

# National Network, Local Connections Advisory Council Meeting 10

Wednesday 2<sup>nd</sup> July

DOC-160925-IHP

# Agenda

1	Welcome and Housekeeping (AK)	10:15-10:25
2	Membership Alignment Update (AK)	10:25-10:30
3	Actions Update (AK)	10:30-10:35
4	Progress on In-Flight Initiatives Update (PM)	10:35-10:55
5	Demand Flexibility Product Update (KD)	10:55-11:15
	Coffee Break	11:15-11:30
6	Blueprint and Roadmaps Update (AK)	11:30-11:50
7	ITAGT / Beat the Peak Update (LS)	11:50-12:10
8	SME Flex Update (VA)	12:10-12:30
9	Roundtable	12:30-12:50
10	AOB	12:50-13:00
	Lunch	13:00

# **Speakers**



Alan Keegan ESB Networks R&S Hub Lead



**Paddy Mulvey**ESB Networks Flexibility Operations Manager



**Kevin Doyle**ESB Networks Flexibility Market Design



**Lindsay Sharpe**ESB Networks Customer & Strategy Lead



Vicky Ainsworth
ESB Networks Customer & Strategy

# Welcome











































# Housekeeping





Please mute your microphone and turn on your camera during the meeting



If joining us virtually, please raise your hand or drop questions into the chat function



Presentations and meeting minutes will be published in the NN,LC stakeholder hub and made available to the general public

Please note over the course of the year there may be open procurement processes so there may be aspects of the programme we will not be in a position to discuss.

Stakeholder forum link: (Our Advisory Council (esbnetworks.ie))



# **Membership Alignment**



We are refreshing the Advisory Council list for 2025 and have requested confirmation of your membership.



Thank you for your cooperation.

# **Actions Update**

Item	Title	Detail	Status	Progress Update
AC9.1	Behind-the- Meter	Consider providing a more in-depth update on the NN, LC's Behind-the-Meter activities to AC members.	Open	N/A



Progress Update on In-Flight Initiatives

Paddy Mulvey



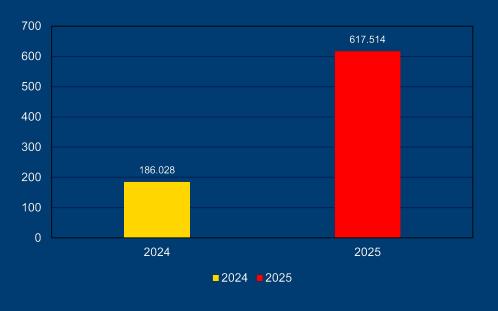
# **Pilot 2 – Dynamic Instructions Set**

#### **Background**

The intention of Pilot 2 was to introduce dynamic instruction sets thereby unlocking demand down capacity. Pilot 2 uses generation forecasting and outage monitoring to increase Individual Demand Sites' ability to provide services to the TSO.

- Pilot 2 was live from the beginning of April until the end of September in 2023 and 2024 and operating in 2025
- Sites have been selected via the existing annual study process
- 5 DSUs including are taking part in the pilot
- The pilot went live April 2025 and potential enhancements are currently underway for 2026. They include:
  - New list of IDS
  - To include New Solar Generators
  - Propose new levels/bands of solar and wind generation from forecast
     & historical data via PSS studies

#### 2024 vs 2025 YTD Performance



esbnetworks.ie

# Potential improvements to Pilot 2

#### **2025 Enhancements**

- Using historical data, ESBN perform PSS studies using smaller groupings instead of fixed 100-75, 75-50, 50-25
   & 25-0% groups
- Create Daily MV Outage whitelisting option for following day
- Create whitelist option for HV outages, automation update in tool

#### **Refinements**

- Hydro Generation
- Abnormal devices/ Dynamic allowances/ Dynamic daily checks

#### **2026 Enhancements**

- To include New Solar Generators
- Propose new levels/bands of solar and wind generation from forecast & historical data via PSS studies
- Admin process to participate

esbnetwork:

# **Conservation Voltage Reduction (CVR)**

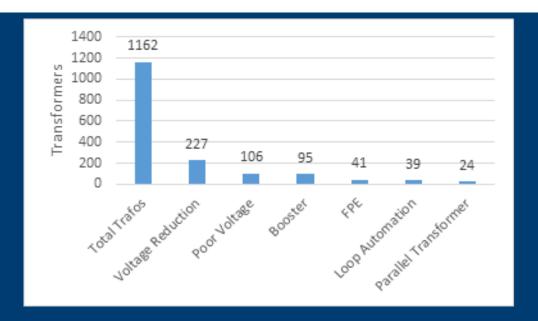
Reduction of demand by lowering voltages

#### What has ESB Networks done?

- Successful CVR implementation
- Voltage Management Tool (SCADA)
- Monitoring Solutions
- Impact Estimation



Poor Voltage Dashboard



**Transformer Selection** 

10 esbnetworks.ie

# Flexible Generation Connections (Pilot 4)

#### **Background**

To facilitate the renewable targets in the Climate Action Plan ESBN are looking to maximise the amount of green generation sources on the system. Due to substation connection constraints, flexibility mechanisms are being applied to facilitate Flexible connections using non-firm access as part of a pilot.

