



**Response to CRU Consultation**

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**National Energy Demand Strategy**

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Electricity Association of Ireland

**Status:** Consultation Response

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The Electricity Association of Ireland (EAI) is the representative body for the electricity industry and gas retail sector operating within the Single Electricity Market (SEM) on the island of Ireland.

Our membership comprises utilities that represent 90% of generation and retail business activities and 100% of distribution within the market. Our members range in size from single plant operators and independent suppliers to international power utilities. Our members have a significant presence in Ireland, Northern Ireland, and Great Britain across the sector value chain. We represent the interests of the all-island market in all relevant jurisdictions, including the EU via our membership of the European electricity representative body Eurelectric.

We believe that electricity has a fundamental role in providing energy services in a decarbonised, sustainable future, in particular through the progressive electrification of transport and heating. We believe that this can be achieved, in the overall interest of society, through competitive markets that foster investment and innovation.

We promote this vision through constructive engagement with key policy, regulatory, technology and academic stakeholders both at domestic and EU levels.

Our ambition is to contribute to the realisation of a net-zero GHG emissions economy by 2050 or sooner, in order to limit the impact of rising temperatures. Electricity offers opportunities to decarbonise the Irish economy in a cost-effective manner.

## **Introduction**

The Electricity Association of Ireland (EAI) supports the development of this strategy on Ireland's National Energy Demand Strategy (NEDS) and welcomes the opportunity to respond to this consultation from the CRU. Flexible demand that can react to signals and adjust consumption patterns based on the dual factors of a) shifting away from peak demand and b) adjusting demand with the emissions intensity of the supply within half hour periods, as outlined in the strategy, are vital. Electricity suppliers will have an integral role working with customers to shift consumption to both signals. The effectiveness of this shift will determine the success of this strategy.

## **Response to Questions**

### **1) Do you agree with the overall approach to the NEDS?**

Yes, the approach to the National Energy Demand Strategy (NEDS) is supported by EAI. A demand side strategy that focusses on both demand turn up during times of ample renewable generation as well as demand turn down during times of lower renewable output is welcomed.

### **The EAI support the Guiding Principles outlined in the paper as:**

1. Initiatives should enable the reduction of the carbon intensity of energy consumed, and/or the reduction of peak demand, and should reward customers for participation.
2. Initiatives should reduce the dispatch down of renewable generation at a local and/or system-wide level in Ireland to the overall benefit of customers.
3. Initiatives should support market participation and new connections by alleviating constraints on the network
4. Initiatives should achieve efficient long-term costs for customers associated with upgrading, expanding, and operating the electricity system
5. Initiatives should support security of supply for customers

We suggest that if a measure is directly opposing any of the guiding principles, then it will not be considered.

- On the first principle; EAI agree customers should be incentivised to participate in demand shifting through TOU tariffs or a CEG payment. However, this requirement should not prevent initiatives which may reduce the carbon intensity of energy consumed or reduce peak demand. Measures such as Energy Sharing can reduce peak demand and provide renewable generation; however, customers who choose to share excess energy from microgeneration may not receive payment for the energy shared. We would suggest that the first principle reflect that customer reward for participation is not exclusively financial remuneration. Customers with renewable assets also benefit from reduced imported electricity, lower emissions, the opportunity to participate in energy communities and bolster security of supply.

- The guiding principles do not consider the importance of market participants and the impact that certain measures in NEDS have on the industry. Flexibility markets and procurement of flexibility have currently an unknown impact on existing DS3 participants. Whilst it is outlined in this consultation that the CRU issued a Direction to ESBN to accelerate the number of initiatives under the National Network Local Connection (NNLC) program, these projects, particularly in relation to designing flexibility auctions and procuring 500MW of flexibility need to be developed and integrated with current work programmes.

### **Three Focus Areas**

Smart Services, Demand Flexibility and Response and New Demand Connections are appropriate focus areas to consider in NEDS. However, the focus on explicit flexibility in the short term may not deliver optimal value for the customer and network.

