If so, please explain what these implications are and why they need to be addressed.

We consider that the most relevant areas have been included in Section 5.

16. How do you think changes to the electricity network tariff structures could help stakeholders avail of opportunities opening up due to future changes to the electricity networks?

The CEP and CAP envisage a world in which consumers are far more actively engaged than they are today. In the future, heating and transport will be electrified to a much greater extent. In the case of transport, this opens up the possibility for EVs to become a significant provider of storage capacity. Consumers are also anticipated to invest in local renewable options in the form of domestic solar and may, as the technology develops, also invest in storage options such as domestic batteries.

ESB Networks notes that the extent and pace of change remains uncertain. In this context, ESB Networks considers it essential that the network tariffs facilitate different network uses and ensure that consumers face fair but efficient tariffs for their use of the network. Particular consideration may also be needed regarding any impact on vulnerable customers or customers facing energy poverty.

Given that customers are already making decisions to adopt low carbon technologies, ESB Networks supports the review progressing in a timely manner so that customers can make decisions with clear information on all aspects including tariffs.

2.6 The Current Network Tariffs

17. In your view, how do the current network tariff structures impact different types of network users? Do any network users have particular challenges or issues with the current network tariff structures? Please explain your answer.

Tariffs have been set, with approval of the regulator, on a largely cost reflective basis. The split of tariffs between fixed and variable components was designed to broadly reflect the costs caused by different user groups. As a result, the existing structure has generally worked well. On the whole, distribution tariffs have been stable and predictable for customers and provided ESB Networks with revenue certainty, necessary to underpin its investment in the network. In particular, ESB Networks is mindful to ensure that the current split of variable and fixed charges does not disadvantage vulnerable customers who are unable to invest in technologies that may reduce their total consumption. Looking forward, ESB Networks believes that increasing fixed capacity-based charges will be an important consideration for this review. In addition, the role of Time of Use (ToU) tariffs merits further consideration during the course of this review, given the changing environment in the electricity sector and possible changes in customer behaviour.

ESB Networks is also keen to ensure that the maximum benefit possible from smart meters is realised and recognises that a change to the tariff structure may facilitate the realisation of such benefits.

18. In your view, could the existing electricity network tariff structures hinder the changes that are necessary for the electricity system in the coming years? Please explain your answer.

The current electricity network tariff structure has been in place for circa twenty years. It has been robust and stable and has delivered the investments needed to support the development of the distribution network.

ESB Networks does not believe that the current tariff structure would hinder the forecast changes to the electricity system. Electricity usage is expected to grow mainly due to the electrification of heat and transport and this uptake will be driven by a number of factors. However, ESB Networks notes that the current network tariffs could have a disparate impact on some customers. With this in mind, ESB Networks agrees that it is timely to review the structure of the network tariffs.

For instance, the apportionment of fixed and variable charges is an area that ESB Networks believe could alleviate potential negative impacts on non-adopters versus adopters of low carbon technologies. ToU network tariffs could also play a positive role in supporting the realisation of the benefits of smart meters.

19. In your view, do the price signals within the current electricity network tariffs sufficiently affect behaviour and influence use of the electricity networks? Please explain your answer.

When considering the impact of network tariffs on consumer behaviour, it is important to note that ESB Networks do not levy charges directly on customers, rather network charges form part of the overall electricity bill. Currently, network charges (both distribution and transmission) make up approximately 30% of a domestic retail customer's average annual bill. While the level and structure of retail tariffs will influence demand, electricity network tariffs therefore come into play as only one of several components of the bill. Behaviour across user groups is primarily reflective of each group's underlying demand for electricity.

For most customers, the current network tariffs are comprised of a fixed standing charge and per kWh energy charge(s), where the majority of domestic customers have a single kWh energy charge applied to all time periods and the remainder have a different charge for day and night.

For those customers with different day and night rates, some shift their consumption to the cheaper night period. However not all customers choose to change behaviour, which highlights the importance

of consumer engagement and potentially the use of technology to support changes in consumer behaviour.

Overall, although there are some price signals in the current network tariffs, ESB Networks agrees that it is worth considering as part of this review if other price signals are needed to support the achievement of the CAP 2021 targets and further decarbonisation post 2030.

2.7 Tariff Considerations

20. What are your views on the network tariff components and considerations outlined in this paper?

The CRU's proposed list of methodologies for consideration is comprehensive and we believe the review process should evaluate these thoroughly to ensure any tariff components considered in detail are of benefit to customers. It is important to note that the existing tariff structure works effectively and has resulted in a robust recovery mechanism for circa twenty years. Therefore, the CRU should consider a practical approach to possible changes and the consequential potential impact to customers. Network tariffs which are clear and transparent are more likely to achieve the desired results. Changes to the network tariff structure may necessitate changes to both network operator and supplier systems. If required, this will take time to achieve and ESB Networks considers that it may be appropriate to consider as part of the review, the time it would take to implement each methodology.