#### **Objectives**

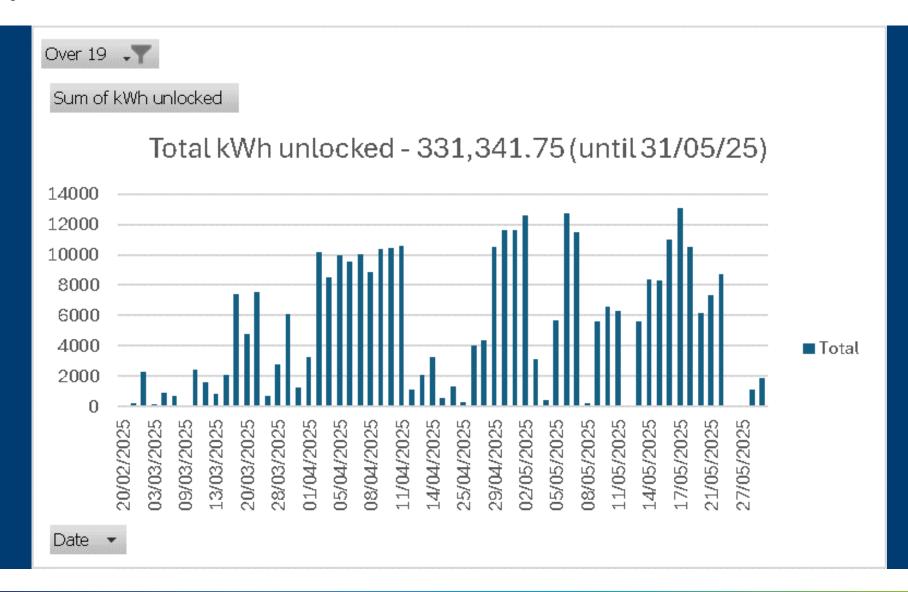
This initiative intends to avoid the initial need for deep connection works or significant shallow works to allow renewable projects to connect (whenever possible) through flexible connection offer rules such as Firm & Non-Firm Access to be used during periods of high generation and low demand, and/or under contingency operating conditions/network outages to facilitate connections.

#### What are the Drivers and Benefits of Flexible Connections



11 esbnetworks.ie

# Pilot 4 output to date



#### **Beat the Peak Business**





Peak Events

Mitigate and address network related issues (i.e. System Alerts).

Provide ESBN some flexibility to address network issues and test functionalities of the flexibility market.



#### **Stop Instructions**

As instructed by EirGrid to ensure assets that also participate in other Markets can be dispatched during or later the BTPB Delivery Window.

Called by ESBN for a specified day or period in the future, to ensure the network is not impacted negatively.





# Operational Instructions

In place to give instructions related to performance to ensure the network is not impacted negatively.

Ending Sept 2025

13 esbnetworks.ie

# **FlexCharging**



FlexCharging aims at understanding how flexible EV charging can help reduce electricity consumption during peak times.

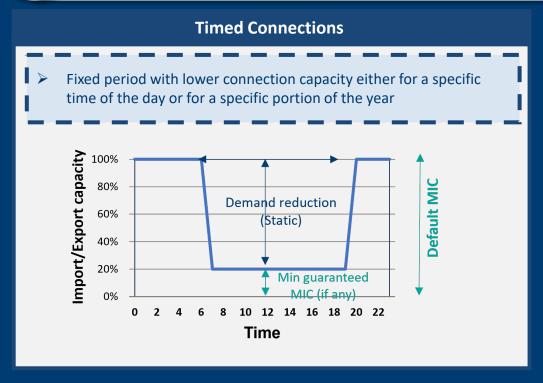
- The study involves 174 Electric vehicles, with a total battery capacity of 11.9 MWh.
- Participants receive a €150 digital voucher for their involvement.
- Cars were organised into groups based on load profiles, car details and charging times.
- FlexCharging ensures that vehicles are fully charged when needed.
- Option for participants to override the schedule if necessary.
- ➤ Building on the learnings from this study we have completed a phase of high-level design for a new EV product. An EcoSystem challenge is now live.