Focusing on deliverables in the very short timeframe to 2025 risks delaying a robust implementation programme of demand response capabilities in the medium to longer-term.

- 2) Do you agree with the sources of demand flexibility identified (storage, transport, domestic, industrial & LEUs (Large Energy Users), commercial)? Are there other sources of flexibility that could contribute to the demand flexibility targets?**

Flexible electrification of heat, which has potential to displace significant amounts of fossil fuel in the heat sector, can manage excess renewable output in the electricity sector and is an important factor in achieving NEDS. We believe this should be explicitly formalised as contributing towards demand flexibility targets.

- 3) Do you agree with the assessment of what cohorts and technologies are in scope for the demand flexibility target?**

EAI welcome the technology neutral approach in the NEDS. A technology neutral approach is crucial to allow the adapting of innovative technologies in sectors that otherwise may prove even more difficult to decarbonise.

Achieving the ambitious target of 20% flexibility by 2025 will not be possible without a wide-reaching and inclusive approach to system flexibility at both the distribution and transmission level.

Regarding point 4 on system services (DS3), it is unclear why this cohort of demand flexibility does not meet the definition set out in the consultation, numerous technologies that operate

under the DS3 programme support renewables and provide demand flexibility in line with the guiding principles.

**4) Do you have additions or modifications to offer on the summary of the key mechanisms through which market participants can provide flexibility?**

EAI believe that assets that can respond to market signals to consume excess renewable power should be treated as “flexible demand” rather than a storage asset.

**5) Are there additional contributions (i.e. other actions or proposals) to the NEDS that should be considered from stakeholders such as Government departments, SOs (System Operators) and State Agencies?**

Mod\_11\_23 which was recently recommended for approval by the SEM Modification Committee is a landmark for our system. This will deliver the ability of the scheduling and dispatch systems to accept negative physical notification and issue negative dispatch instructions, allowing for the first time, renewable led consumption access to the markets. Currently such notifications and instructions are exclusively for batteries, but this latest functionality will remove this barrier to flexible demand.

**6) Do you agree with the proposed clarifications for defining demand flexibility?**

In our response to the CfE, we requested that demand flexibility is not measured solely in terms of reducing peak demand, and to also consider the carbon intensity of the system at times of consumption. This is developed further in our response to question 8.

**7) Do you support the proposed Volume Shift option for defining demand flexibility?**

Yes, EAI support ‘Volume Shift’ as the definition of demand flexibility.

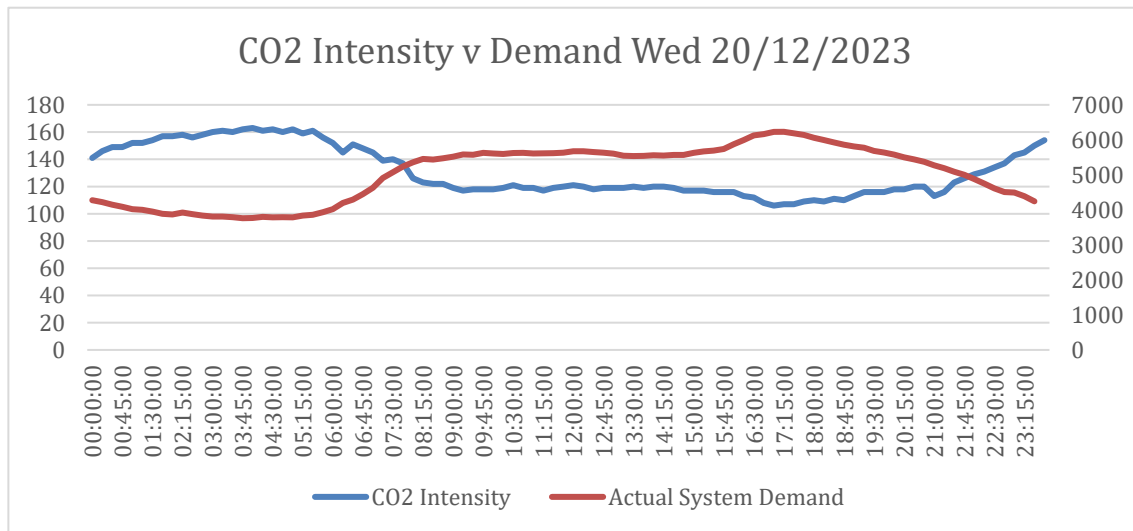
**8) Are there additional considerations or clarifications required in defining demand flexibility?**

