

# Connections Customer Forum

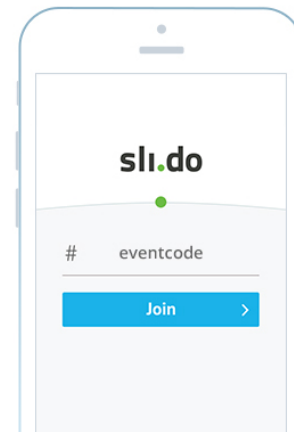
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17 April 2019  
National Railway Museum York



# Welcome

- We are here to help you get connected.
- We want to hear from you.
- Ask questions at any time using Sli.do.
- Take the opportunity to talk to our team.
- Please remember your feedback forms.



[www.sli.do/](https://www.sli.do/)

#getconnected **JOIN**

# Connections Update

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Mike Hammond  
General Manager



# Connections update – April 2019

## CURRENT PERFORMANCE

- BMCS (YTD) Northern Powergrid 4th overall (88.6%) Connections 4th (87.3%).
- 2018/19 reg. year - LVSSA&B average time to quote & deliver remained outside Ofgem reward target.
- Incentive on Connections Engagement (ICE) - 2017/18 zero penalty.
- 22 ICE actions and associated outcomes delivered in 2018/19; 12 actions in our 2019/20 ICE Looking Forward work plan.

## ONGOING INITIATIVES

- Refinement of small works enduring process ongoing.
- Technical innovation - Active Network Management, storage, DSO transition.
- Emerging technology - Electric Vehicles (EVs) and heat pumps.
- Stakeholder engagement driving our service improvement plans.

## OUTPUTS DELIVERED

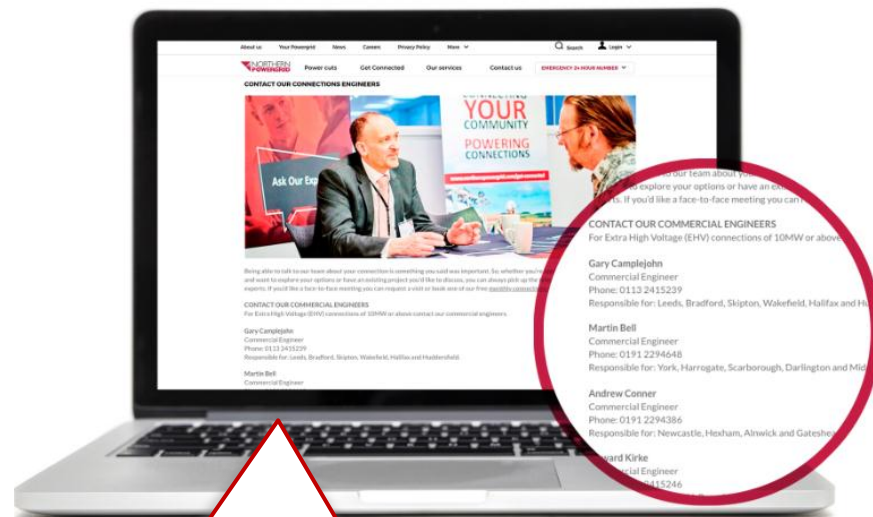
- ✓ Connection offer expenses (A&D fees).
- ✓ New requirements for generators.
- ✓ Fast track storage applications (G59/G99).
- ✓ New EV and heat pump process.
- ✓ Connections webinars and workshops.

## ED1 ENVIRONMENT

- Minor cons BMCS reward/penalty.
- Minor cons TTC/TTQ reward.
- Large works ICE incentive - penalty only.
- Constrained networks - flexible solutions.
- DNO to DSO transition.

# Focus on upfront engagement

- We continue to focus on delivering better customer service through increased upfront engagement and better pre-application conversations.
- Pick up the telephone - contact details for our connections engineers on our website.
- Request a site visit.
- Book one of our monthly surgeries.
- Attend our Connections Customer Forums.

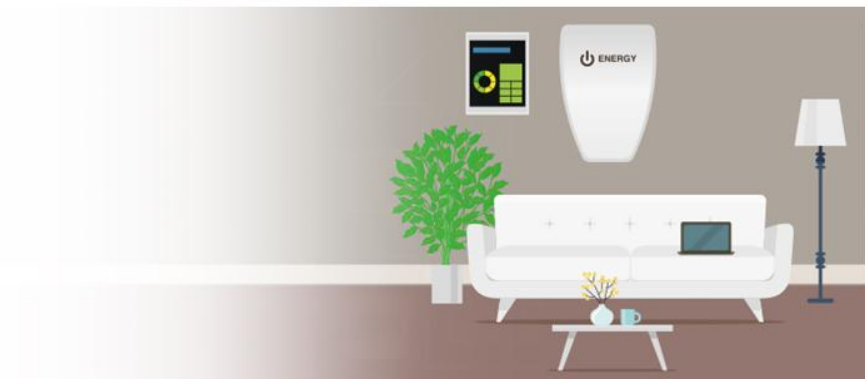


Contact details for our connections engineers are published on our website at:

<https://www.northernpowergrid.com/contact-our-connections-engineers>

# Fast track storage applications

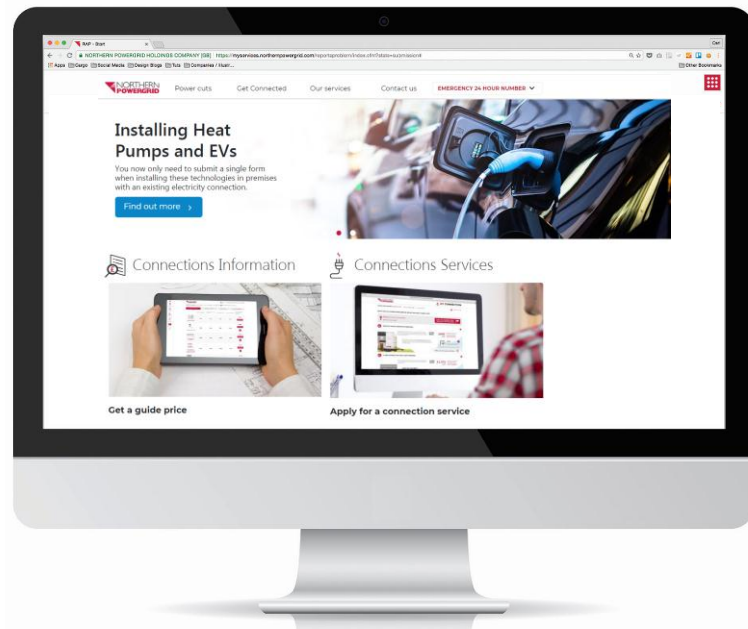
- New fast track process for energy storage devices that meet certain criteria:
  - Connection to a single premises where there is existing generation that conforms to G98 (previously G83) or;
  - New generation and storage with two G98 type tested inverters.
- Find out more at:  
<https://www.northernpowergrid.com/fast-track-electricity-storage-applications>



# EV and heat pump installations

- Simplified process for installing EVs and heat pumps.
- Single application form for premises with an existing electricity connection.
- Find out more at:

<https://www.northernpowergrid.com/heat-pump-and-electric-vehicle-installation-process>



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# Asset Management Update

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Derek Fairbairn  
System Design Manager



# A&D fees – what they do

- Connection Offer Expenses (more commonly known as A&D fees) were introduced to:
  - Ensure fairer allocation of costs, and;
  - Help improve the efficiency of the connection process and the levels of service customers receive.