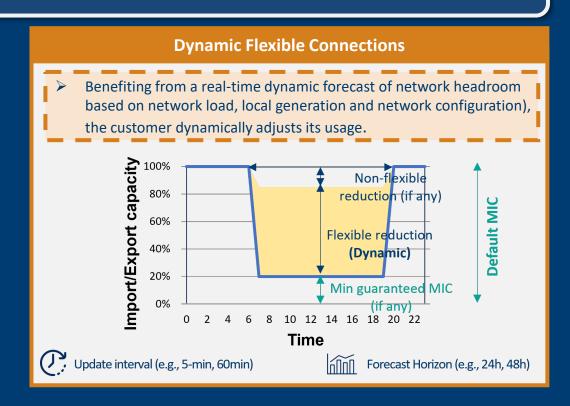
14 esbnetworks.ie

# Flexible Demand Connections Proposition | Definition & Context



Two types of flexible connections are defined as extreme ends of spectrum of flexible connections. This proposition will focus on Dynamic flexible connection (a non-firm demand connection which does not guarantee full 24/7 access to MIC).





**Operational complexity Customer curtailment** 

A flexible connection product provides choice to customers and could create the following benefits:

- 1. Reduced connection costs

- 2. Reduced line charges 3. Increased speed of connection 4. Option to connect first and decide later on exact physical capacity needs

# **Demand Flexibility Product Update**

Kevin Doyle



# **Background of Demand Flexibility Product**





#### **List of locations for DFP**

Location	MW
Bandon 110-38	23
Carrick on Shannon 110-38	11
Castlebar 110-38	20
Dundalk 110-38	23
Inchicore (North) G 110-38	12
Inchicore (North) R 110-38	11
Inchicore (North) 110-38	31
Kilbarry 110-38	46
Kilkenny 110-38	19
Lisdrum 110-38	14
Moy 110-38	6
Central Park 110-MV	15
Kilbarry 110-MV	14
Salthill 110-MV	12
Corduff 110-MV	6
Fermoy 110-38	3

#### **Product Principles:**

- Demand reduction, demand shifting or an injection of power, at or near their full contracted service capacity, for a specified duration of hours in a day and across a 15-year contract.
- Operating envelope issued daily for 15 years where assets must stay within upper and lower limits in each half hour.
- Assets can participate in existing energy markets and must return
   50% of positive net revenues to ESB Networks each month.

# **Context for Recommendations Paper**

- 2nd Consultation Published in October 2024
- There were 15 respondents to this consultation
- Main feedback topics were:

Topics		
Early Energisation		
Off-Ramp Clause		
Locational Batching		
Phased Procurement		
Proposed Sharing Factor		
Operating Envelope		
Incentive Regime		
Market Interactions		

# **Recommendations Paper Decisions: Sharing Factor**

#### **Sharing Factor proposal:**

- 50% sharing factor (originally we proposed 70%-85%)

#### Logic for this change in approach:

- Consultation feedback was unanimous that a 20% market return for developers provides insufficient incentive for market participation (this would ultimately lead to suboptimal performance and revenue recovery)
- Strong incentive for market participation ensures a steady mechanism for DUoS customer cost recovery

# **Recommendations Paper Decisions: Sharing Factor example at 50%**

#### The aim was to choose a sharing factor that:



Ensures the DUOS customer does not pay excessive returns for this product.



Ensures Flexible Service Providers have appropriate incentives to participate in other markets (revenue stack) in order to deliver the maximum benefit to the wider system.

#### Applied to Net Revenues earned by FSP in energy markets:

- Capacity Market
- Ex-Ante Markets (Day-Ahead and Intraday)
- Balancing Market
- Potentially other compatible markets

	ESB Networks	Flexible Service Provider
Asset Size (MWs)	12	12
Floor Payment	-€ 1,500,000	€ 1,500,000
Net Revenue in other markets	N/A	€ 800,000
Sharing Factor	50%	N/A
Sharing Factor implemented	€ 400,000	-€ 400,000
Net Position	-€ 1,100,000	€ 1,900,000

# **Recommendations Paper Decisions: Operating Envelope Forecast**

#### **Industry Feedback:**

- Not enough detail provided in consultation on expected utilisation of asset over 15 years
- Developers concerned that this poses problems for them in terms of forecasting costs of maintenance, asset degradation and asset replacement.