21. Are there additional tariff components, structures or options not described above that the CRU should consider? If so, please identify them and provide rationale.

The Call for Evidence provides a good overview of tariff components for the reader.

2.8 International Review

22. Are there lessons or insights highlighted in our Advisors' Paper (CRU/21/123a) that are particularly relevant to this Electricity Network Tariff Structure Review? Please explain your answer.

The differences across jurisdictions make a direct comparison with the Irish framework challenging. However, the International Review offers some valuable insights on electricity tariff models;

- Many tariff structure regimes have either recently been changed or are in the process of being changed. This reflects the transformation of electricity markets in Europe and suggests that the CRU's review is timely.
- There is no one-size-fits-all tariff model. Rather, different trade-offs of principles and specific peculiarities of each network structure result in differences across jurisdictions. Additionally, different trajectories in the adoption of new technologies and systems inevitably shape the current structure of tariffs, whose design in turn affects consumer behaviour.

The topic of apportionment of fixed and variable costs in the network tariff is addressed in most jurisdictions (Great Britain, Italy, Norway, Netherlands, Spain), likely driven by the forecasted network investment needed to support decarbonisation. To the extent that a trend is discernible, there appears to be an increase in the proportion of costs that are recovered through fixed capacity-based charges. It is therefore appropriate that this change is considered for the network tariff review process.

23. Are you aware of any other lessons or insights from these (or other) jurisdictions that may be relevant to this review? Please explain your answer.

The international analysis of tariff reviews completed by Europe Economics, TNEI and Delta-EE appears to be comprehensive. As tariff reform is under way in a number of jurisdictions at the moment, ESB Networks considers that there will be value in monitoring tariff reforms abroad during the review (for instance, we would note that further reforms have been introduced in Spain subsequent to the first reform covered in the existing review). ESB Networks recently contributed to a EurElectric paper on the role of network tariffs to support the cost-effective enhancement of Europe's distribution grids⁹.

⁹ <https://www.eurelectric.org/tariffs/>

ESB Networks also notes that it may be helpful to consider some elements of the International Review in more depth, e.g. where experience from other jurisdictions can help focus reform on changes that would be most effective (e.g. understanding of increasing fixed components of charging, lessons from jurisdictions where time of use tariffs are in place, other).

2.9 Interactions with Other Policies

24. In what ways could changes to the electricity network tariff structures interact with other regulatory policies and arrangements?

It is difficult to answer this question in the abstract. In principle, significant changes to the network tariff structures could impact on multiple different policies and arrangements. Overall, ESB Networks considers that it will be important for CRU to carefully assess the extent to which any potential changes to the tariffs may impact on other elements of the regulatory arrangements. In particular, it will be important to guard against the creation of unintended consequences, which may act to the detriment of customers.

3 Conclusion

ESB Networks fully supports the CRU's proposed review of tariffs and considers it is a timely point to carry out such a review. The existing network tariff structure has been in place for circa twenty years and has worked well. However, it is important to recognise that the world is changing, and that the energy transition, coupled with the development of new technologies is likely to significantly change the way in which customers interact with the electricity networks. The Irish government has set ambitious decarbonisation targets which are clearly laid out in the latest publication of the CAP. ESB Networks seeks to proactively assist and contribute to the decarbonisation of Irish society. ESB Networks is committed to working with CRU in relation to the tariff review process. Overall, ESB Networks agrees with the high-level approach outlined in the CRU's document.

In particular, ESB Networks considers it critical that the review is based on a balanced set of assessment criteria that appropriately weigh the different objectives of tariff reform. ESB Networks also believes that fairness could be added to the principles put forward by the CRU, in support of equitable treatment between customer groups and protecting vulnerable customers. Simplicity and transparency may play a key role in ensuring that any changes to the distribution tariff structure are well understood by market participants.

ESB Networks also considers that high levels of stakeholder engagement are essential to ensure that market participants have the opportunity to share their perspectives regarding how network tariffs can support the transition to a low carbon future. ESB Networks notes from the international review of distribution tariff methodologies that no one size fits all approach has applied however, a common theme appears to be an increase in fixed capacity-based charging. ESB Networks believes that increasing fixed capacity-based charges will be an important consideration for this review.

We appreciate the opportunity to respond to CRU's consultation and remain available to engage further with CRU regarding any elements of our consultation response at any time.