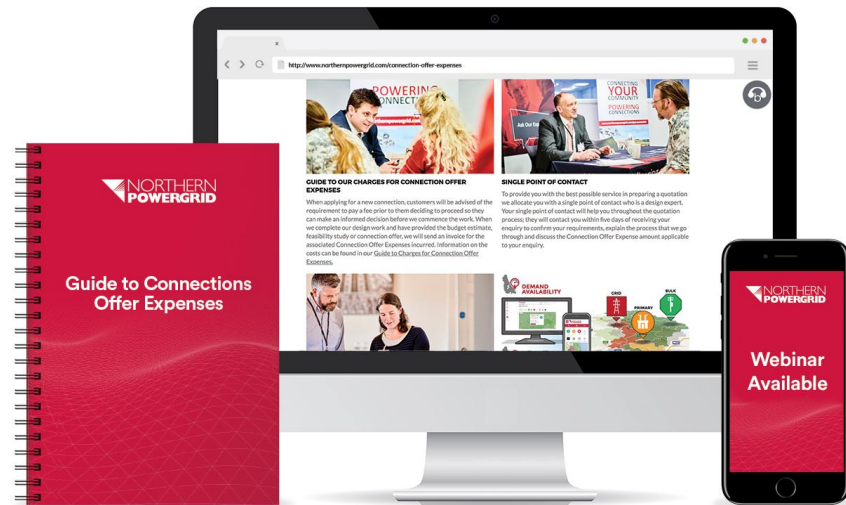


# A&D fees - our position

- We are legally obliged to provide a connection offer under the Electricity Act and in doing so incur connection offer expenses.
- We are only permitted to recover the reasonably incurred costs of providing those connection offers.
- A&D fees are designed to be cost neutral and we are not making a profit.
- We have established our policy position and we believe we have a fair, cost reflective approach that meets the intentions of the regulations.
- Our implementation approach is driving better conversations with customers, across all market segments and we continue to strive to improve the service we offer, driven by conversations with our customers and industry best practice.

# More information

- Further information can be found at:  
<https://www.northernpowergrid.com/connection-offer-expenses>
- Our customer guide is also available on our website at:  
<https://www.northernpowergrid.com/asset/5/document/4238.pdf>



# What is available without incurring a fee?

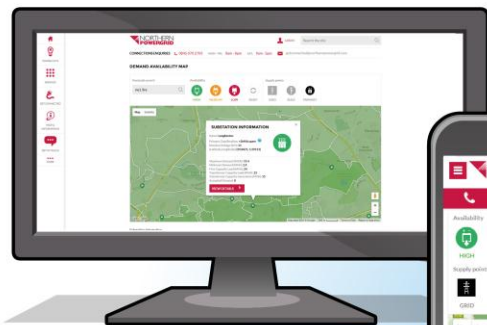
- There is a wealth of information available to you before you make a formal connections application:
  - Ask our experts
  - Demand and generation availability heat maps
  - Tools to calculate an indicative price
  - Contracted capacity register  
<https://www.northernpowergrid.com/contracted-capacity-register>
  - Long term development statement  
<https://www.northernpowergrid.com/long-term-development-statement>

# Network availability heat maps

Network capability to connect large-scale developments to major substations  
[www.northernpowergrid.com/demand-availability-map](http://www.northernpowergrid.com/demand-availability-map)



**DEMAND  
AVAILABILITY**



**GENERATION  
AVAILABILITY**



Network capability to connect large-scale generation developments  
[www.northernpowergrid.com/generation-availability-map](http://www.northernpowergrid.com/generation-availability-map)

**GRID**



**PRIMARY**



**BULK**



Would training on how to use our heat maps be useful?

# Indicative cost calculators

**CALCULATE AN INDICATIVE PRICE**

For Simple connections, the quick calculator will show you a typical cost based on similar connections work we have carried out in the past.

**1 YOUR PROPERTY TYPE?**

Domestic Non-domestic

**2 YOUR LOCATION? NOT SURE?**

Rural Urban

**3 CONNECTIONS**  
Typical costs assume that your connection is within 20m of our network and that cable will be running across 1 minor road.

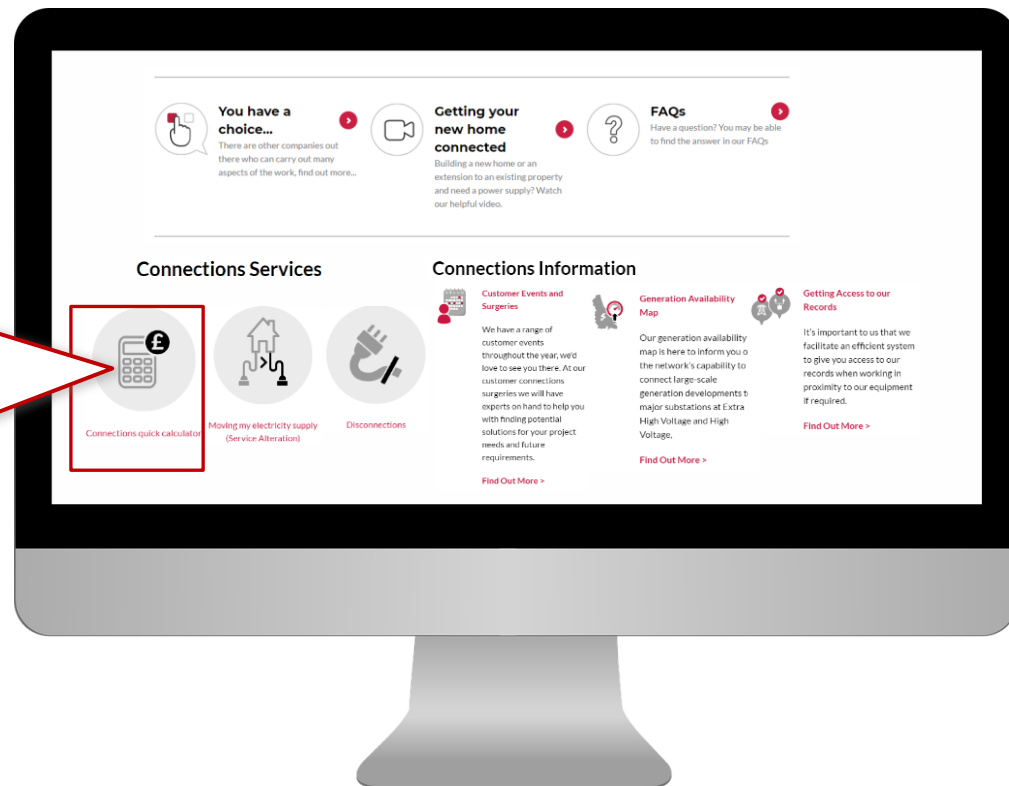
How many connections do you require?