#### **Solution:**

- As part of CfT we include indicative 15-year operating envelopes for each location to allow for assets to forecast the asset use case and factor degradation and maintenance into their projected costs
- Will also be issuing indicative days of need for each location over the 15 years

# **Recommendations Paper Decisions: Incentive Regime initial proposal**

Second Consultation proposal:

Monthly ESBN Payment= (Annual Floor Price x Capacity x Demand Weighting Factor) x Performance Scalar

#### Demand Weighting Factor

- Demand weighting factor to incorporate expected product utilisation throughout the year.
- The demand weighting factor will consist of a percentage based on the expected relative demand flexibility product utilisation.
- May also be set to an even % and in doing so will not have an impact

#### Performance Scalar

Sliding scale method to calculate the performance scalar, whereby the following will apply:

- Monthly performance between 100% 80% → Performance scalar is calculated using a sliding scale with reduction factor equal to 5, i.e. for a reduction in monthly performance of 1%, the performance scalar reduces by 5%, following .
- Monthly performance ≤ 80% → Performance scalar= 0%

# **Recommendations Paper Decisions: Incentive Regime changes**

• Reduce Performance scalar factor from 5 down to 4 which naturally reduces the minimum performance to 75%.

#### **Pre-Energisation incentives:**

A reduction in the number of milestones following both industry feedback and internal SME feedback.

# **Recommendations Paper Decisions: Market Interactions**

- A Flexible Service Provider must stay within our operating envelope limits
- They can participate in other existing energy Markets



# Which markets are we working towards allowing them to participate in?



What are the incentives for them to participate?

- Capacity Market
- Day Ahead and Intraday Markets
- Balancing Market
- Future System Services

Main Payment is a floor payment for DFP Participation, but:

- Assets can earn revenue by participating in existing energy markets
- Assets will be paid a floor payment and also get to keep 50% of revenue earned in existing energy markets

Monthly ESBN payment= Annual floor price × Capacity × Demand Weighting factor × Performance scalar



# **Recommendations Paper Decisions: other decisions**

#### **Early Energisation (no change from Consultation)**

- Allow assets to energise in advance of their provided first service delivery date.
- Assessed on a case-by-case basis dependent on network need

#### **Off Ramp Clause (no change from Consultation)**

- Positive feedback from industry
- Only activated if both ESBN and the contracted asset agree
- Can only lead to a positive outcome for both parties

#### **Locational Batching (no change from Consultation)**

- Moving away from locational batching and instead to all locations included in batch one
- Most economic advantageous locations are chosen in first round
- Other locations included again in next batch

#### **Phased Procurement (change from Consultation)**

- Industry feedback unanimously negative
- Does not provide the developer certainty necessary to invest
- Recommending to remove as part of recommendations paper



Coffee Break.. See you in 15 minutes!





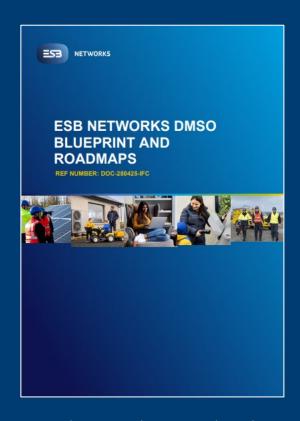
# DMSO Blueprint and Roadmaps process update

Alan Keegan



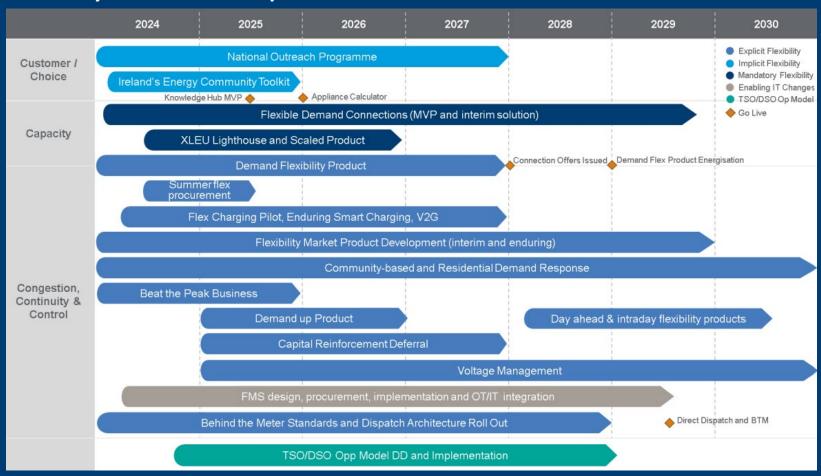
#### **Background and context:**

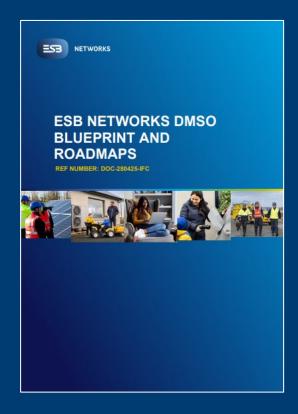
- Attempts to capture developments needed to enable flexible demand and smart energy services across relevant markets.
- Core areas:
  - > Flexibility Market.
  - Smart+Retail Market.
  - Operations Transformation.
- Set out a long-term view.
- Seeks industry views on the key activities and priorities earmarked in the roadmaps.





