

# SP Energy Networks Preparing for Net Zero Conference Wednesday 8<sup>th</sup> September 2021

## Preparing for EV, Heat Pumps and Heat Networks



# SPEN Preparing for Net Zero Conference

## Wednesday 8<sup>th</sup> September 2021



### Agenda

Preparing for Low Carbon Technologies:  
Electric Vehicles and Heat

*Thank you for taking the time to attend  
today.*

*We value your opinions,  
and we are keen to generate an open  
session with opportunities to hear your  
feedback.*

13:30 – Welcome, Housekeeping and Safety Contact

13:40 – SPEN Green Recovery Project Update

14:00 – Project CHARGE & ConnectMore Tool

14:30 – Heat Up Tool

15:00 – Community Energy Plans for RIIO-ED2

15:30 – Overview of ICE Progress

16:00 – Close

# SPEN Preparing for Net Zero Conference

## Wednesday 8<sup>th</sup> September 2021



### Housekeeping

Preparing for Low Carbon Technologies:  
Electric Vehicles and Heat

*Thank you for taking the time to attend today.*

*We value your opinions, and we are keen to generate an open session with opportunities to hear your feedback.*

- *This session is being recorded*
  - *please let Louise know if you are not comfortable with this and we will take your comments in the Chat section*
- *Please try and keep background noise to a minimum by using the mute button when you are not speaking*
- *We are keen for this to be an interactive session as your feedback is important*
  - *please raise your hand electronically or use the chat function if you would like to ask questions to the speakers*

# Conference logistics

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## Video conferencing

If you experience any problem, please unmute and tell us, or type it into the chat function

## Data protection

We will be capturing your feedback anonymised, if we would like to attribute your views to your organisation we will seek your approval first

## Join the discussion

'Raise hand' to ask a question at any point or please message in the chat

To make it easier for you to provide detailed feedback we are using Mentimeter. Please scan the QR code on the side or click on the following link

<https://www.menti.com/acaogbr1ao>

When we reach a question, a prompt will appear on the screen for you to provide your feedback

## Mentimeter QR code



# Safety / Environmental Contact

**E-highway study given £2m funding to draw up plans for overhead electric cables on M180 motorway near Scunthorpe, in Lincolnshire.**



▲ Siemens and Scania have already tested their e-highway systems in Germany, Sweden and the US. Photograph: Siemens

- Study will draw up plans to install overhead cables on a 20km (12.4 miles) stretch of the M180.
- If the designs are accepted and building work is funded the trucks could be on the road by 2024.
- On the e-highway, lorries fitted with rigs called pantographs – similar to those used by trains and trams – would be able to tap into the electricity supply to power electric motors.
- Lorries would also have a smaller battery to power them over the first and last legs of the journey off the motorway.

*The project is led by Costain, an infrastructure construction company that also operates some UK motorways, using trucks built by Sweden's Scania and electric technology from Germany's Siemens that is already in use in smaller-scale trials there, Sweden and the US.*

# Maidenhill Innovation Introduction

- ▶ Stuart Walker
- ▶ SPD ICE Engagement Manager

# Maidenhill Innovation Introduction

## Introduction

### Background

- Housing developers face the challenge of **grid restrictions** for import and export when they plan their new development.
- DNOs and IDNOs have the challenge of defining realistic ADMD factors and **keeping the restrictions** when homeowners increase their electric loads and generators significantly with retrofitted PV, heat pumps, e-chargers along with other technologies.

### Objective

- To advance the definition of control systems that can be approved for both export and import limitation in neighbourhoods to **ensure that the use of the infrastructure is as efficient as possible** whilst complying with grid restrictions.



# Maidenhill Innovation Partnership

## Stakeholders

Taylor  
Wimpey



miller homes

petriebuchanan





# Maidenhill Innovation Location



# Maidenhill Innovation Overview #1

SP Energy Networks, EON, Energy Assets, Miller, CALA, Taylor Wimpey Homes Heat Partnership at Maidenhill Developments

Government net zero targets are accelerating the drive to transfer from traditional fossil fuel heat sources, with housing developers switching to air source heat pumps.

This coupled with the transition to electric vehicles and solar panels on new houses has dramatically increased the load factor of housing developments and added new generation on to the grid that were not considered only a few years ago.

This has created challenges in many existing planned developments that do not have the load capacity in the existing distribution network to cope with this additional load and generation.

The all- electric home is now a reality with air source heat pump heating, electric hob and oven for cooking and two perhaps three electric vehicles charging in the driveway.

This coupled with the growing demand of electrical appliances in the home significantly increases the electrical energy load for each home and although solar panels on the roof will offset some of this load, it will add a generation element that needs to be taken into account.

This is the future of climate change and the drive to net zero and with appropriate smart meters and smart grids we can all do our bit to meet the 2045 / 2050 Government targets.

This is how it will be for most people, those buying new build homes experiencing this new fully electrified lifestyle first, followed by those in social housing, and lastly those of us in privately owned existing housing stock.

If we were to continue on the traditional network set up, we would need three to four times the amount of copper in the ground to supply this increased load and micro generation, which is not feasible. Working in partnership EON, SP Energy Networks, ICP & IDNO's, house builders and consultants, are creating smarter solutions using the existing distribution network at a fraction of the cost using the existing network.

# Maidenhill Innovation Overview #2

House builders are coming to the realisation that regulatory changes don't just mean adding PV arrays to a new home, or replacing the gas boiler with a heat pump.

This consortium of organisations is embarking on a partnership in innovation aimed at serving as a lighthouse project for the UK and beyond.

On a constrained area of SPEN's network, three house builders are forging ahead with the construction of new homes with due to additional of heat pumps and EV charging has surpassed the original available capacity.

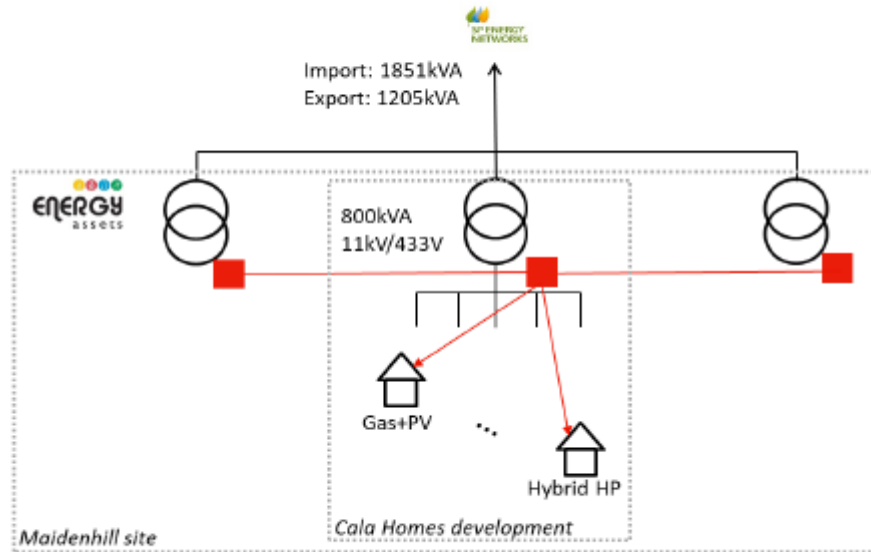
Maidenhill is a joint venture development for Taylor Wimpey, Cala Homes and Miller Homes, where the builders are faced with the prospect of paying for an upgrade to the available infrastructure capacity to site, or endeavouring to build out the development within existing capacities.

The constraints to the site are for energy import as well as export, with rooftop Photo-voltaic (PV) arrays being the main solution of choice across the development. In addition to the PV on site, Cala Homes have delivered the first pod of their section of the site installing hybrid air source heat pumps, with the associated uplift in After Diversity Maximum Demand (ADMD) with is the electric load per home figures assigned to that area of the development.

The reality of the situation for the Maidenhill site is that both SP Energy Networks and the IDNO Energy Assets have legitimate concerns regarding the import and export values upon completion, and importantly beyond the final houses being occupied.

# Maidenhill Innovation Situation

## Maidenhill situation

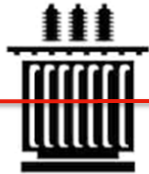


- Supply PV installations to 66 properties
- Prevent Export to SPEN's network
- Develop a G100 compliant control solution at neighbourhood level ⇒ **PV generation can be used by other houses under the same transformer**

# Maidenhill Innovation: Dynamix Export & Import Limitation

Step 1

Solar PV steered to maximise collective self-consumption. Only incrementally curtailed in line with export capacity.



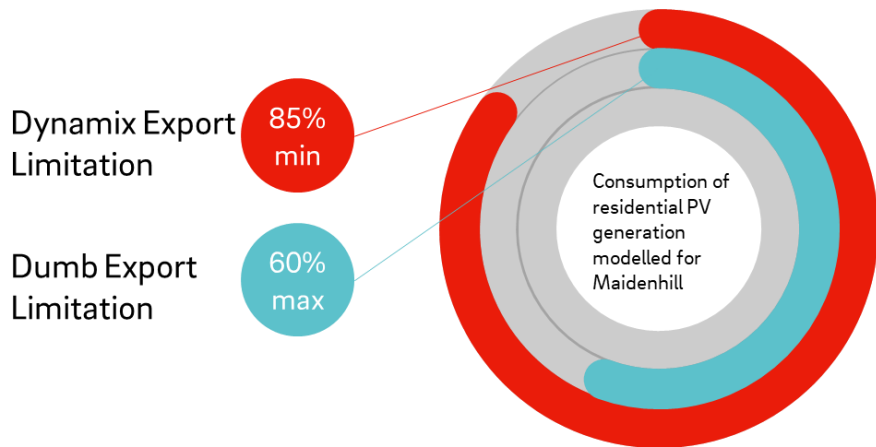
Substation monitored to ensure import & export capacities not exceeded.