Cost based on a connection within  metre(s) of our network

Cost includes running cable across  minor road(s)

**4 INDICATIVE ESTIMATE: £0**

**NOT SURE?**  
Contact an expert for advice



# New LV budget estimating tool



- Benefits:
  - New self-service method to obtain Low Voltage (LV) budget estimates.
  - Users will be able to view locations and the estimated costs of potential connection points.
  - Quick response – potentially in minutes.
  - Consultation during Q1 and Q2 2019.

Location...

Landlord / Commercial / Industrial

Heat Pump (Form A)

Domestic Electric Vehicle Charger

Public Electric Vehicle Charger (2)

No. at ckn Size of Charger

No. at ckn	Size of Charger
2	7 kW
1	50 kW
0	Select...

G83 PV

Single Welder

Single Motor

Service Cable Length 15

Reset Submit

"A lot of my enquires are at planning stage and the costs I am looking for are general... I would like to know if there is a speedier avenue for budget/indicative cost?"





# Introducing Safedig2

- Benefits:
  - Single environment for all Northern Powergrid SafeDig mapping information.
  - Modern technology compatible with modern browsers.
  - Individual login and passwords.
  - Choice of method for map selection.
  - PDF response for ease of distribution.



# Constraints and curtailment



- Following a comprehensive review and consultation with stakeholders we have agreed our approach.
  - Generators with assets in our region are encouraged to participate in our DG owner operator forum where they can engage with operational experts and get accurate information on planned and unplanned outages.
  - We also encourage you to make use of available tools and to engage with our experts pre-application.
  - Our approach aligns to the recommendations of the Open Networks Project Workstream 2, Product 7 – Provision on Constraint Information  
<http://www.energynetworks.org/assets/files/Provision%20of%20Constraint%20Information%20-%20VPublished.pdf>.



# Policy and Markets Update

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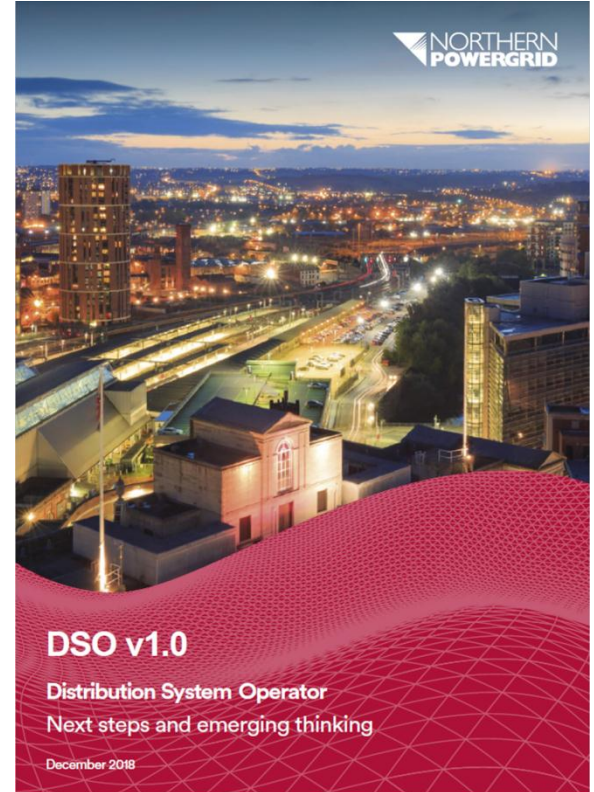
Jim Cardwell

Head of Policy Development



# Transitioning to DSO – consulting on our intentions

- DSO forms a key part of our stakeholder engagement activity and we have been sharing our thoughts with external parties since 2017
- We have set out our thinking in our DSO v1.0 document and are seeking views through consultation
- We have committed to update in June 2019 and on a rolling six-month basis thereafter
- We have separated our thinking:
  - Next steps - that we are getting on with such as implementing flexibility tenders
  - Emerging thinking on potential pathways to 2030