#### **Flexibility Market Roadmap:**

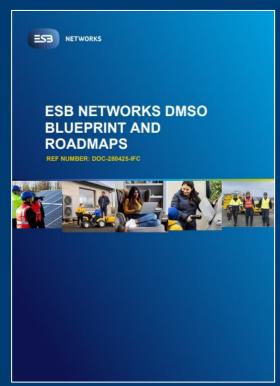






#### **Smart+Retail Market Roadmap:**

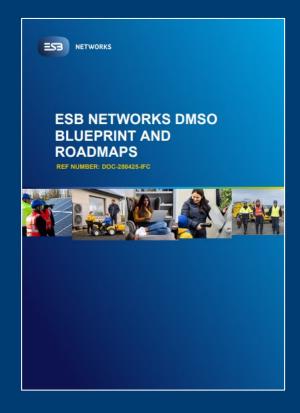






#### **Next steps:**

- Views of industry and external stakeholders (e.g. key activities, priorities, delivery, etc.)
- ESB Networks to review and consider feedback received.
- Agree updated roadmaps.





# Is This a Good Time?

Lindsay Sharpe



# Is This a Good Time? | Overview



#### WHAT?

Behavioural change and communications campaign to engage Irish public around mindful energy consumption.

To **build awareness** around peak usage and support customers to take control of their energy use (DSF).

**Makinga difference** Why it's good to postpone household chores



Households could get cash incentives to 'Beat the Peak' in new ESB energy-saving plan

Households will be incentivised to move some of their electricity usage outside peak hours to take pressure off national grid

DANIEL MURRAY | SEPTEMBER 17, 2022

# connecting a clean electric fution

Is This a Good Time?

Behavioural and awareness initiative that educates participants via email and SMS communications on how and when they use their electricity throughout the day matters.

Peak demand reduction

Energy conservation

Increased renewable energy integration



Promotion of energy-efficient behavioural practices



#### HOW?

#### **Energy Events:**

 Incentivise ITAGT participants to shift electricity use away from peak times (5-7pm) during periods of system tightness or plentiful renewable generation.

#### **Educational Content:**

 Provide ITAGT participants with the knowledge and information needed for them to take control of home energy usage.

Optimiting Ireland's Electricity Supply as Auto



# Is This a Good Time? | Our Journey So Far



Is This a Good Time? (formerly Beat the Peak) was born from a security of supply ask. It was implemented as part of a wider suite of initiatives led by Government and the Commission for Regulation of Utilities, along with other agencies' efforts to ensure citizens remain warm and well, while shifting electricity demand from peak times.









### Is This a Good Time? | Progress in 2025











**Estimated** 72MWh **Electricity Shifted** 



Sharing simple ways to control



Supported by Seai

**New Spring campaign – +50%** increase in monthly signups

Energia, SSE, BGE & **Pinergy** have supported the campaign

Improved customer onboarding journey for new participants

Version 3.0 & 4.0 releases – improved customer dashboard, to display personal energy-event and rewards report.



ES3 NETWORKS

rewarding.

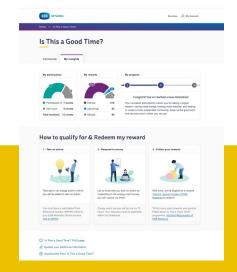
Damien signed up for 'Is this a good time' and finds it very

Damien



### Is This a Good Time? | What's next for 2025?





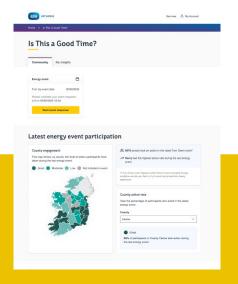
**Customer Dashboard** 

Further enhancements to customer dashboard



Refer a friend

Refer a friend feature to further grow our participant base



**Community Dashboard** 

Data on a participant's local area

Flex Event - Turn Up: There will be a flex event tomorrow between 10am-12pm. It's forecasted there will be excess renewable electricity generation in your area.

Need inspiration? If you're catching up on household chores, consider using appliances such as your washing machine or tumble dryer between 10am-12pm tomorrow to make the most of the elevated renewable electricity.