The proposed definition of Volume Shift captures the requirement to flex consumption up and down as per the definition of demand flexibility. However, it does not factor in criteria regarding the intensity of emissions at times of demand, which is the ultimate goal of NEDS in achieving CAP targets.

Under the proposed definition; with a higher level of renewable penetration on the system, peak demand may be met by a majority of renewable sources, and therefore a relatively low carbon intensity.

If this volume is shifted away from peak demand, and renewable energy supply drops, it may result in shifted demand being met at times of higher carbon emissions.

An example of this occurring is illustrated in the graph below whereby on the 20/12/2023 due to high wind, peak demand was achieved at low carbon emissions. Applying the volume shift definition may result in reducing this peak, despite it being met through renewable sources.



It is clear from the consultation that the goal of NEDS is both, system flexibility and carbon abatement. However, as shown above there is a need to consider the emissions intensity of the grid before utilising volume shift. Guidance on how volume shift will consider the carbon intensity of the grid would be appreciated.

### 9) Do you agree with the view of progress to date?

Yes, EAI agree with the progress to date and the acknowledgement there is currently limited flexibility across all sources as per the proposed definition of demand flexibility. We believe the National Energy Demand Strategy can help unlock investment in delivery of flexible demand. Flexible demand turn up is currently excluded for those participating in the Balancing Market, the NEDS is crucial to helping provide investor clarity on how future demand flexibility will be rewarded.

**10) Do you have any views on the approach to Area 1: Smart Services, developed to increase customer engagement and participation in support of the NEDS?**

**a) Are the initiatives that the NEDS is engaged in and planning for its future program sufficient to support customer participation and deliver increased flexibility?**

The EAI broadly welcomes the CRU's understanding that electricity suppliers play a key role in delivering flexibility through offering innovative products to customers. By offering bespoke products, electricity suppliers empower customers to actively manage their demand. It is with this understanding that the CRU must create the regulatory environment and appropriate incentives in which suppliers can offer such products. The measures included in the smart services section of the NEDS is positive however, the EAI has views on how these measures should be prioritised as outlined in the next question.

**b) Do you have any view on what measures the NEDS should prioritise in order to deliver greater flexibility and why?**

EAI acknowledge the ongoing work in finalising the Smart Data Access Code and understand that a decision on enduring arrangements for the clean export guarantee for microgeneration customers are priorities for the CRU. The delivery of both workstreams is essential as a first step.

The automation of market systems for those with microgeneration must be delivered to unlock fast response required for demand flexibility. The current retail market systems require manual processes which must be resourced by suppliers and managed on an ongoing basis. Streamlining this process to ensure that the market settlement timeline for export mirrors the settlement process timeline for import is essential to reduce the burden on suppliers and unlocking more time reflective rewards for customers. We are concerned that without a viable and sustainable plan to automate as much as possible much of these flexibility programmes for suppliers and customers, the level of data being managed manually from each programme will become unsustainable for suppliers.

The EAI notes that the CRU will be working on developing a regulatory framework for "Relevant Market Participants" who are not licensed electricity undertakings. The EAI stresses the need for our members to be consulted on any proposed regulatory framework. In particular, we note that as suppliers we have high levels of consumer protection in place for customers ensuring that we are clear and transparent in our dealings. As new entrants may enter the market solely for the purposes of creating flexibility demand management value, it is integral that such market participants are held to an equally high standard when engaging with customers.

Actions such as revising the Price Comparison Website Accreditation Framework and Sub-metering are dependent on the creation of appropriate data access mechanisms i.e. a smart meter data access code. Therefore, the EAI believes that these measures can be investigated once the priorities outlined above are implemented. It is important that in the delivery of NEDS

that a prioritisation exercise is undertaken, and a clear project management approach is devised to ensure that suppliers are given a clear and achievable roadmap of delivery.