Step 2

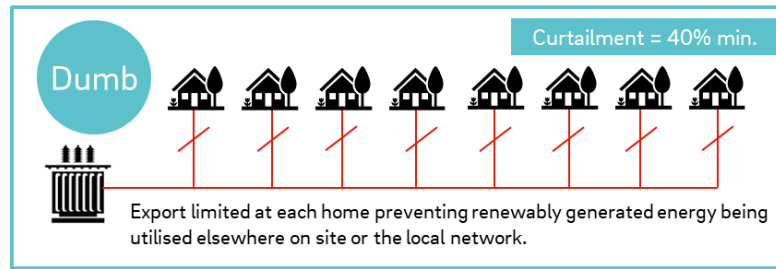
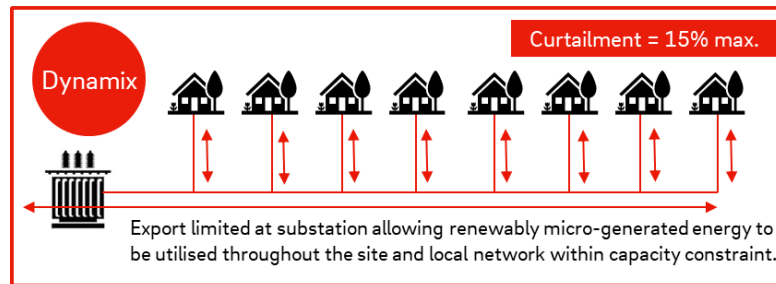
Hybrid Heat Pumps and EV's steered in line with import capacity when necessary.



# Maidenhill Innovation Benefits



'Dumb' export limitation is used widely by house builders where they would be liable for the cost of upgrade to constrained networks

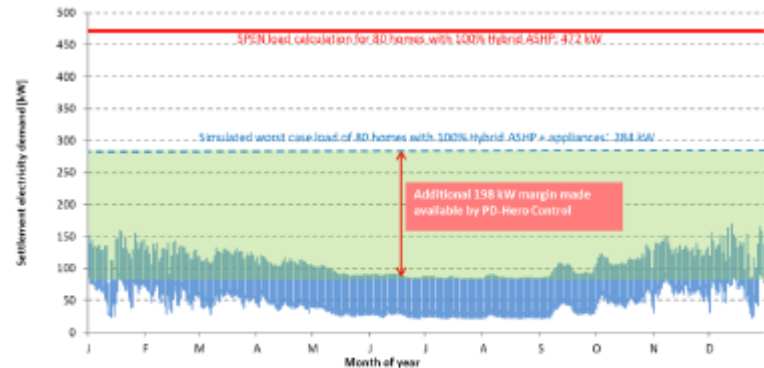
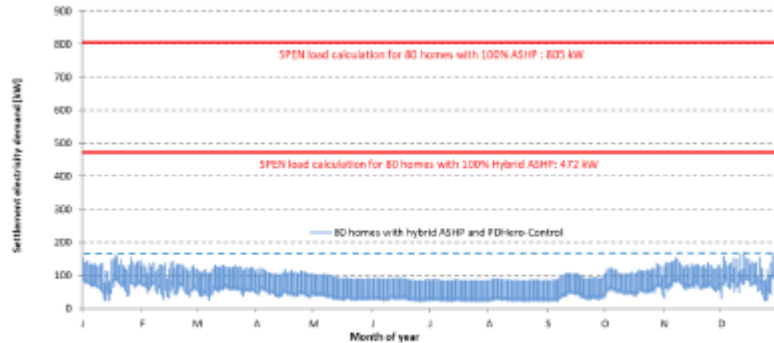


# Maidenhill Innovation Solution

## PD Hero control solution solves the load capacity problem

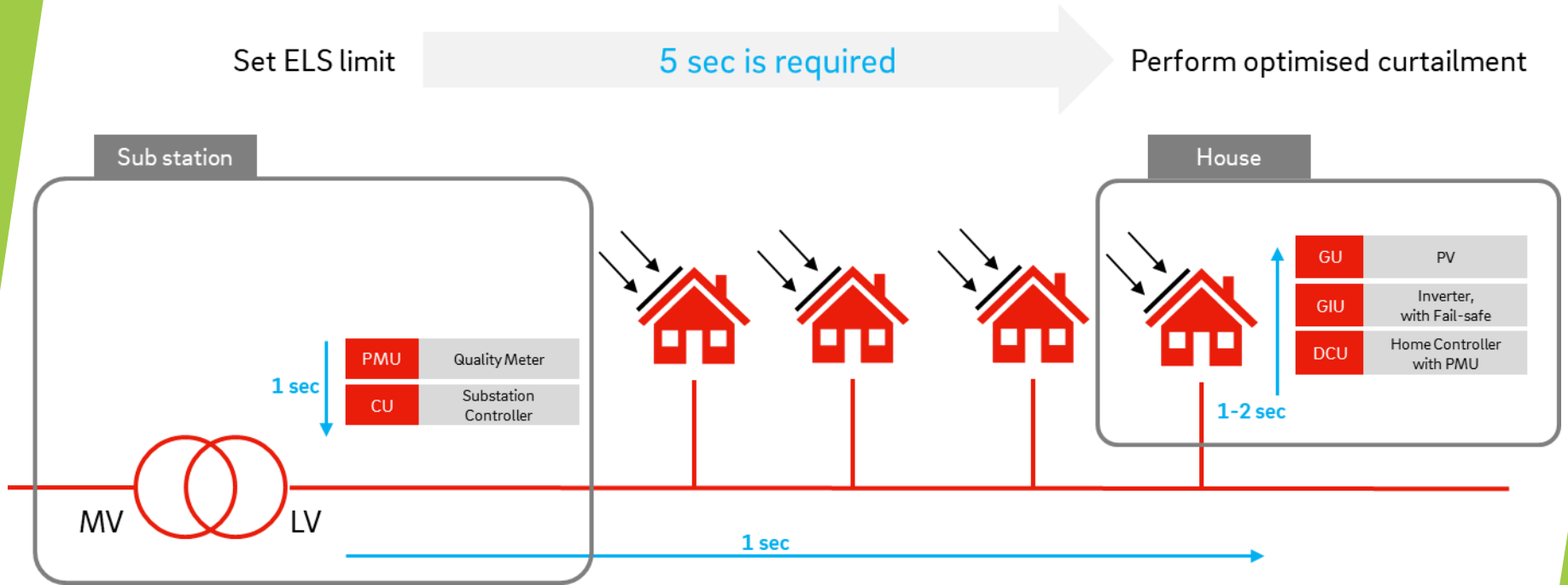
- Various sites in Scotland modelled with ASHP or Hybrid ASHP showed that the PD Hero Control Solutions and Hybrid Air Source Heat Pump can manage the load capacity

### Example #1: 80 homes – Additional 198 KW margin made available by PD HERO Control





# Maidenhill Innovation G100 Requirements

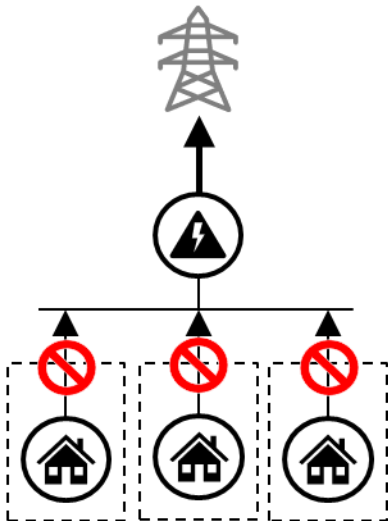


# Maidenhill Innovation Steps

## G100

- Individual export limitation

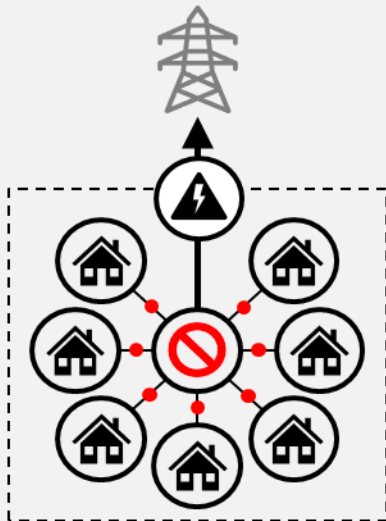
Management of residential generation for G100 compliancy.



## Dynamix G100+ 1.0

- Community export limitation
- Individual export limitation

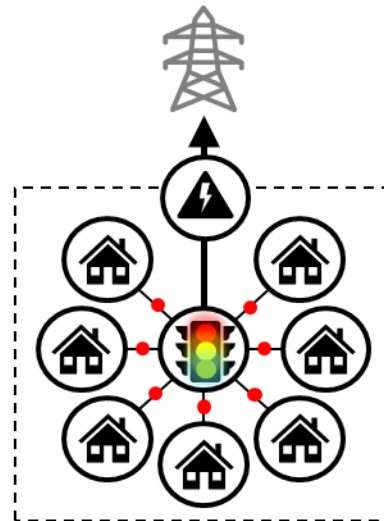
Dynamic management of community generation plus individual G100 compliance.