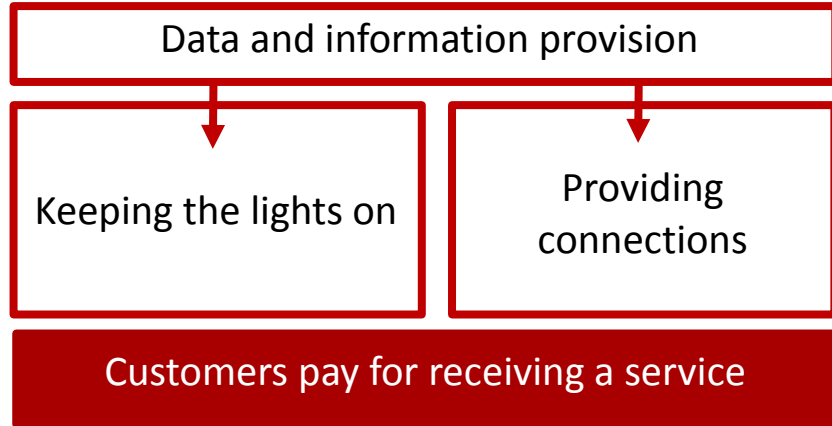


# An evolving world



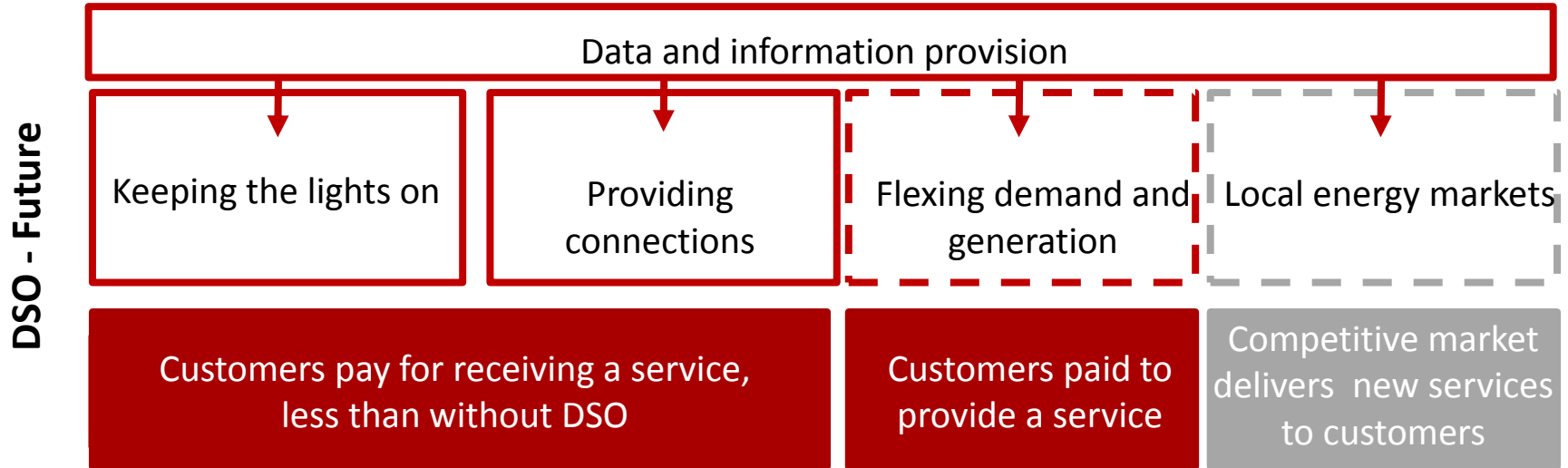
# What it means for our customers

DNO - Today





# What it means for our customers



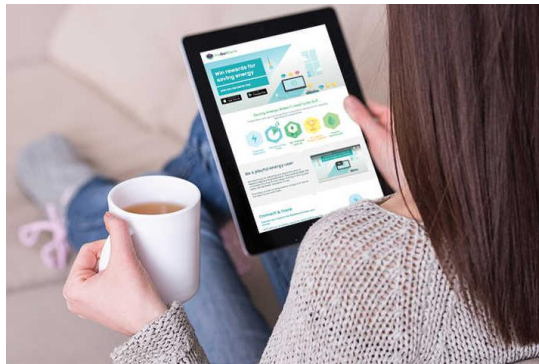
## DSO as a set of functions

**DSO = DNO + Network flexibility + Customer flexibility**

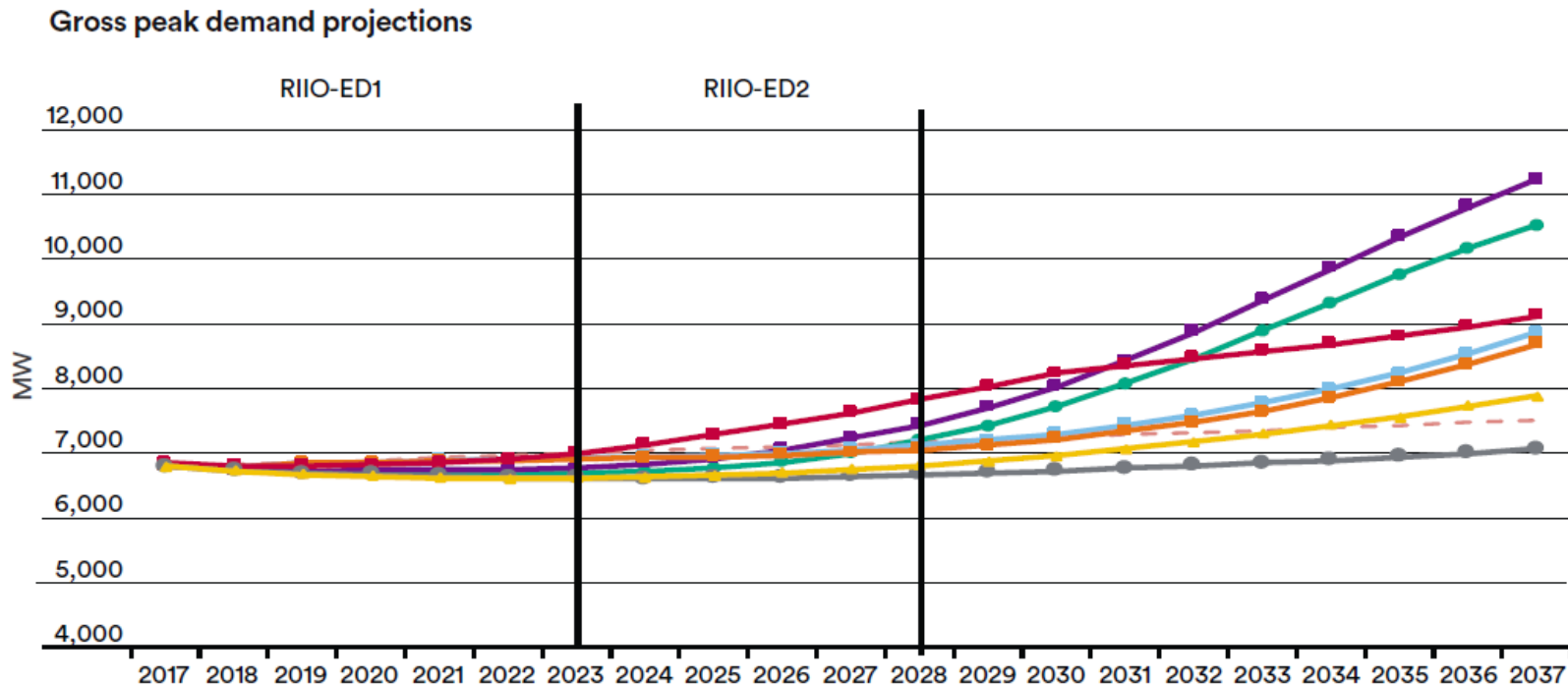




# Exploring the future: our innovation portfolio

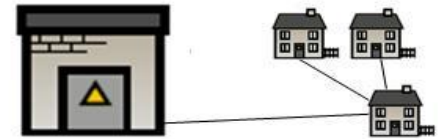


# Scenario based modelling informing our network needs





# SMARTGRID TIMELINE



## Primary (town) networks

## Local (street) networks

**1960s** ✓ Locally managed circuit breakers

✓ Dumb, 'fit and forget' passive assets

**1970s** ✓ Post-fault circuit re-closing

**1980s** ✓ Remote operation of circuit breakers  
✓ Monitoring one-way power flow  
✓ Low bandwidth communications

**1990s** ✓ Equipment rationalisation driven by electronics

✓ Temporary LV fault management devices

**2000s** ✓ Remote reconfiguration post-fault

✓ Low bandwidth HV remote control

**2015 - 2023 (ED1)** ✓ Self-healing networks  
✓ Real-time capacity management  
✓ Two-way power flow monitoring  
✓ Advanced substation control devices  
✓ Wideband flexible communications (IP-based)

✓ Time of use demand data  
✓ Remote monitoring of LV circuit power flow  
✓ Automated control of voltage  
✓ Fault prediction and smart "fuses"  
✓ Wideband communications  
✓ Harvesting network data from existing HV devices



# Implementing first phase of customer flexibility



**2019-2023**

Capacity required for flexibility  
up to 14 sites, 16MW



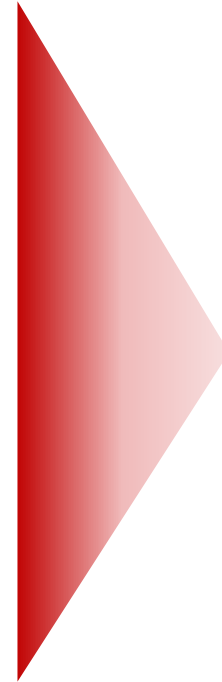
**2023-30**

Capacity required for  
up to ca. 40MW



# Customer flexibility – a significant change built on trust

- ✓ Blend of RIIIO regulation and incentives
- ✓ Track record introducing positive changes
- ✓ Company culture promoting service ethos
- ✓ **Clear definition of roles within our teams**
- ✓ **Reporting and visibility of our actions**