**c) Are there other areas or measures that the NEDS should consider in addition to those outlined above?**

#### **Smart Services Delivery**

We welcome the increasing penetration of Smart Services, we believe that as we now progress to post NSMP installation there needs to be consideration given to how we now fully utilise the multi-million-euro programme of works to the benefit of customers, integration of renewables and grid optimisation.

Customers need to be informed of their smart meter capabilities and encouraged to adopt smart tariffs through creative measures. Moving more customers onto smart tariffs would increase implicit flexibility in the near-term. We welcome educational and information campaigns such as the SEAI initiative to better inform customers of what steps they can take to manage their demand flexibly, and we will engage with SEAI on this important piece of work.

#### **Network Tariff Review**

EAI welcome the decision to review network tariffs structures and feel that this work should be prioritised. As suppliers seek to promote TOU and dynamic tariffs, identifying any barriers to effective price signals is necessary to ensure customers are given clear incentives to shift demand. We look forward to progressing this work.

#### **Location Based Signals**

Offering bespoke products to customers on demand flexibility in the medium to long term will require real time information from the distribution system. Currently, suppliers cannot offer location-based flexibility products to customers which achieve network requirements. These could include prompts to customers to react to a network signal, rewarding customers for shifting or reducing their demand.

Currently suppliers do not receive near real time location-based information which could be used to design flexibility products. As grid investment needs differ widely across Ireland, a more locational based regime that identifies, signals, and manages customer demand will be required. For example, as EV battery ranges increase, we may see load demand increase in rural locations, which previously has not seen shifts in demand, and as such this may drive the need to manage grid flexibility at a more local level.

**d) Are there any additional measures that should be implemented by NEDS stakeholders (such as Government departments, SOs, and State Agencies) to contribute towards the goals of the NEDS?**



### **Innovation Funds**

One of the barriers to introducing new flexibility products is uncertainty of investment and the high cost associated with developing new products. EAI members would support an innovation fund for energy products administered by Enterprise Ireland, or a similar Government agency.

### **Education Campaigns for Smart**

In the context of the NSMP approaching 1.6 million installations, we note that there is still limited uptake of smart tariffs despite the benefits available. Whilst we recognise that there has been a series of actions in raising customer awareness of the benefits of smart services, the EAI believes that continuing educational campaigns in promoting smart tariff uptake is essential. We believe that any campaign should focus on illustrating that active demand management by customers is the best means of drawing a benefit from a smart tariff. In addition, educational campaigns must educate the customer on how they are currently using their energy and what changes they can make to partake more fully in smart services.

### **Energy Efficiency**

Removing barriers to energy efficiency measures outlined above would benefit Ireland's demand flexibility. VAT of 0% on all energy efficiency measures would increase access to energy efficiency measures and contribute to our Article 8 Energy Efficiency Directive targets. The current Statutory Instrument which obligates parties to carry out energy efficiency measures has delivered significant energy savings in compliance with the energy efficiency directive requirement; however, as we move to implement the Energy Efficiency directive recast there is a need for a more holistic approach to energy efficiency that is not overly prescriptive on obligated parties but reassesses that role of National alternative measures to ensure compliance.

The current skills shortage of qualified technicians to install heat pumps in Ireland, reduces our ability to carry out work at scale and slows down the decarbonisation of the heat sector. Addressing this skills shortage through increased apprenticeships or otherwise would be beneficial.

### **e) Are there any other measures which the NEDS should consider around enabling greater business participation in flexibility?**

For industrial demand flexibility markets, SO systems and government support should be technology neutral. Overly focusing on any one technology will lead to less efficient delivery. For example, the current Schedule and Dispatch work will unlock flexible consumption dispatch by the TSO for the first time, but only for units registered as batteries. Markets and systems should not restrict access by selecting technology. Electric boilers, thermal storage, hydrogen production, etc all need access to the Balancing Market and TSO dispatch signals.