**Behaviour testing** 

Testing messaging and timings to optimise customer engagement

Targeting
40,000 ITAGT
participants
by the end of
2025



### **ESB Networks' Weather Watch Programme**



ESB Networks have launched the 'Weather Watch' schools programme to engage secondary school geography students (Junior Cycle and Transition Year). The programme primarily aims to educate students on the weather and renewable energy.

With their own school weather stations, students can gather realtime data to analyse local and national weather and explore the role of renewable energy in building a sustainable future 8,000+ students across

90

Schools launched in February 2025

oss n 25

Lesson plans – downloaded over 300 times

Detailed teacher notes

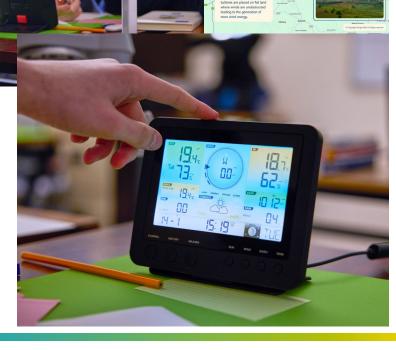
**Student activities** 



Weather
Broadcast
Challenge
Over 60 entries

680K views /
interactions on
Social Media
Engagement +4%
industry norm 3%





### **ESB Networks' Community Toolkit**



### **Renewable Energy Forecast Alerts**

Allows users to sign up for customised **SMS notifications** providing them with a forecast of renewable energy availability for their selected county/counties.

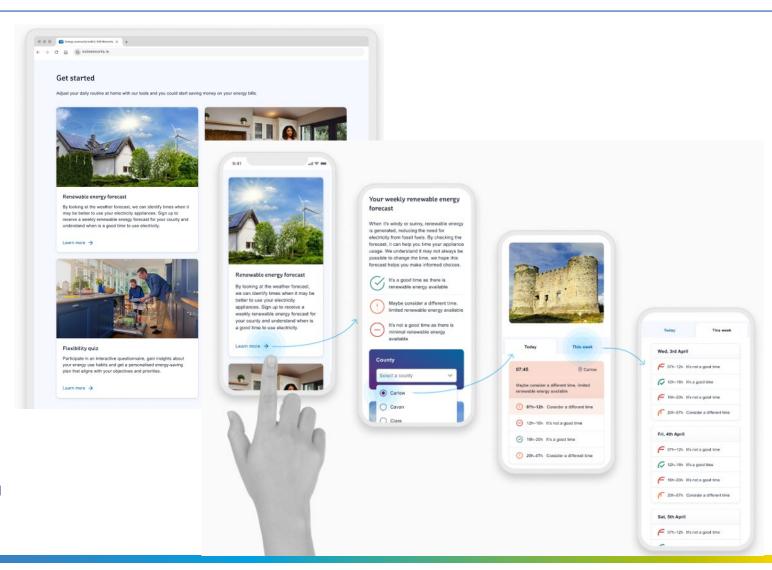
#### **Flexibility Quiz**

Tool to engage customers by assessing their behaviour regarding energy consumption & offer insight in behaviour change to 'take control' of home appliances and how/when use electricity

#### **Appliance Calculator**

Customer models the energy consumption of their household appliances by inputting their appliances and typical behaviours & will be offered insight into 'what if' I improve the appliance rating of my home appliances or 'what if' I change how/when I use my appliance.

Three initiatives have been defined, in conjunction with the SEAI and Sustainable Energy Communities for the next phase of the DMSO Community Toolkit.





# **SME Flex Update**

Vicky Ainsworth



## **Contents**

- 1. Background & Context
- 2. Research to Date
- 3. Vision, High Level Journey and Design Parameters
- 4. Industry Partner Rationale
- 5. Next Steps Engagement



### **SME Flex Product** 1. Background & Context



#### Specific to non-domestic customers

- Targeted Research and Insights for Relevant Non-Domestic Sectors: Dedicated
  research is key to ensuring we design products, services, and engagement with an
  understanding of customer behaviours, needs, and challenges. We plan to conduct
  qualitative and quantitative research into the energy needs and behaviours of non-domestic
  customers, as well as to understand the motivations and barriers which may impact their
  ability or desire to participate with demand side flexibility products, services, or initiatives.
- **Develop SME Flexible Demand Products MVP Outline**: This milestone relates to the creation of an initiative aimed at a specific segment or segments within the non-domestic customer base, to raise awareness and engagement with demand side flexibility. The design of the initiative will be informed by research with industry to understand the challenges, motivations, and barriers to their participation with demand side flexibility.