**LEVEL PLAYING FIELD  
COMPETITION**

**Network solutions  
VS  
Customer flexibility solutions**

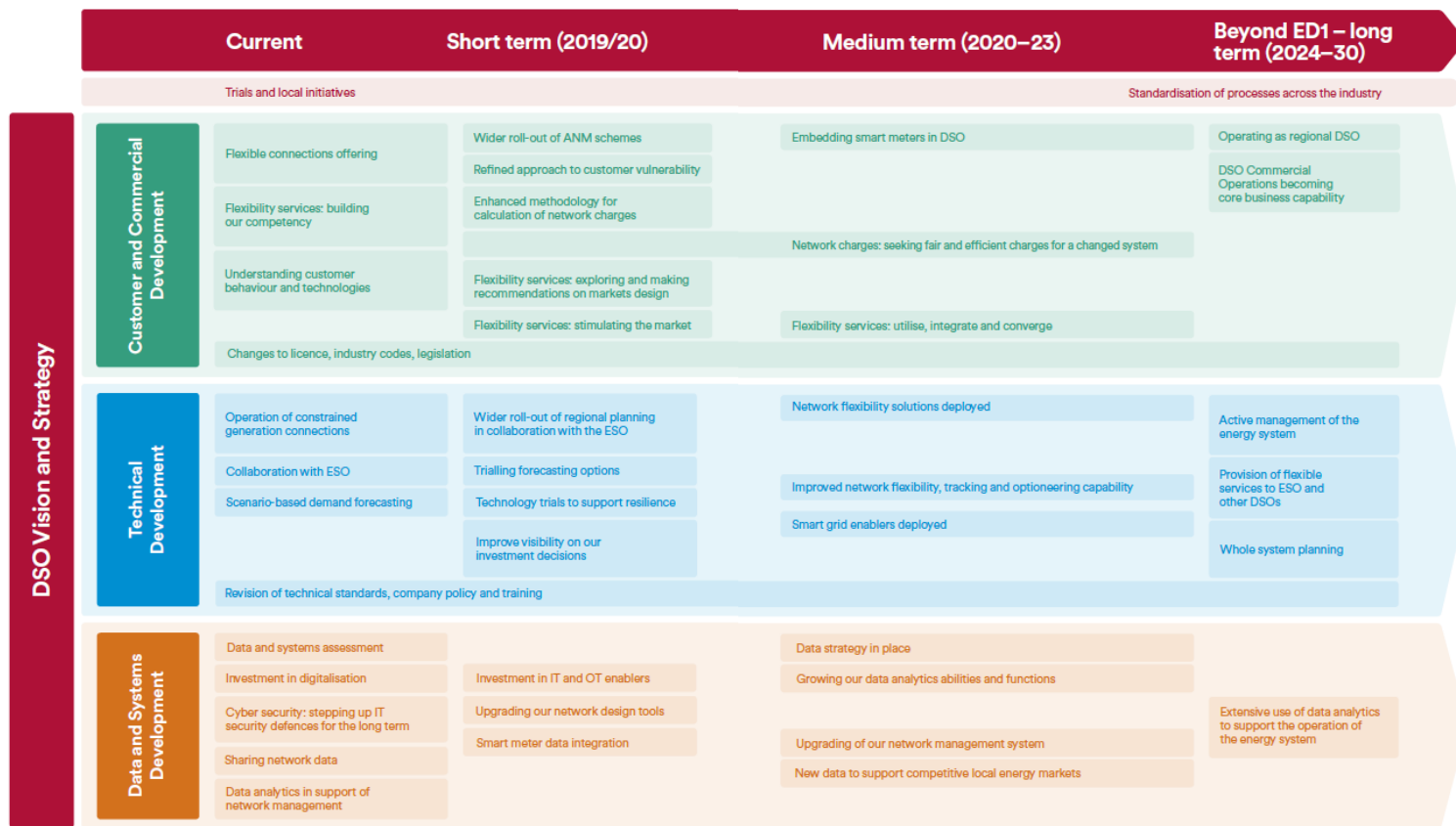


# Future services: our guiding principles

1. Led by our customers' needs
2. Promotes sustainability by being efficient, fair and inclusive, and better for the environment
3. Requires a right-sized regulated business supporting competitive markets for flexibility
4. Changes to duties that optimise the system as the volume of distributed energy resources increases



# Our emerging thinking: potential pathways to 2030





# Charging reform – seeking fair and efficient outcomes

- Moving revenue from volumetric to fixed charges
- **Decision:** Summer 2019
- **Likely implementation:** April 2022

## Targeted Charging Review (TCR)



## Access & forward looking charges Significant Code Review (SCR)



- Network access rights, review of DUoS and TNUoS and the distribution connection charging boundary
- **Decision:** Autumn 2020
- **Likely implementation:** April 2023

- DCP268 - R/A/G charges for all customers
- Supporting the move towards half hourly settlement
- **implementation:** April 2021



## Normal industry change



## Non-SCR Charging Reforms (Open Networks)

- Allocation of access rights, including improved queue management and the scope for trading
- **Decision:** Autumn 2020
- **Likely implementation:** April 2022 or 2023





# Questions?

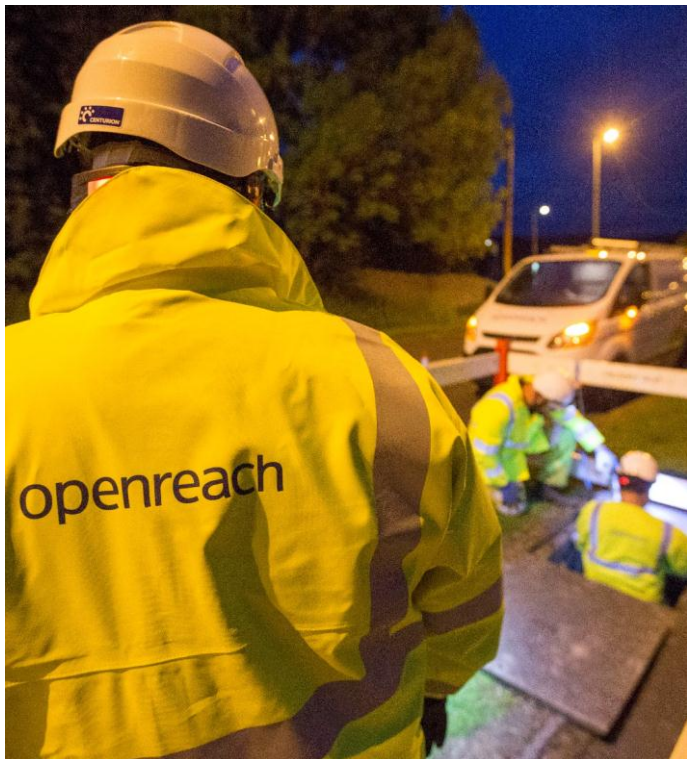


# Guest Speaker

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Rob Williams  
Openreach





openreach

**£5bn**  
annual revenues

**£13bn**  
invested in our  
network over the  
last 10 years



**24,700 vans**  
across the UK



More than   
**32,800**  
people



We recruited over  
**2,500 field engineers**  
in the first three  
quarters of 2018/19

**Upgrading our 12  
regional training schools**

We're continuing to invest  
more in our training schools  
by uplifting them to Blueprint  
standard and rolling out more  
Open Street facilities across  
the UK that emulate our  
network end to end.