**11) Can the items proposed for Area 2: Demand Flexibility & Response, as outlined, provide appropriate incentives to improve flexibility across the relevant target sectors (i.e. large business and industrial users, and the transport and public sectors)?**

**Network Charging**

EAI welcome the indication that CRU will continue in its Network Tariff Review, consulting on long term and short-term options. EAI believe this is a crucial piece in unlocking future investment for the demand turn-up side of the NEDS. The wholesale electricity market offers real time electricity pricing signals, and these signals should promote consumption in times of high renewables and discourage electricity consumption when the grid is reliant on fossil fuels. However, consumers of power are sheltered from these price signals. Charging structure (market, networks, PSO (Public Service Obligation), etc) should be structured to encourage flexible consumption and maximise utilisation of renewable electricity. To deliver Ireland's decarbonisation targets appropriate charging structures will be needed.

Through the NEDS, CRU is seeking to engage customers in their energy consumption, one driving force behind this will be retail price structures. The benefits of a high penetration of renewables, and cheaper electricity, should result in cheaper tariffs for customers at certain times. Removing barriers to this, such as market and network charges which are not reflective of the generation portfolio at times of consumption, is essential to enticing more customers into flexible contracts where appropriate.

We look forward to developing this point further through future consultations on network tariffs.

The introduction of a DSO led market for flexibility creates a route to market for demand side units which are too small to participate in the DS3 system services. This is an issue as system services on the transmission system are currently undervalued, reducing the incentive to invest in flexibility. It also allows opportunity for the DSO to create new services such as demand turn up to mitigate against our wasted renewable energy.

Developing market systems and adopting modifications to the Trade & Settlement code to allow for dispatchable demand widens the scope of achieving flexibility. Reducing curtailment of renewable energy is one of the guiding principles of this strategy, and enabling dispatchable demand is a core element to achieving this.

This is particularly important to facilitate carbon neutral heat and meet the targets for renewable hydrogen in Ireland. Allowing industry to flex demand based on available supply and having market signals in place to notify plant operators to do so is essential to their efficiency and reducing the cost of heat and green hydrogen.

EAI would welcome any further consultations on introducing dispatchable demand.

**12) Are there additional mechanisms to facilitate demand flexibility that should be considered as part of the NEDS?**

**13) Do you have views on whether incentives are the best mechanisms to accelerate the delivery of flexibility or if mandatory measures could be more effective?**

Some of our members involved in the industrial heat sector believe incentives will provide investor clarity and an ability to forecast future cash flows on newly acquired assets. The potential timelines for delivering additional flexibility in the heat sector will hinge on the success of implementing the NEDS. Investors do not have any current signal to continuing investment without a clear revenue stream to pay for these assets. EAI welcome the CRU approach of seeking to foster and develop flexibility markets whilst being technology agnostic. This will allow rapid sector decarbonisation with industry and participants free to identify the best technology.

**14) What are your views on the approach to Area 2: Flexibility Demand & Response? Are there other options that should be considered?**

**a) Do you agree that the options for flexibility markets can deliver flexibility and represent good value for consumers?**

Asset flexibility is a key component of a decarbonised electricity system. Value must be considered in a holistic approach when viewing flexibility markets. Although the commodity cost of electricity may decrease in the coming years with further penetration of renewable assets, it is likely fixed charges will become a larger share of a consumer's bill. It is paramount that renewable generation assets which are built, backed by consumer backed PSO levies, are utilised to the best of their ability. There is a substantial risk that without finding flexible demand for potentially dispatched off renewable generation, society could begin to question the value of overbuilding renewable assets.

**b) What are your views on how the costs of this procurement should be recovered; is the DUoS charge an appropriate mechanism?**

Renewable led electrification must be cost competitive with fossil fuels. The DUoS charge appears a suitable way of recovering costs of flexibility. However, there is a risk, if not applied dynamically, the fixed element of a flexible consumer's bill will increase while the commodity charge decreases. If the network charging methodology is not aligned with economic market signals there is a risk that flexible consumers would be disincentive. It is therefore of utmost importance that any application of a flexibility charge is levied in an appropriate manner consistent with dynamically priced network tariffs.