## Dynamix G100+ 2.0

- Community export limitation
- Individual export limitation
- Import limitation

Dynamic community generation and consumption with individual fallback



# Maidenhill Innovation EURO Experience

## Dynamix Communication System has been using for many years by E.ON

### PV inverters

- G100 certified

### Local Control

- Since 2009
- Scaled: Currently 2000 installations / month
- PV monitoring & control
- Home Energy Management
- G100 standard & higher
- Lab and real life tested





# Project Charge Update & ConnectMore Tool

- ▶ Geoff Murphy, LCT Manager
- ▶ Ana Duran, Senior, Consultant, EA Technology

# Project CHARGE



Project Value     **£8.5m**  
Duration           **January 2019 – December 2022**  
Location           **SP Manweb**

*Through DNO led innovation, accelerate the deployment of public EV charging infrastructure*



# Public Charging Infrastructure

Chargepoints that can be used in the absence of privately owned domestic chargepoint:

## On-Street Chargepoints



Typically 3 → 22kW<sub>ac</sub>

## Workplace Chargepoints



Typically 7 → 22kW<sub>ac</sub>

## Destination Chargepoints



Typically 7kW<sub>ac</sub> → 50kW<sub>dc</sub>

## En-Route Chargepoints



Typically 50 → 350kW<sub>dc</sub>



# Increasing relevance of CHARGE

**2030**

All new car & van sales must be BEV or Hybrids\*

**40%**

~% UK customers without off road parking

**400,000**

Estimate of public chargepoints required by 2030

**35,000**

Approximate number public chargepoints at present

*\* Ban of Hybrid sales comes into effect in 2035*

# Key questions CHARGE will answer



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Where is there growing demand for public chargepoints?

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What is the most appropriate charger type and volume for each location?

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What is the likely utilisation of the chargepoints?

---

Where can chargepoints connect without the need for reinforcement?

---

What connection options are there when network capacity is limited?

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What are the costs to connect at every location?

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# Project Structure

## Method 1 Transport Model



- Build of a full Transport Model for SPM
- Simulates the uptake and movement of EVs (2020-2050)
- Highlights the likely charging demand at destinations and along all routes
- Provides analytical data to inform investment decisions

## Method 2 – Smart Charging Connections



- Generate understanding of the flexibility available from public chargepoints
- Development and trial of flexible connections bespoke to public chargepoints
- Assessment of performance of Smart Charging Connections (SCCs)
- Financial assessment of SCCs vs reinforcement
- Integration of SCCs as an option in ConnectMore

## Method 3 - ConnectMore



- Development and delivery of the online tool 'ConnectMore'
- Provision of Interactive Maps that hosts the Transport Model data alongside high granularity network capacity maps
- Enables customers to identify optimal locations to invest
- Provision of a Connection Cost Estimation tool for customers
- Taking time to generate connection cost estimates from weeks to minutes

# Smart Charging Connections being explored

## Customer Led Smart Charging Connections

## DNO Led Smart Charging Connections

### Time Constrained Connection Schemes

- Smart Chargepoints programmed by customer to constrain load to a set level at a set time/duration to avoid peak load times on network

### Customer Load Management Schemes

- Smart Chargepoints are programmed by customer to ensure their collective demand does not exceed declared supply capacity of the connection

### Locally Managed Constraint Schemes

- A single network constraint location is monitored by the DNO
- A local controller calculates and communicates the available capacity to the customer chargepoints which undertake any necessary constraint

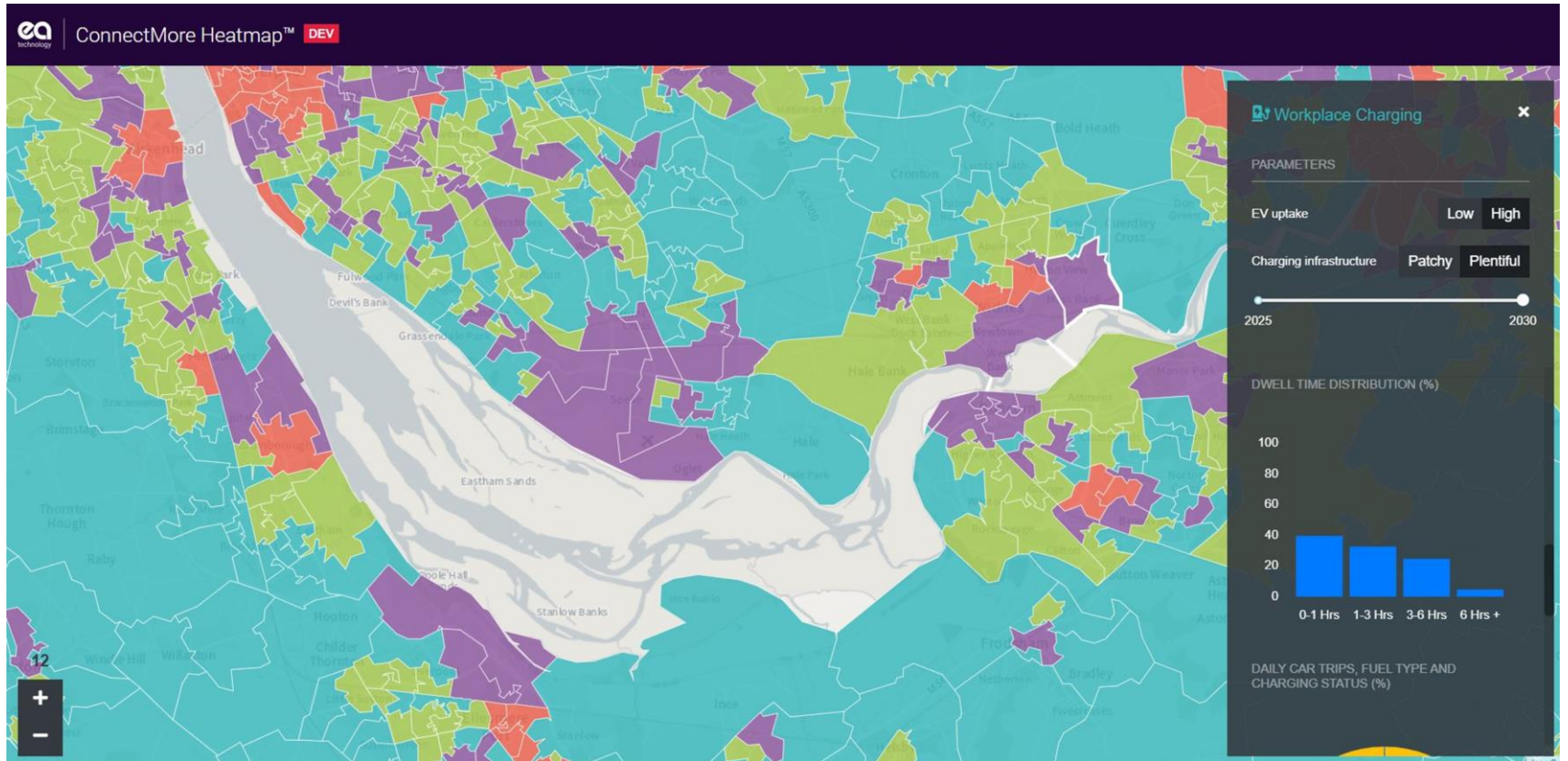
### Centrally Managed Constraint Schemes

- Multiple network constraint locations are monitored by the DNO
- A central platform coordinates the measurements, calculates and communicates the available capacity to the customer chargepoints

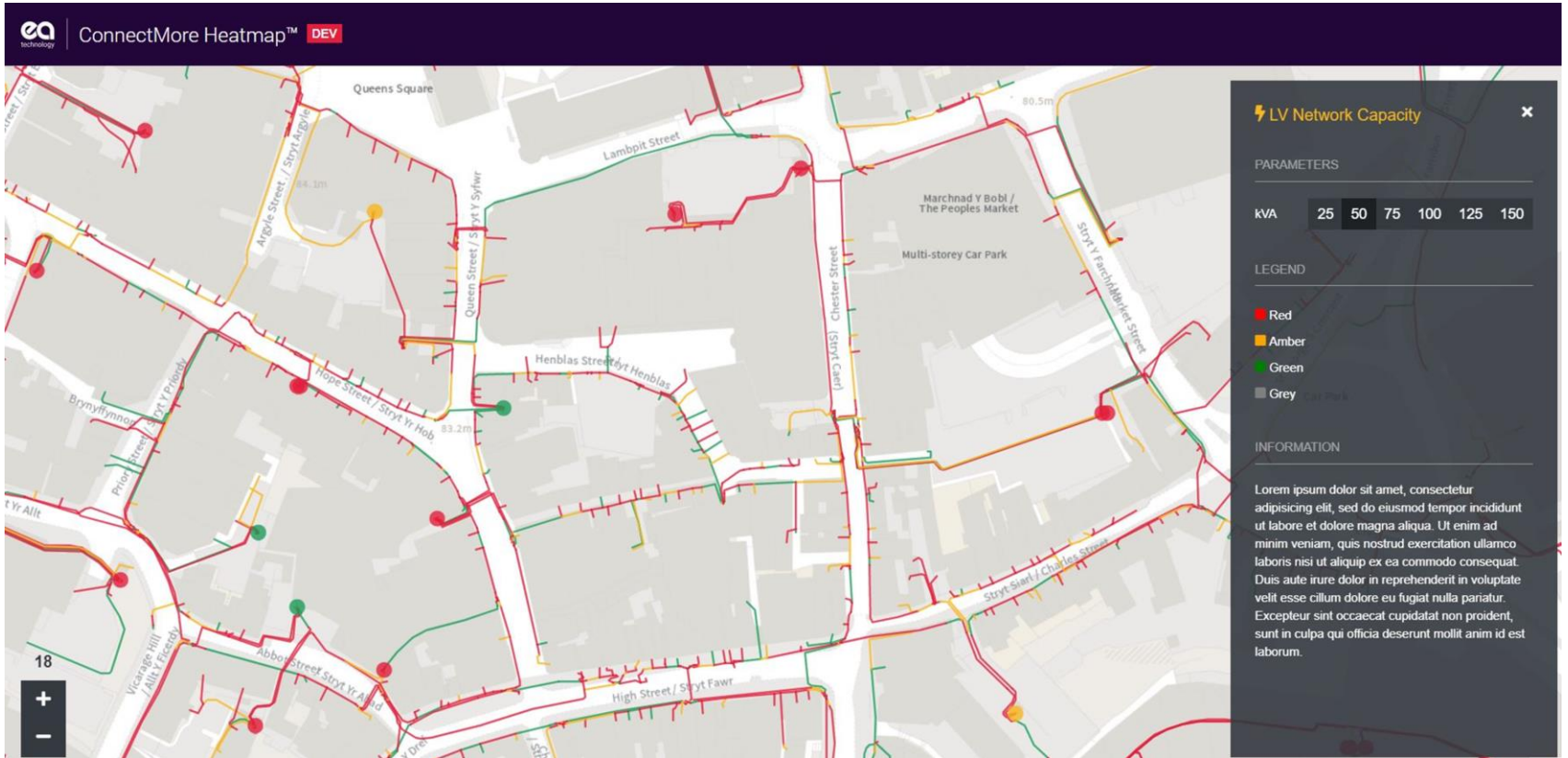
← Low Complexity

High Complexity →

# ConnectMore Interactive Maps



# ConnectMore Interactive Maps



# Updates since we last met

Last presentation on 9<sup>th</sup> June:



LV meshed networks



Download CSV  
file (LSOAs)

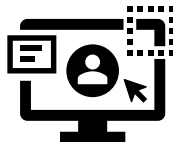


Mobile/Tablet  
user friendly

Developments since then:



En-route  
charging

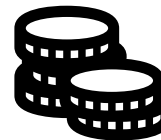


Improved UI display

Transport heatmap



HV network  
capacity heatmap



LV unconstrained



Specs being finalised

Cost Estimator



# Roadmap – Where are we?



LV network  
capacity  
heatmap

Transport  
heatmap  
(98%)



En-route  
charging  
location (2%)

LV cost  
estimator  
(unconstrained  
)

HV cost



Interest in  
capacity and  
planned  
reinforcement

Flexible  
connections

# **ConnectMore Interactive Maps Demonstration**

Further Information & Getting In Touch:

[www.chargeproject.co.uk](http://www.chargeproject.co.uk)

[ChargeProject@SPEnergyNetworks.co.uk](mailto:ChargeProject@SPEnergyNetworks.co.uk)

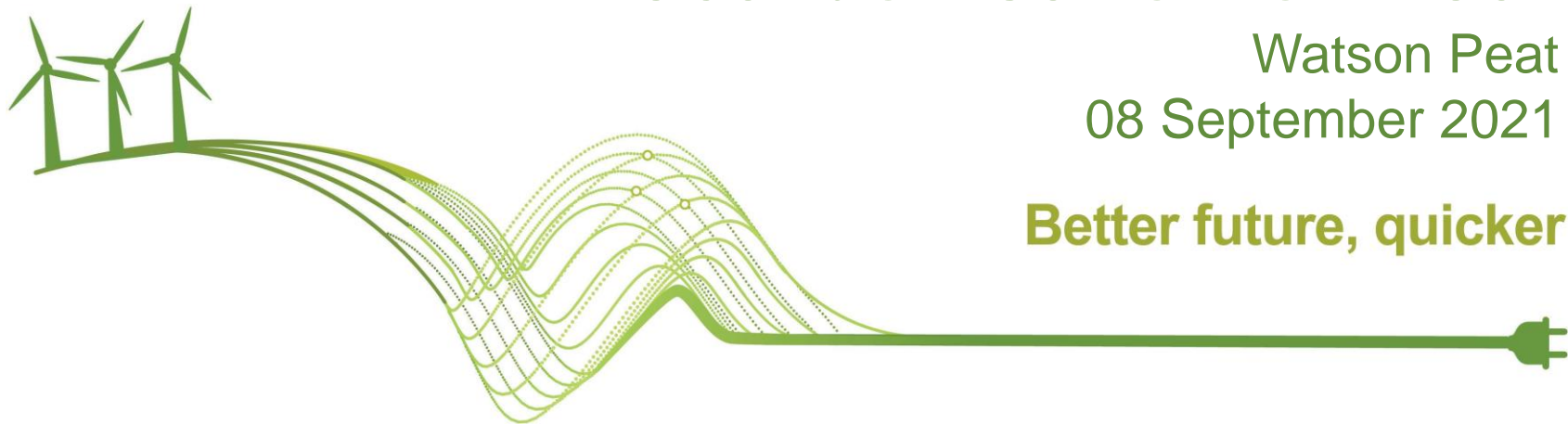
## Heat Up

- ▶ Watson Peat
- ▶ Lead Engineer Future Networks

# Our preparations for Decarbonisation of Heat

Watson Peat  
08 September 2021

**Better future, quicker**



# Forecasts – the foundation of our plan

Our **Distribution Future Energy Scenarios** show the scale of activity is greater than ever before

## Electrification of transport

1.0m - 1.5m new EVs by 2030



## Electrification of heating

0.6m - 0.9m new heat pumps by 2030.



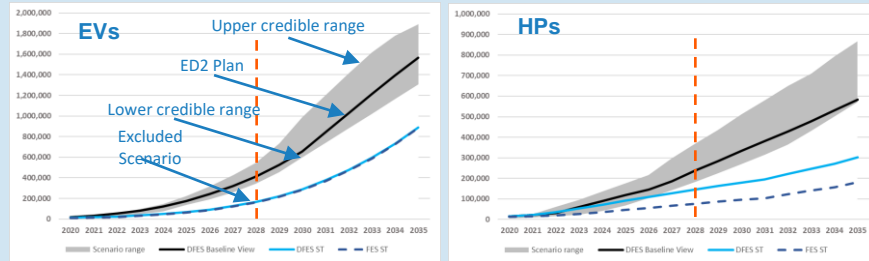
## Distributed generation

+6GW to +7GW of additional generation by 2030. (2.5 x current levels)

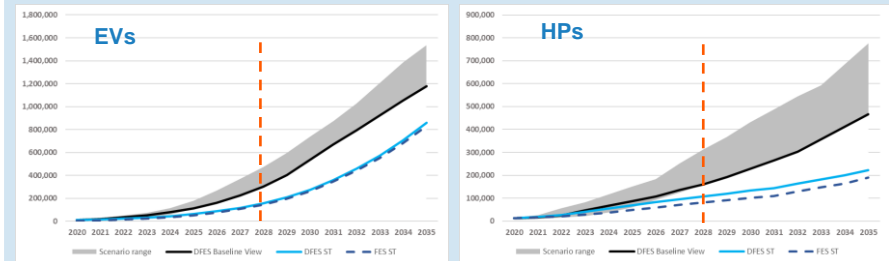


Developed our **Baseline scenario** using DFES, ESO, and Climate Change Committee projections

## SP Distribution



## SP Manweb



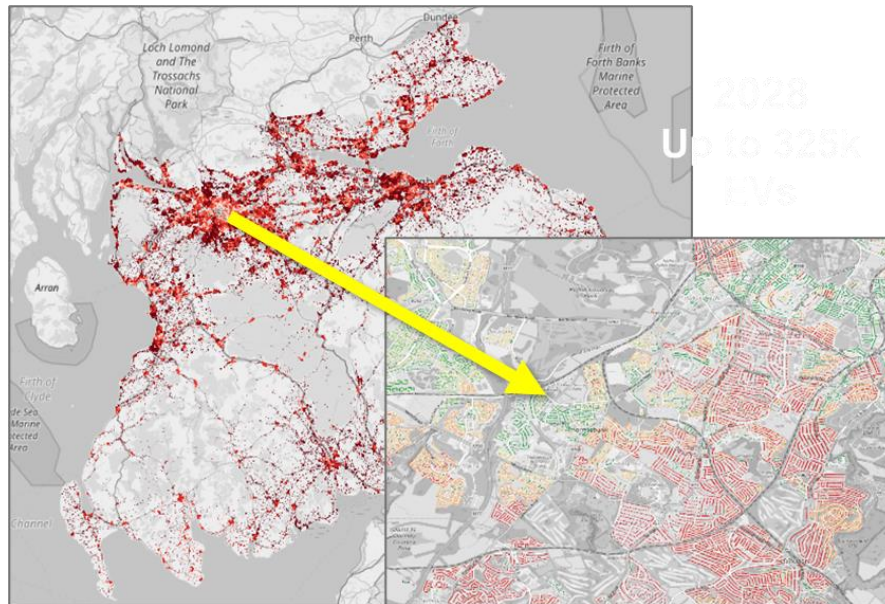
Our plan will facilitate all credible Net Zero pathways with our delivery strategy flexing accordingly



## Enhanced forecasts – taking our forecasting further

We need to understand what is happening at a granular level **heat pumps**.

- **Heat-Up** forecasts heat pump uptake for every customer we serve.
- Developed through RIIO-ED1 innovation, they do this using spatial, demographic, and socioeconomic data.
- Complementary to macro scenarios – it shows, for any macro scenario, which customers will get heat pumps and in what timescales.