Perfect for all Openreach  
employees to learn about  
our network.

Our network is over  
**173 million km**  
long enough to go around the world 4,314 times



**5,600**  
exchange  
buildings



Over  
**100,000**  
street cabinets



**4.8m**  
distribution points  
(telephone poles  
and junction boxes)



Our network is available to  
**31.8m premises**

**620**

We work on behalf of more than  
**620 Communications Providers**

# Our Service Improvement Plans

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Mike Hammond  
General Manager

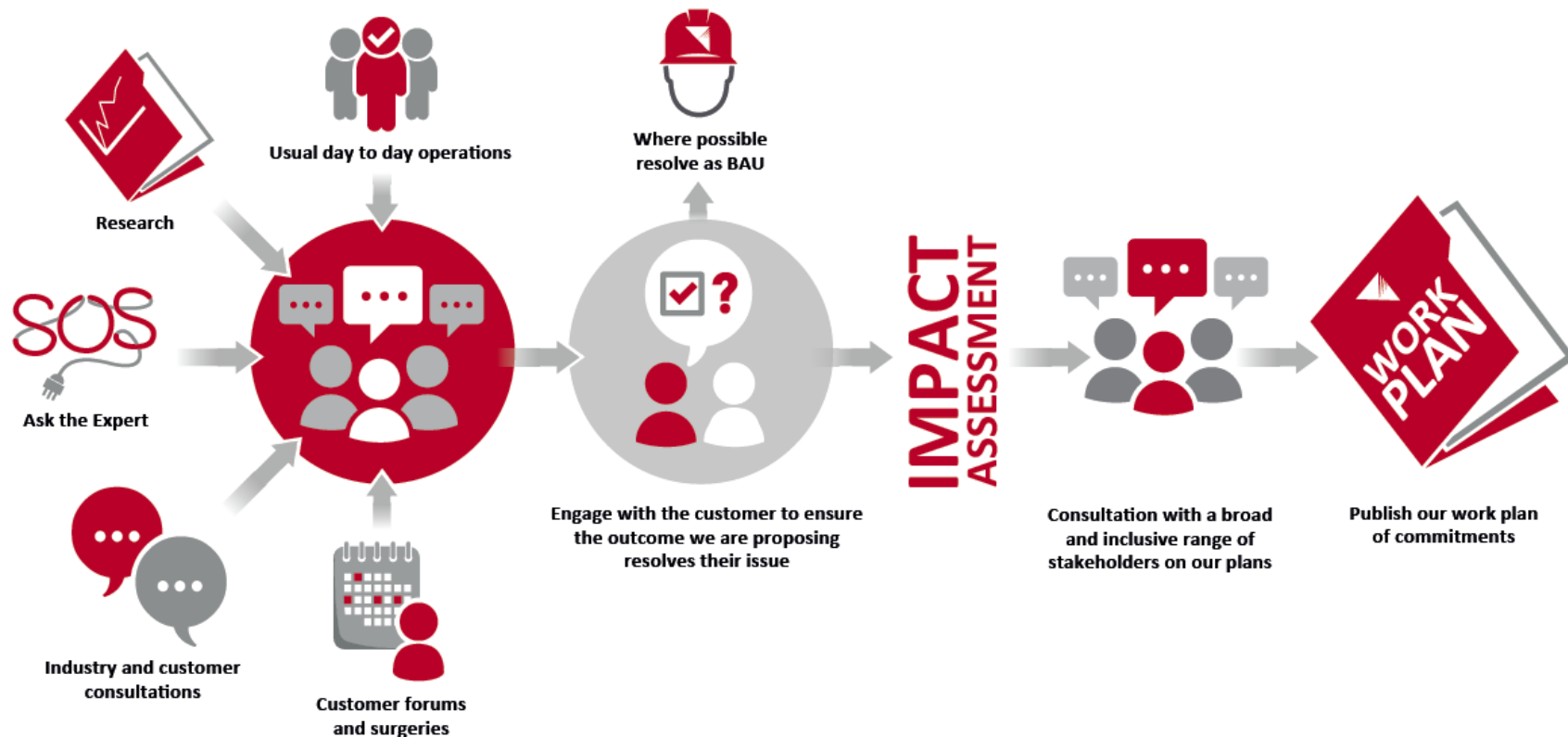


# Incentive on Connections Engagement (ICE)

- The Incentive on Connections Engagement (ICE) drives DNOs to continually improve service to large works connections customers.
- Each year we produce a detailed work plan plan of service improvement commitments developed together with our connections customers and stakeholders.
- We are now seeking your feedback on our plans.



# Developing our plans





# Acting on your feedback

- Most feedback can be addressed through contact from one of our team or changes to BAU practices.
- Some comments relate to a non-connections issue or a customers specific project.
- Some of the feedback we receive is a positive endorsement of our service or engagement activities.
- Some comments relate to emerging connections topics which we maintain a watching brief on.
- Some of the feedback generates actions in our ICE plan.

"Many thanks for today's event and for looking after us so well. It was very helpful to meet you and your colleagues and to be able to discuss many issues of relevance to our connections work."



# Acting on your feedback



*"Very useful webinar - thank you! Could you give any details on where else you will be considering deploying ANM?"*



*"A lot of my enquires are at planning stage and the costs I am looking for are general... I would like to know if there is a speedier avenue for budget/indicative cost?"*



*"...most of the DNOs issue KMZ (Google Earth) files of their network (HV and above). Is this something you are doing yet?"*



*"It may be helpful to have a list of engineers to discuss a project with before applying"*



*On "ongoing feedback": We have seen SSE adopt the practice of "DG owners operators forum" at our request, mid-year."*



*"Bulletin giving info on progress and expected offer date"*



*"The storage commitments are commendable and we would ask NPG to go further and publish guidance on how generators should go about making an application for hybrid generation-storage sites"*





# Delivering our 2018/19 commitments

- Introduced a quarterly DG owner operator forum.
- Developed a new process to supply detailed network data in a range of formats compatible with the IT platforms and applications our customers use.
- Published contact details for all our engineers online.
- Consulted with stakeholders on our approach to the provision of constraint and curtailment information.
- Produced a technical guidance note for generators on hybrid storage connections.
- Delivered webinars on ANM, Statement of Works and A&D fees.
- Find out more at: <https://www.northernpowergrid.com/ice-work-plan/timeline/2018-2019/all>



# Seeking your feedback on our 2019/20 plans

- Do you agree these actions will improve the connections service Northern Powergrid provides?

1=YES    2=NO    3= DON'T KNOW



# Provision of information



- 1.1 We will develop and publish a new EV connections guide. We will also review the EV information that is currently available on our website and make updates and improvements if required.
- 1.2 We will inform stakeholders about the launch our new Safedig system and provide briefings and training for users (first this afternoon).
- 1.3 We will produce a new guide for customers with contact details for our connections team.
- 1.4 We will deliver training on our network availability heat maps for users.