**c) What are your views on the respective roles of procurement of flexibility at the transmission and distribution level?**

A clear picture on how network tariffs and other charges will be reformed will impact on investment decisions. EAI believe there is potential for large scale sectoral decarbonisation in the heat and transport sector if the correct investment signals are put in place. We welcome the CRU engagement with the TSO on how integration of flexible assets into the balancing market may be made possible. This will allow for greater utilisation of assets which are currently relying on an ex-ante market signal rather than responding to real-time congestion issues identified by the TSO.

**d) How can further investment and participation in flexibility from LEUs be enabled?**

Enabling LEUs to operate flexibly is capital intensive and requires engagement and education of these users but has the potential to be economical in the longer term.

We believe the ESN approach has the potential to provide revenue certainty needed for investors and a route to market.

**e) Do you agree with the anticipated benefits, costs and risks from the procurement approach described?**

**15) What other mandatory requirements could be considered as part of the NEDS?**

- **These may be already identified but not currently part of the NEDS, or newly proposed mandatory requirements. They may also be associated with any of the relevant entities across the broad range of stakeholders contributing towards the design and implementation of the NEDS.**

**16) Are the actions set out to deliver the NEDS consistent with the ambitions for 2025 and 2030?**

Yes, EAI believe the actions that are set out to deliver the NEDS are consistent with the 2025 and 2030 ambitions. We welcome the phased approach but would caution that much of the heavy lifting will need to be done in the latter half of this decade. With electricity demand expected to continue to rise, as well as some demand, which the CRU note, is highly uncertain, there is a risk that additional MWhs of demand flexibility will need to be procured between 2025 and 2030. Continued regular engagement with industry, who are actively pursuing the solutions required but currently are not obtaining the required investment signal, will help mitigate against some of this risk.

**17) Does the proposed approach to managing uncertainty around elements of future system decarbonisation provide flexibility while building confidence in the NEDS?**

The CRU captures this uncertainty in the phased, adaptive approach and it is welcome the risks are being called out at an early stage. EAI agree the approach should remain iterative and under review to ensure the required levels of flexible demand are accommodated onto the system.

**18) What supporting actions including, for example, delivery of enabling legislation, are required from actors other than the CRU to progress and enhance elements of the NEDS?**

In a future renewable led electricity system, a sizeable increase in flexible demand will be required to ensure levels of dispatch down of renewable generation is minimised. EAI believe the CRU's continued engagement with the TSO to find a solution for the integration of flexible assets to the balancing market will enhance the NEDS. EAI also welcome the inclusion of the network tariff review in the NEDS and feel these items are both critically important for the successful delivery of the strategy.

An annual assessment of the need for demand flexibility in the Irish grid should be conducted. To manage weather-dependent output, the energy system must provide adequate flexibility resources at scale from both the demand and supply side. The European Union Agency for the Cooperation of Energy Regulators (ACER) calls for Member States [1] to assess and unlock the potential of flexibility resources such as demand response. By highlighting the volume of wasted zero carbon renewable electricity and forecasting the volume of wastage in the future, when Ireland approach the 22GW of renewable capacity set down in the CAP24, the opportunity for the heat and transport sectors will become increasingly evident. Such data would also help inform policy makers of the inefficiencies which exist in Irelands energy utilisation across different sectors. This demand flexibility is more important for Ireland than any other EU Member State due to our abundance of variable renewable power and our geographical reality of being an island with no AC interconnection.

[1] [https://www.acer.europa.eu/sites/default/files/documents/Publications/EEA-ACER\\_Flexibility\\_solutions\\_support\\_decarbonised\\_secure\\_EU\\_electricity\\_system.pdf](https://www.acer.europa.eu/sites/default/files/documents/Publications/EEA-ACER_Flexibility_solutions_support_decarbonised_secure_EU_electricity_system.pdf)