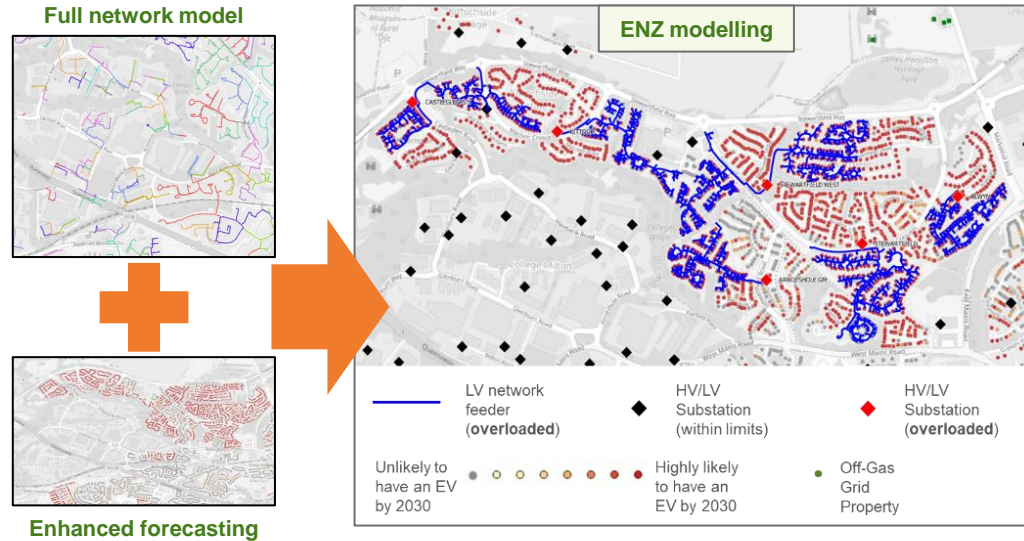
Enhanced forecasting helps us identify precisely where and when our customers need capacity





# Comprehensive modelling to assess capacity need

We combined detailed modelling of our entire network with enhanced forecasting, to **systematically identify the location, magnitude, and timing of every network constraint** in RIIO-ED2.



Our comprehensive approach means we could test for flexibility for every constraint – our plan is built to address **individually known solutions** using **market tested solutions**



# Heat Up video

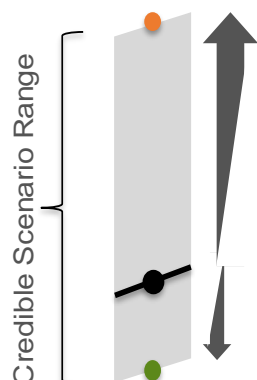
The Heat Up video is available on the SPEN website at :

[https://www.spenergynetworks.co.uk/pages/video\\_library.aspx?v=190](https://www.spenergynetworks.co.uk/pages/video_library.aspx?v=190)



# Our RIIO-ED2 load related plan

We assessed flexible, smart, innovative, and traditional solutions to deliver capacity. Our plan will deliver the Baseline scenario, but can flex anywhere within the low to high scenario range.



Scenario		Looped services & cut outs	LV network	Switchgear (fault level)	All other LRE	TOTAL LRE (excl. connections)
<b>High</b> 1.02m EVs 0.63m HPs +5.9GW DG	<b>RIIO-ED2 interventions needed</b>	70,380	904km LV cable 1,330 HV/LV substations	34 33kV sites 8 HV sites/groups 41 RTFLM & AFLM		
	<b>Investment</b>	£161.7m	£186.9m	£48.8m	£174.4m	£571.8m
<b>Baseline</b> 0.67m EVs 0.37m HPs +4.7GW DG	<b>RIIO-ED2 interventions needed</b>	43,384	563km LV Cable 708 HV/LV substations	28 33kV Sites 8 HV sites/groups 41 RTFLM & AFLM		
	<b>Investment</b>	£100.0m	£92.9m	£40.0m	£136.4m	<b>£369.3m</b>
<b>Low</b> 0.65m EVs 0.34m HPs +4.7GW DG	<b>RIIO-ED2 interventions needed</b>	40,921	540km LV cable 680 HV/LV substations	28 33kV sites 8 HV sites/groups 41 RTFLM & AFLM		
	<b>Investment</b>	£94.3m	£89.1m	£40.0m	£133.7m	£357.1m

Our load related plan **delivers the capacity our customers need**, in the timescales they need it

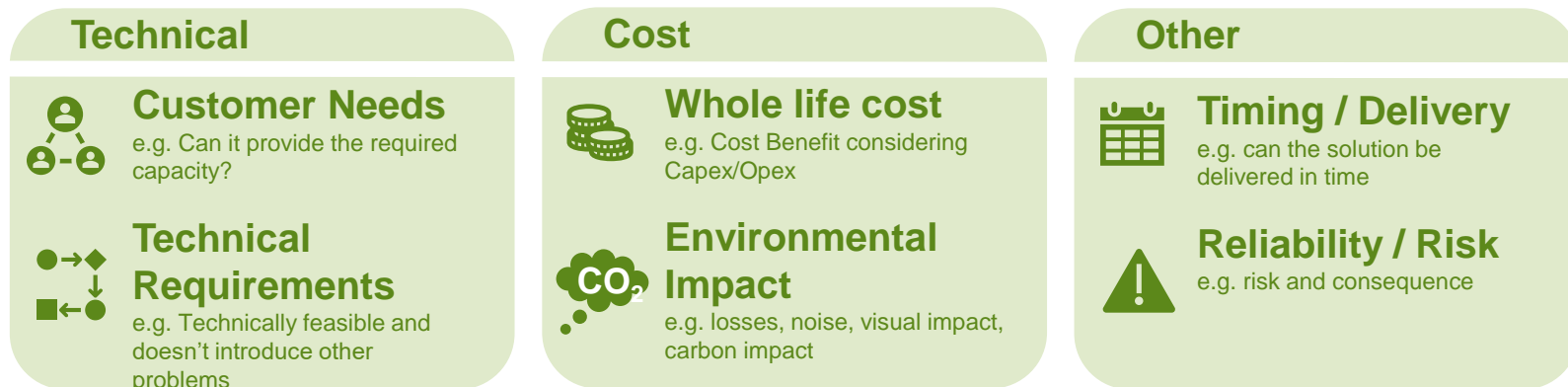


# Identifying and selecting solutions

Options assessments consider a wide range of solutions to manage network constraints:



Options assessed across a wide variety of factors:



All schemes included in the Load Related plan are underpinned by robust Engineering Justification Papers (EJP) and Cost Benefit Analysis (CBA).



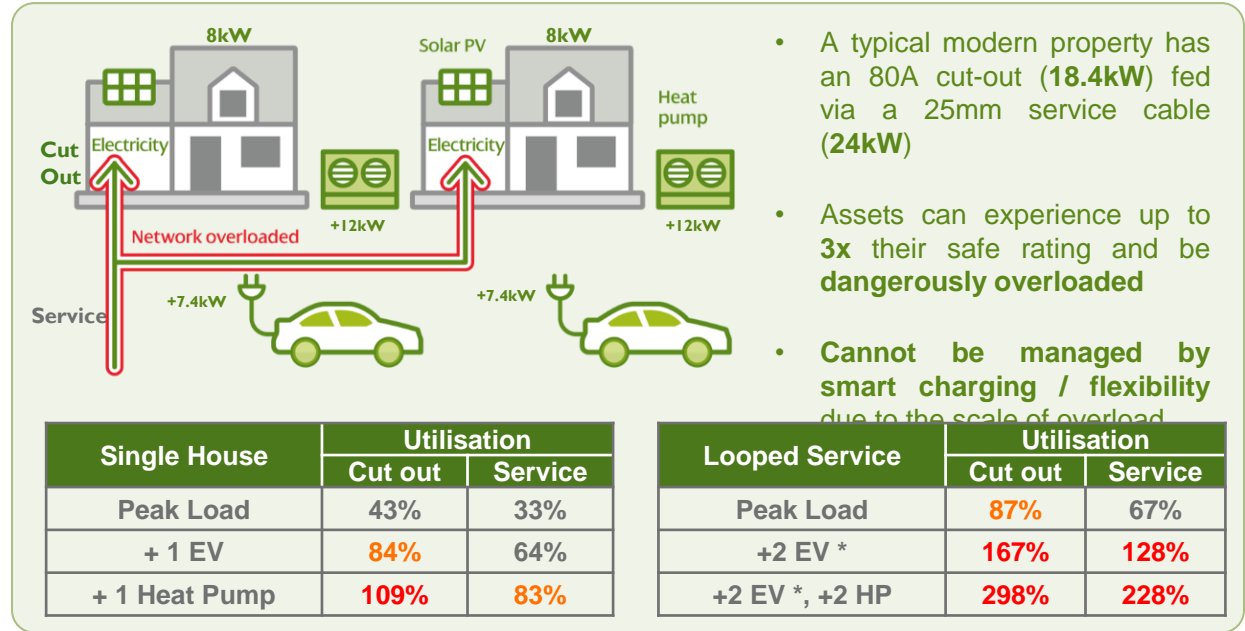
# Unbundling Looped Services

We must upgrade household electricity supplies to ensure that customers continue to receive a safe and reliable supply. Network investment is complementary to using flexibility.

## Network investment

**Cut out units:** older units will need to be replaced to facilitate LCT demand.

**Service cables:** up to **0.5 million\*** homes supplied by 'looped' service cables that cannot accommodate LCT demand with upgrade cost over the longer term up to £1.8bn.



\*Values for SPEN's distribution network

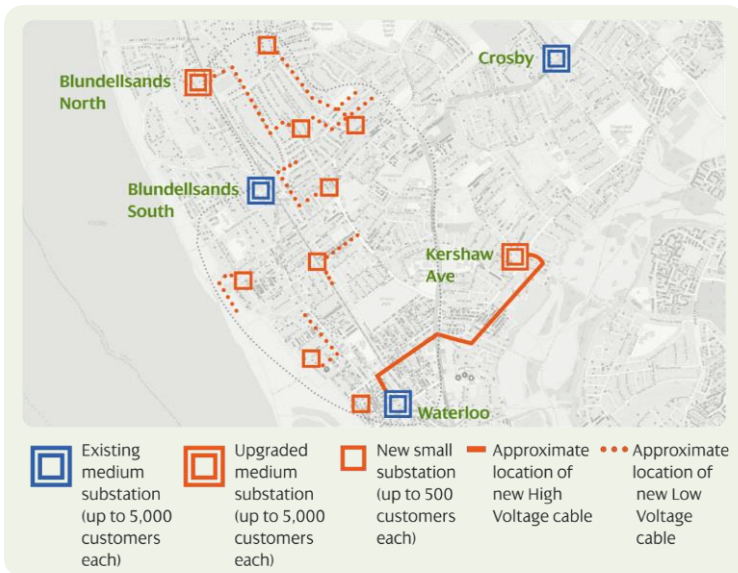


# Upgrading the LV Network – Case Study

3.5m homes, businesses, and public services depend on our electricity network. We investigated the ability of a typical network to accommodate decarbonisation.