#### **Background**

- We have a commitment to develop products for SME sector in our Flexibility Multi Year Plan.
- A number of schemes have been launched over the past 3 years targeting the commercial sector broadly.
- We have learned a lot from all of these schemes, but none were specifically targeted the SME sector, and none have had significant up-take within that sector.
- A common piece of feedback received about these schemes was that the process to sign-up and onboard was lengthy and complex, often the effort not reflecting the potential reward.
- In 2024 & 2025 we have been conducting research into the SME sector, to understand their behaviours, needs and challenges, and exploring how we might do things differently to successfully engage this cohort in Demand Side Flexibility (DSF).

### **SME Flex Product** 2. Research to Date - Insights Overview

#### **Background & Purpose:**

- Following secondary research completed, Retail and Manufacturing sectors were identified as target sectors to conduct primary research.
- The purpose of the research was to understand more about different businesses and how they use electricity and to use these insights to help inform future products/ services/ initiatives for businesses.

#### **Electricity Management**

- No singular role responsible for energy/ utilities management.
- The level of control facilities managers have over BMS can vary hugely
- While aware of cost of bills, not all organisations know their energy consumption baseline.

## Motivations to participate in DSF

- The incentive to participate must be worth the trade-off they are making.
- Sustainability is a secondary motivation.
- Businesses need to see a simple cost/benefit analysis and clear examples

# Barriers for participating in DSF

- There is a hesitancy to disrupt core business hours
- Some business operations are not forecastable
- Businesses need resources to help them understand their consumption and options to reduce/shift demand.
- Funding can be difficult to secure if investment is high and return is not quick.

#### **Sector Specific**

- Operations are unique to customers & sectors
- Manufacturing some machinery needs to be running at certain temperatures, so it makes sense to be on 24/7.
- Industries can be very guarded, the key to engagement is getting one or two businesses on board
- Seasonality between sectors could be interesting to explore

### **Design Principles**



participate







Ensure that staff are brought along the journey and/ or automated solutions are used

### **SME Flex Product** | 3. Vision

#### **Vision Statement**

Work with an Industry Partner to engage Small and Medium Enterprises (SMEs) in Demand Flexibility over a 12month period to raise awareness and engagement with demand side flexibility. We aim to gather learnings and insights into how SMEs can participate in demand flexibility. The learnings & insights will be used to inform future products & services for SMEs

#### **Target Behaviour**

We want to understand if we can engage the SME sector in demand side flexibility and if we can achieve the following behaviours from SME customers:

- Opt-in to participation
- **Respond to Event Notifications**
- Shift or reduce energy usage
- Allow data collection for insights

#### **Product Objectives**

- Test if partnering with an Industry partner(s) provides a better experience/ simplified sign-up process for customers and increases participation
- Test if SME sector likely to provide flexibility
- Understand the optimal conditions for SMEs participating in demand side flexibility
- Gain deeper understanding into motivators, challenges or barriers to participating in demand side flexibility

### How might it work?











John's bakery sign up through Industry Partner's event web-page, has regular windows to demand down, receives additional event triggers, accept or reject participation to reduce or shift energy use at given

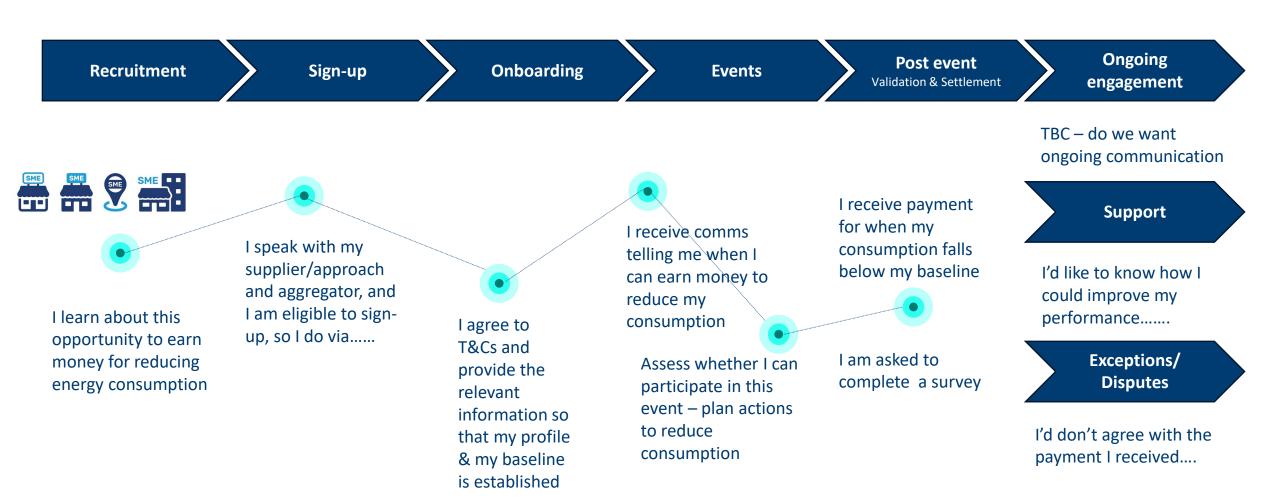
ESB Networks sends signals (triggers) details to industry partner, which will be tweaked to test various features:

- location-specific event (e.g. sending only to Fermoy customers)
- advance notice period (e.g. sending 7 days v 2 days in advance)
- Defined event timing windows (3 -5pm vs 7 – 9pm)
- Duration of events (e.g. 2 hours v 3 hours)

Industry Partner(s)

- 1. Recruiting & renumerating SME Participants that are willing to participate
- 2. Operating the end-to-end flexibility products on ESBN's behalf from signing up to sending triggers to SMEs RE reduce or shift energy in the notified time windows
- 3. Measures energy reduced, collects behavioural data and sends back to ESB Networks

### **SME Flex Product** | 3. High Level Customer Journey



## **SME Flex Product** | 3. Proposed Design Parameters

Area	Proposal
Overarching objective	• To trial the participation of Small and Medium Enterprises (SMEs) in demand side flexibility and to trial if partnering with an industry partner enables greater participation and simple experience for customers
Duration	• 12 months, September to August
Eligible Customers	DG5-7 customers with QH or smart meters
Application/ onboarding assessments	<ul> <li>No generation interaction studies or proving tests for assets below a certain criteria</li> <li>For those above criteria they may require assessment by ESBN</li> </ul>
Service Window	<ul> <li>There will be 2 elements to the service window</li> <li>Monday-Friday, 4.30pm-7pm – no communications will be sent for this window</li> <li>Events – which can occur any time Monday- Friday 9am-7pm and communication will be given for these events in advance (24hrs-1hr)</li> </ul>
Events	• Events will be triggered over the duration of the scheme, estimated 12-20 events. Objective of events will be to understand if SME can provide flexibility at shorter notice and understand conditions in which they can / can not
<b>Customer Incentive</b>	• Customer will receive a MWh/€ rate for the amount reduced from their baseline
Participation in other markets	For initial trial assets cannot participate in other markets

### **SME Flex Product** | 4. Why an Industry Partner?

Why do we want to partner with an Industry Partner?

Feedback from previous schemes indicates that the procurement process is onerous for participants (effort vs. reward). In addition, SME sector is broad and thus likely to include organisations completely unfamiliar with etenders and public procurement. Thus, part of the objective of SME Flex is to establish if partnering with an organisation who already engages with these types of customers and has the capability to manage customer relationship and provide a good customer experience, removes barriers and makes it easy to participate

What do we want Industry Partner to be able to do?

#### **Ability to:**

- Recruit customers through multi channels
- Build a simple online sign-up process
- Communicate events with customers
- Issue rewards / payments to customers
- Survey Customers
- Share customer info and data, and learning with DMSO

Nice to haves: Ability to segment customers, Access to consumption data for baselining and measuring performance Why would an industry partner participate?

- Supplements current business offerings focused on cost saving and energy efficiency
- First mover advantage opportunity to be seen as first mover and leader in this space
- Potential to receive payment
- Potential to be co-branded

### **SME Flex Product** | 5. Next Steps

- From Shaping & Prioritisation we have a view of how a product for the SME base might work. However, the **product heavily hinges on industry partnership.** To detail out the design of the product, we are proposing engagement with industry to incorporate feedback on the high-level design thus far and to take account and include any additional considerations.
- We believe it would be beneficial to engage with industry to ensure we design a solution that works for both ESB Networks and any potential Industry Partner/s.
- We would ask that you share this slide deck with the groups you represent, and if any party is interested in collaborating with us on the design of this proposition, they can email us at <a href="mailto:engagement@esbnetworks.ie">engagement@esbnetworks.ie</a> before 18th July and we will set up 1-2-1 workshops.

Jun	July	Aug	Sept	Oct	Nov	Dec
	Engage with into	erested parties	Finalise Design		Publish Outline in line with FMP	
Progress Business Design Elements						

### **Roundtable Discussion**



Open discussion and questions?



Any other business?

## Thank you!

Contact us at engagement@esbnetworks.ie