# Provision of information



Q. Do you endorse these actions and agree they would improve the connections service Northern Powergrid provides?

98% 1. Yes

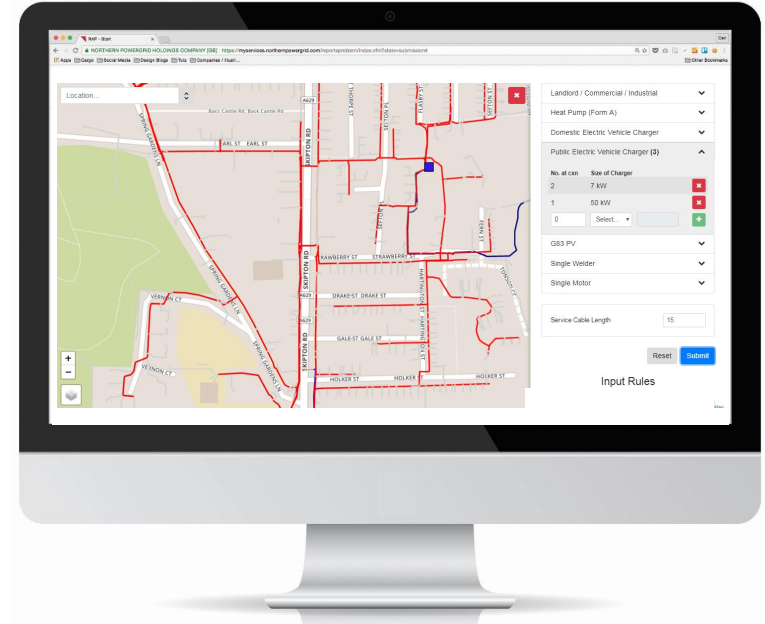
0% 2. No

2% 3. Don't know

# Improving our application and delivery process



## 2.1 We will develop and deploy a new Low Voltage (LV) budget estimating tool.



# Improving our application and delivery process



**Q.** Do you endorse this action and agree it would improve the connections service Northern Powergrid provides?

92% **1.** Yes

0% **2.** No

8% **3.** Don't know

# Improving our communications and engagement



- 3.1 We will engage with stakeholders who use a contractor to procure multiple connections and seek feedback from those stakeholders on our service.
- 3.2 We will engage with stakeholders to understand what we could do to improve their connections surgery experience.
- 3.3 We will deliver a series of connections forums aimed at Local Authorities where they can come together to discuss emerging connections issues and access specialist advice.



# Improving our communications and engagement



Q. Do you endorse these actions and agree they would improve the connections service Northern Powergrid provides?

88% 1. Yes

3% 2. No

10% 3. Don't know



# Technical and commercial developments



- 4.1 We will engage with stakeholders to inform them about the steps that are being taken to accommodate the roll-out of EVs in our region.
- 4.2 We will provide updates on developments in the Statement of Works process and progress of the Appendix G trials.



# Technical and commercial developments



Q. Do you endorse these actions and agree they would improve the connections service Northern Powergrid provides?

69% 1. Yes

10% 2. No

21% 3. Don't know

# Enabling competition

- We will develop a new process to allow accredited Independent Connections Providers (ICPs) to undertake street lighting overhead pole transfers as contestable works.



# Enabling competition



Q. Do you endorse this action and agree it would improve the connections service Northern Powergrid provides?

62% 1. Yes

5% 2. No

33% 3. Don't know

# Innovation

- 6.1 We will continue to engage with stakeholders as we transition to a Distribution System Operator (DSO).



# Innovation



Q. Do you endorse this action and agree it would improve the connections service Northern Powergrid provides?

70% 1. Yes

9% 2. No

21% 3. Don't know



# And finally...

- Overall, would you agree that we have a comprehensive work plan of service improvement commitments that meets the needs of our connections stakeholders?



# And finally...



Q. Overall, would you agree that we have a comprehensive work plan of service improvement commitments that meets the needs of our connections stakeholders?

71% 1. Yes

17% 2. No

12% 3. Don't know

# Questions



# And finally...



Q. Overall, would you agree that we have a comprehensive work plan of service improvement commitments that meets the needs of our connections stakeholders?

71% 1. Yes

17% 2. No

12% 3. Don't know

# Summing Up

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Patrick Erwin  
Policy and Markets Director



# Deliberative Roundtables

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Patrick Erwin  
Policy and Markets Director



# Roundtables

<https://www.northernpowergrid.com/customer-events-and-surgeries>

- **Unlocking our Energy Future: innovation roundtable**
  - Join our team as we discuss how we are using innovation to ensure that our network provides value and is fit for the future. As well as providing your knowledge, thoughts and challenge as we seek your views on key innovation issues:
    - Date: Tuesday 30<sup>th</sup> April, 10.00 – 14.30 at Cloth Hall Court, Leeds
- **Clean air zones and low emission vehicles: the challenges and opportunities**
  - Join us as we discuss the introduction of Clean Air Zones around the cities in our region and the implications for companies such as utilities and retailers:
    - Date: Tuesday 7 May, 9.30 – 13.00 at the Park Plaza, Leeds
- **DSO and energy retailers: co-ordinating our vision of the energy future?**
  - Join our roundtable as we bring together energy retailers and providers of energy services to initiate the sharing of the vision for the future of energy markets, their mechanisms, and their priorities:
    - Date: Thursday 9 May, 12.30 – 16.00 at the Pullman London St Pancras Hotel





# Roundtables

<https://www.northernpowergrid.com/customer-events-and-surgeries>

- **The challenges and interdependencies of decarbonising heat**
  - Join us as we discuss what strategy / plans you have in place to begin the decarbonisation of heat? How can we best support you in this transition? What is missing to enable you to begin switching to low carbon heat?
    - Date: Friday 10 May, 09:00-12.30 at the Park Plaza, Leeds
- **Climate change: the impact on regions and organisations**
  - Join us as we discuss the nature of the issues and risks organisations face as part of their climate change adaptation strategy and how they are planning to respond to those issues and risks:
    - Date: Monday 13 May, (time and location TBC)
- **How do we build a smart energy system centred around the needs of our customers?**
  - Join our roundtable as we bring together energy retailers and providers of energy services to initiate the sharing of the vision for the future of energy markets, their mechanisms and their priorities:
    - Date: Wednesday 15 May, 09.30 – 13.00 at the Barbican Centre, London