 Flexibility and other market actions reduce the amount of network investment, but they will not be able to solve the challenge on their own – we also need to upgrade the network.

## 🚩 Case Study – Crosby, Liverpool



## 🔍 Key findings

Crosby is a **typical community** replicated across GB.

Even with **flexibility**, **investment** will be required in substations, cables and services.

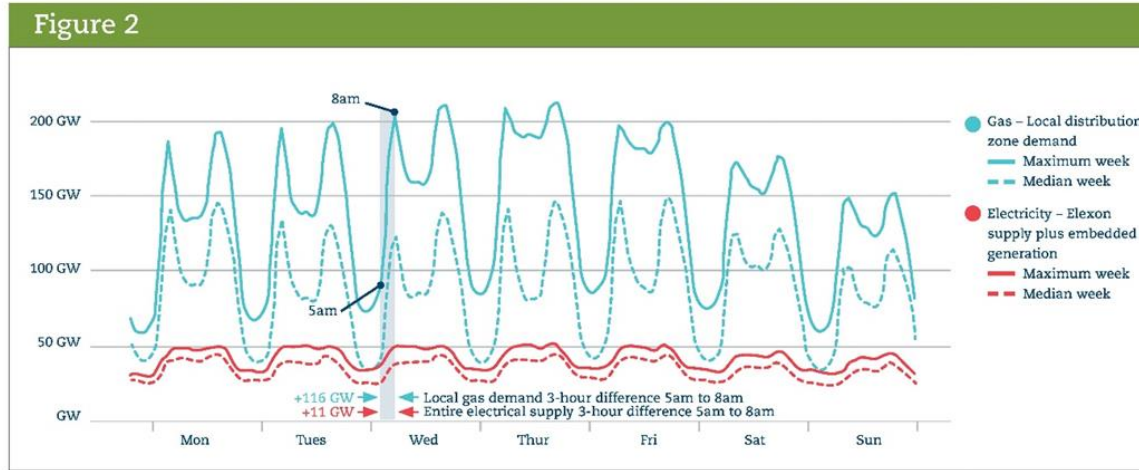
We have developed a range of least cost interventions, including; **LV monitoring**, **smart substations**, alongside **flexibility** (with >1.5GW tendered to date).

**Delays in investment risks security of supply and safety, increasing overall costs to society and will inhibit Net Zero.**



# Heat Peak Demand

- Peak demand is biggest concern for electricity networks



**Figure 2:** Britain's local gas demand and electrical system supply - median and maximum demand weeks. The week dating 22nd to 28th January is the median demand week for the 2017–2018 heating season. The week dating 26th February to 5th March represents the maximum demand week of the 2017–2018 heating season.

UK ERC Report: Challenges for the decarbonisation of heat: local gas demand vs electricity supply Winter 2017/2018



- Gas peak daily energy demand **4-times** that of electricity
- Mitigated peak electricity demand could increase to 300%

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# Constrained Renewable Generation

## Network capacity already constrained

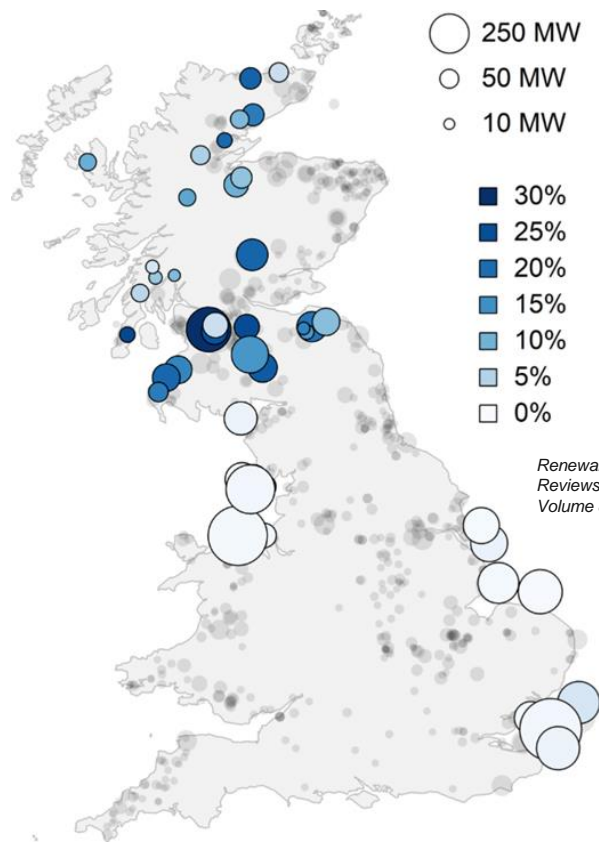
Transmission system reaches export capacity at times

Generators paid to switch off

Cost £100m+ per year to customers

Increasing year on year

Renewable generation needs to quadruple



*Renewable and Sustainable Energy  
Reviews  
Volume 86, April 2018, Pages 45-65*

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# Innovation Areas

## How might we innovate to reduce and smooth peak heat demand?

Energy efficiency measures

Customer behaviour:

- HP uptake and flexibility enablers

Demand side response:  
• Commercial flexibility

Demand side response:  
• Direct load control

Domestic storage:  
• Thermal & battery

Large scale storage:  
• Inter-seasonal thermal

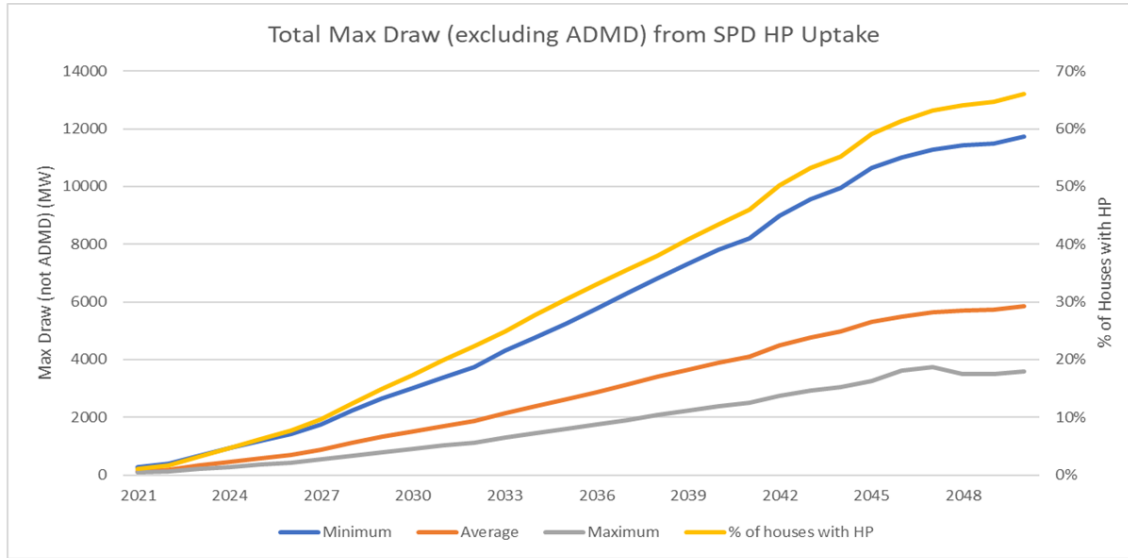
Other storage:

- Hydrogen, grid batteries, V2G



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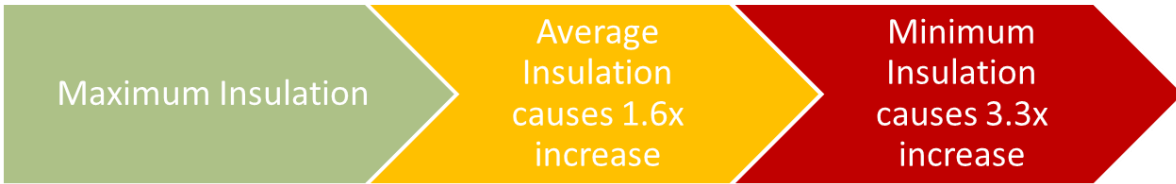
# Energy Efficiency



1970s

1990s

2010s



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# Customer behaviour

- **Customer research by Nationalgrid Gas found:**
- There's a major knowledge gap, but a willingness to act
- Public awareness is needed to help drive uptake
- Warm and comfortable homes are top priorities
- One size doesn't fit all
- Addressing the high upfront cost barrier is important
- Trust and accountability in decision-makers and authorities is crucial
- A fair and just transition is non-negotiable

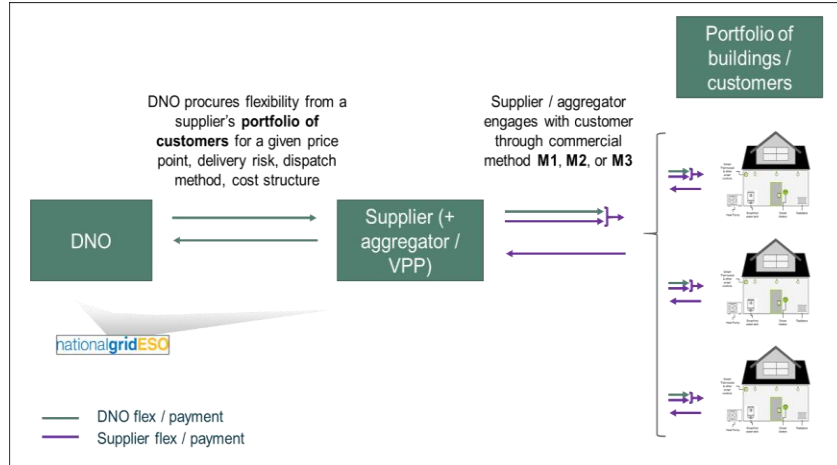
Heating our homes in a Net Zero Future: Understanding what matters to consumers  
Project Report for nationalgrid September 2020



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# Commercial flexibility

- WPD EQUINOX - Trialling 3 different methods



**Method 1 (M1):** 'Save in advance'  
In this method, the energy supplier, and in turn, the end-customer, receive an upfront flexibility payment in return for offering a fixed, minimum obligation of flexibility.

**Method 2 (M2):** 'Save as you go'  
In this method, the energy supplier, and in turn the end-customer, are not committed to a fixed, minimum obligation but instead have more control over the flexibility they offer based on (near) real-time signals delivered in an automated way.

**Method 3 (M3):** 'Save in advance & boost as you go'  
This method will combine aspects of both upfront flexibility payments (M1) and dynamic price signals (M2).

Value of customer flexibility to the DSO ~ £\*\* per year  
Need to stack value streams



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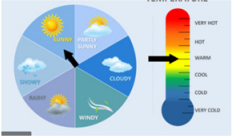
# Direct Load Control



Wind Farm status/  
forecast  
curtailment



Network model/  
Operational Data



Weather  
Forecast and  
Wholesale  
Market price

Network  
Monitoring

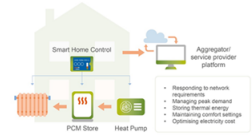


DSO  
Operational  
Forecasting &  
Planning



Load forecast &  
heat scheduling

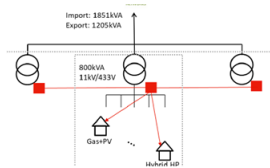
Heat Status/  
available flex



ASHP + Thermal  
Store



Electric Storage  
Heating



Smart Local  
Energy Systems



Better future, quicker

# Domestic Thermal Storage

## Heat Pumps & PCM Thermal Stores

- **Re-heat** will trial in **~150 homes** across East Ayrshire, East Dunbartonshire and Highland council areas
- Keep load within network limits while maintaining customer comfort
- Customer bill savings of up to **£136 per annum** are expected by making heat load flexible
- Solution rollout could avoid or defer reinforcement in 606 clusters across SPD saving **£54m** by 2040



## Storage Heating

- **4D Heat** project looked at how storage heating charging could be better aligned with renewable generation
- Estimated benefits of **£24m** per year through avoiding payments to curtail wind farms
- Our **Flexible Tower** project is demonstrating through trial how storage heaters in tower blocks can support flexibility markets
- In addition to network, customers will benefit through additional revenue streams

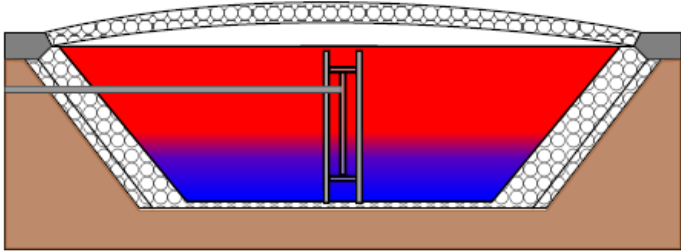


**Better future, quicker**

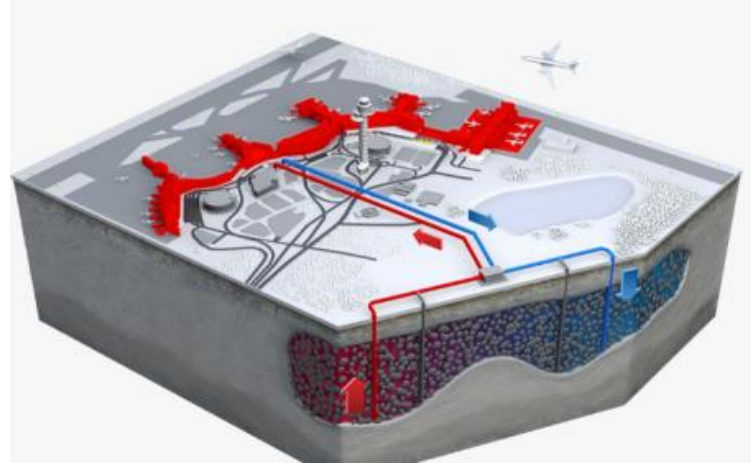
# Inter-seasonal storage

## INTEGRATE project is investigating

- Danish system: Pit-thermal energy



- Dutch system: Aquifer-thermal energy



- Large systems achieve very low costs
- What is the effect on the whole energy system?



**Better future, quicker**



# Other Storage

- Hydrogen electrolysis
- Grid scale batteries
- Vehicle to Grid



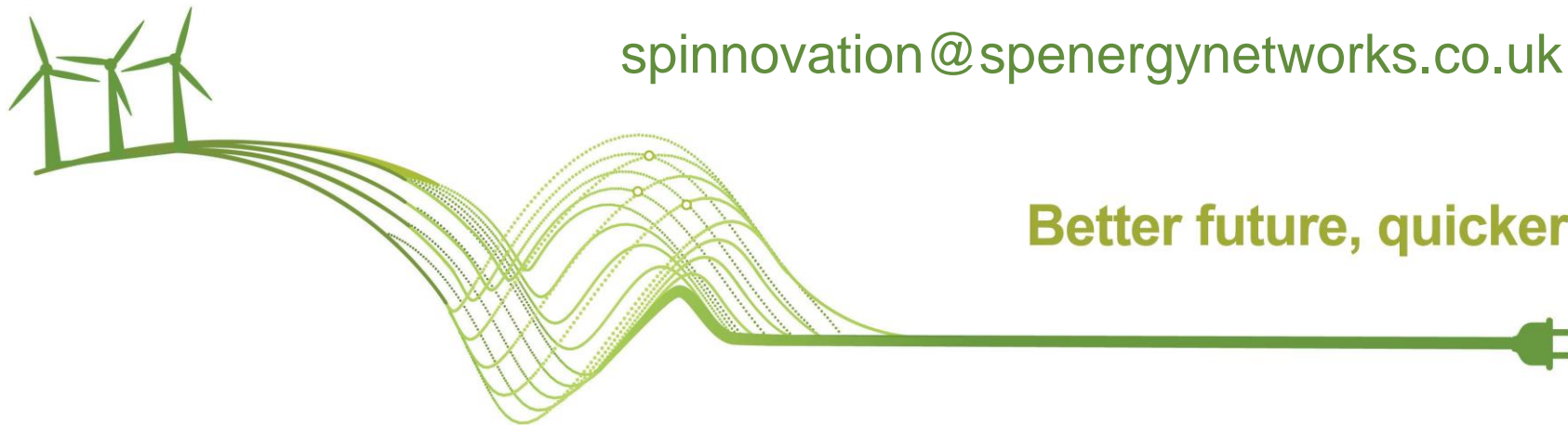
Better future, quicker



# Thankyou

[spinnovation@spenergynetworks.co.uk](mailto:spinnovation@spenergynetworks.co.uk)

**Better future, quicker**



# Community Energy Plans for RIIO-ED2

- ▶ Gillian Hurding
- ▶ ED2 Community Energy Lead

# Community Energy

Strengthening the sector's contribution to a low-carbon & more efficient electricity network

SP Energy Networks

Image source: Community Energy Scotland. HSO Project



# Defining Community Energy

## Defining community energy

Community energy refers to the delivery of community-led renewable energy, energy demand reduction and energy supply projects, whether wholly owned and/or controlled by communities or through partnership with commercial or public sector partners (Community Energy England). Community energy projects can include the local generation of renewable power or heat, the collective purchasing or peer-to-peer trading of energy, energy efficiency improvements or low carbon community transport and EV charging (The Environmental Audit Committee).

With democratic control, shared benefits and active participation at its core, community energy supports the major shifts in culture and infrastructure needed to reduce the impact of climate change and increase security of local energy supply (Community Energy England).



# Our support for community energy projects to date.

Our customer and stakeholder engagement to date as told us community projects would benefit from SPENs input in to the following 4 areas:

-  Strategic Support
-  Educate
-  Practical Support
-  Communicate

## Strategic Support (including independent research)



## Educate | Practical Support | Communicate



## Our Zero Carbon Communities Hub



### LOCAL ELECTRICITY BILL



## Practical Support:



# Supporting Community Energy in ED2

Facilitating the sector  
during 2023 to 2028  
...and beyond





# Working with our customers and stakeholders to develop our RIIO-ED2 Plan



# Collaborating with existing organisations already operating in this space

## Community Energy England

**Mission:** To help active community energy organisations implement new projects, innovate, improve and grow.

**Vision:** A thriving community energy sector integrated into and truly powering a fair, zero-carbon energy system.

Founded in 2014



## Community Energy Scotland

**Mission:** To strengthen and empower local communities by helping them to own, control and benefit from their local renewable energy resources, control and reduce their energy costs, regenerate their communities and play their part in the low carbon transition.

Opened 2008



## Community Energy Wales

**Mission:** To support and accelerate the transition to a fair, low carbon and community-led energy system.




**Vision:** Putting people at the heart of the energy system.

Constituted 2012





## Opportunities, barriers and SPEN's proposal

	SPEN's Zero Carbon Communities (ZCC) proposed COMMITMENTS
 <p><b>Our ZCC Community Energy Strategy (annually assessed)</b></p>	<p><b>ZCC Community Energy Strategy – reviewed annually</b> Our strategy will be reviewed every year to make sure we are learning as we go and adjusting to changes in the external environment...</p>
 <p><b>Awareness raising &amp; education (delivered in partnership)</b></p>	<p><b>ZCC– Awareness raising and educational outreach</b> We will deliver community energy campaigns similar to those we already do for our severe weather warning messaging at scale to raise awareness of the changes coming to the energy sector and how individuals and their communities can participate in local energy schemes. We will work alongside local delivery partners...</p>
<p><b>Technical support, optioneering and sign-posting</b></p>	<p><b>ZCC– Technical advice, optioneering and sign-posting</b> We will seek to offer extra hand-holding support to individuals and their local communities who wish to explore LCT activities and community energy schemes in their local area. We will sign-post to impartial support organisations and link to local energy planning initiatives of local authorities where these exist...</p>
 <p><b>Ring-fencing 25% of Distribution Net Zero Fund</b></p>	<p><b>Ring-fencing ~25% of our proposed Distribution Net Zero fund for community energy projects.</b> Community groups will still be able to access other categories of the fund.</p>





## Question #1

Do you agree with our stakeholder feedback so far that DNOs should dedicate resources to activities which aim to increase the number of community-led renewable energy focused projects ?



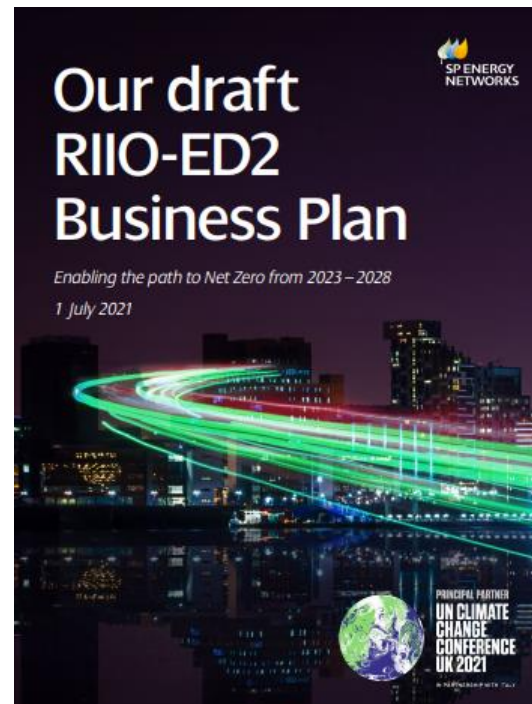
## Question #2

Do you agree with the 4 key areas where we are proposing to dedicate resource?



## A two step approach to funding community energy

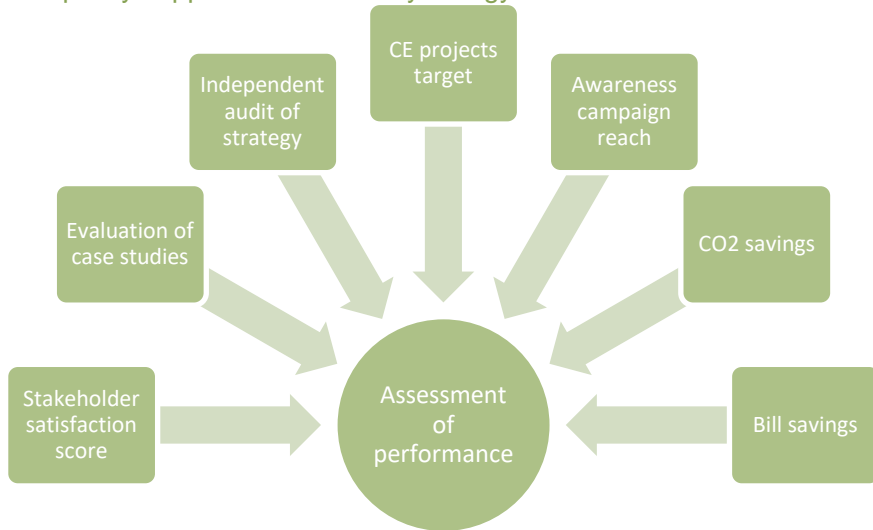
- £2.6m baseline allowance for period 2021 to 2026 to carry out our ambitious Community Energy Strategy and related commitments and achieve the minimum performance targets.
- Making use of Ofgem's incentive mechanism to provide more support to communities (especially in response to changes in the external environment). SPEN would fund the additional resource required to deliver this (~£2.08m for ED2) and would hope to recover our costs from the ODI reward if outputs achieved.



# Our proposals for measuring investment impact of our incentive

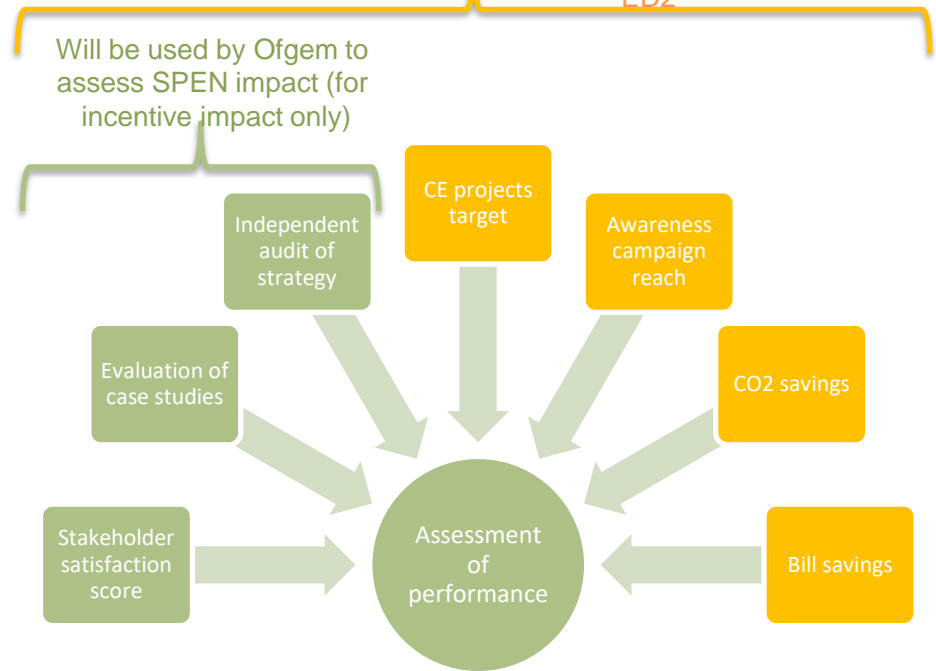
## VERSION 1 (submitted to Ofgem in July 2021)

- Draft feedback suggests draft proposal is overly complex and would create too much regulatory burden on regulator during annual assessment
- Impact in these areas would not be solely related to SPENs activities and is linked to changes in external environment e.g. – policy support for community energy



## VERSION 2 (to be submitted to Ofgem Dec 2021)

Would be captured by SPEN and CE bodies to improve impact data over ED2





## Question #3

Do you agree with us making use of the RII02 bespoke incentive mechanism to increase our focus on community energy?



## Question #4

Do you agree with our proposals for measuring success and reporting on the impact of our investment of community energy? Are there any other metrics you think we should capture? (for improved industry data, if not for Ofgem assessment)



## Overview of ICE

- ▶ Rachel Shorney
- ▶ Stakeholder Engagement Manager

# Policy Updates

Change of location for our SPEN policies - [www.spenergynetworks.co.uk](http://www.spenergynetworks.co.uk)

They can now be accessed via both areas on the SPEN website:

- Getting Connected
  - Document Library
- About Us
  - Document Library

We are continually updating our Policies and Standard Documents.

Please send any requests or queries to our stakeholder team so that we can incorporate your requirements into our programme of updates.

- [gettingconnectedupdates@spenergynetworks.co.uk](mailto:gettingconnectedupdates@spenergynetworks.co.uk)

# Customer Focus Group

## Changes to the application webforms - why the need?

LCT equipment size and location information will enable SPEN to make informed decisions on where reinforcement of the network is required. The webforms will be changed to collect this information.

## What's changing?

- Modernised look and feel – mobile friendly
- User experience improved with intuitive flow
- Follows common websites structure
- Simple to answer questions – less jargon
- Progress meter
- Add load calculator

## Which forms?

- New Supply – information gathered and used on “energisation”
- Alteration to point of supply – information gathered and transferred to system
- Additional Load – information of existing devices gathered and transferred to system

## Next Steps

- Go-live by the end of November 2021



# RAdAR Working Group

Held 2 RAdAR Working Group meetings to date.

Dates for the next sessions:

- Wednesday 17<sup>th</sup> November 2021
- Wednesday 9<sup>th</sup> February 2022

Update on progress:

- Detailed exact customer requirements for the system
- *Reviewing internally with our Business Change team:*
  - *Quick and easy ability to download files – e.g. suggest zip file*
  - *Improve the communication between SPEN Designers and ICP Designers*
- Investigating options for longer term solutions to some of the suggested improvements:
  - Additional functionality to update the user on progress of activity
  - May be part of a wider Connections Transformation in ED2

# Feedback and Q&A Session

- ▶ Rachel Shorney
- ▶ SPM Stakeholder Manager
  
- ▶ Stuart Walker
- ▶ SPD Customer Engagement Manager

# Feedback and Q&A Session

- ▶ Rachel Shorney
- ▶ SPM Stakeholder Manager
  
- ▶ Stuart Walker
- ▶ SPD Customer Engagement Manager

# SPEN Preparing for Net Zero Conference

## Wednesday 8<sup>th</sup> September 2021



**Thank you for your time today.**

*Your feedback has been useful and we will follow up and incorporate your comments when planning our next session.*

### **Upcoming events for the calendar:**

Preparing for Net Zero Conference

Wednesday 1<sup>st</sup> December 2021

- 09:30 to 12:00
  - Preparing for Whole System Approach
- 13:30 to 16:00
  - Preparing for EV and Heat