# Lunch and Networking

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# SafeDig Briefing

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## WORKSHOP SESSION

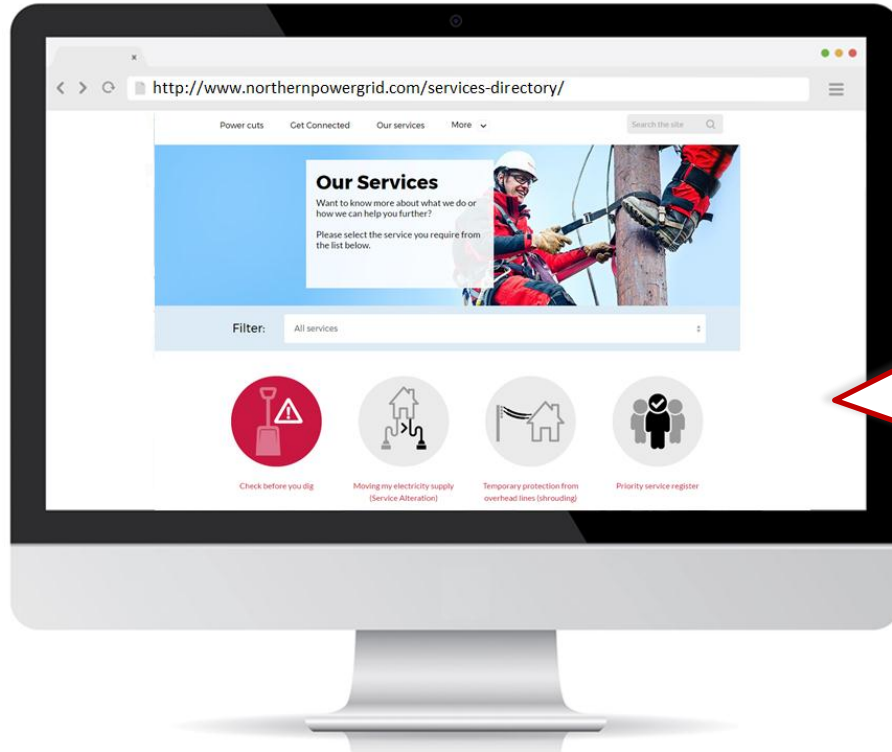


# Benefits of Safedig2



- Single environment for all Northern Powergrid Safedig mapping information.
- Modern technology compatible with modern browsers.
- Individual login and passwords.
- Choice of method for map selection.
- PDF response for ease of distribution.

# Getting started



Check before you dig

## WE JUST NEED TO TAKE SOME DETAILS...

Already got an account with us? Login here:

Email address\*

Password\*

[LOGIN >](#)

[Forgotten your password?](#)

## NOT REGISTERED?

Take a few moments to register and get access to our full range of online self service applications.

[REGISTER HERE >](#)



**HELP WITH YOUR APPLICATION?**  
Download our guide here

# Registration links

- When registering to use Safedig for the first time:  
<https://myservices.northernpowergrid.com/safedig/login.cfm>
- Self-serve login link to be saved in favourites and used for all future visits:  
<https://myservices.northernpowergrid.com/selfserveaccount/login.cfm>

# Welcome page



Welcome

Ian

DAYS SINCE LAST VISIT: 0

JOBS IN PROGRESS: 1

EDIT YOUR PROFILE ▾



Looking for:

[Cut-out change](#) | [Equipment problems](#) | [Enquiries](#) | [Earth Request](#)

LOGIN HERE ➤

## IN YOUR AREA

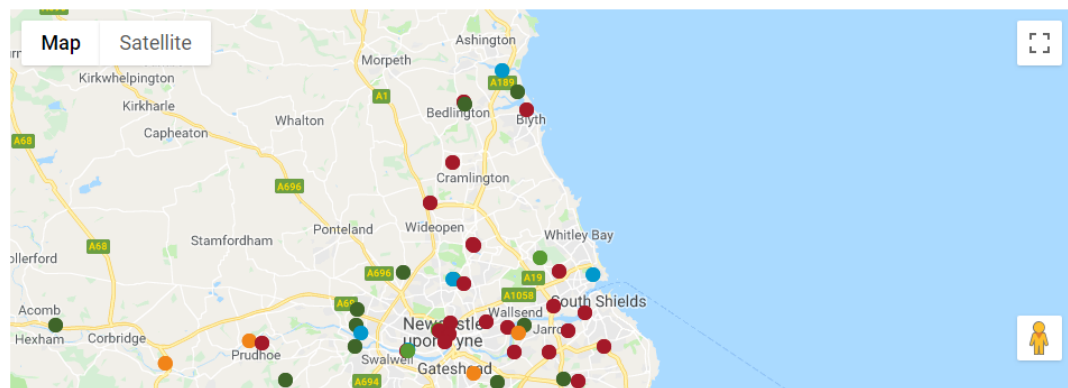


☒ Show Power Cuts

☒ Show Investments

Search for location

LOCATE ➤





# Terms and conditions

EMERGENCY 24 HOUR NUMBERS:  
NORTH EAST ☎ 0800 66 88 77

YORKSHIRE & N. Lincs ☎ 0800 375 675

HELLO, IAN.  
MY ACCOUNT | LOG OUT

JOB DETAILS

CONTACT DETAILS

YOUR SITE

OUTPUT

CONFIRM

SUMMARY

Application Reference: SD02740

## TERMS AND CONDITIONS

### AGREEMENT FOR USE OF NORTHERN POWERGRID ELECTRONIC MAINS RECORDS

1. In these terms and conditions, "Northern Powergrid" means either Northern Powergrid (Northeast) Limited (company number: 02906593) whose registered office is at Lloyds Court, 78 Grey Street, Newcastle Upon Tyne, NE1 6AF or Northern Powergrid (Yorkshire) plc (company number: 04112320) whose registered office is at Lloyds Court, 78 Grey Street, Newcastle Upon Tyne, NE1 6AF depending on where the Location (as defined below) is situated, and "User" means the person, firm or company who receives Data from Northern Powergrid under these terms.
2. In consideration of the User paying Northern Powergrid £1.00 (receipt of which is hereby acknowledged by Northern Powergrid), Northern Powergrid may (but shall not be obliged to) provide to the User electronic access to maps and diagrams containing cable and wiring information ("Data") for the relevant location as previously agreed between the User and Northern Powergrid or, failing such agreement, for the location as solely determined by Northern Powergrid to be relevant to the User ("Location"). Northern Powergrid may provide the Data to the User through an online log-in system. Northern

# Job details



JOB DETAILS



CONTACT DETAILS



YOUR SITE



OUTPUT



CONFIRM



SUMMARY

Application Reference: SD02740

## JOB DETAILS

\* Signifies mandatory fields

How would you like us to refer to your application?

E.g. Project 123abc

Plans required for Onsite Work:

When will this work take place? \*

DD/MM/YYYY



How would you like us to refer to your application?

E.g. Project 123abc

Plans required for Onsite Work:

When will this work take place? \*

DD/MM/YYYY



When do you expected the work to be completed? \*

DD/MM/YYYY



I don't know

Are you working on behalf of: \*

Please Choose...



Main onsite activity \*

Please Choose...



# Job details

## SITE CONTACT DETAILS

\* Signifies mandatory fields

Title \*

Mr

Would you like to use your correspondence address as your site address?

Your correspondence details

First Name

Ian

Mr Ian Foster

Northern Powergrid

Surname \*

Foster

whitt83fos@gmail.com

01912294271

Your Company/Name

Northern Powergrid

New York Road

Shiremoor

Property Name/Number \*

New York Road

Newcastle upon Tyne

GB

Address Line 2 \*

Shiremoor

NE27 0LP

Address Line 3 \*

Newcastle upon Tyne

USE MY REGISTERED DETAILS

CHANGE MY DETAILS

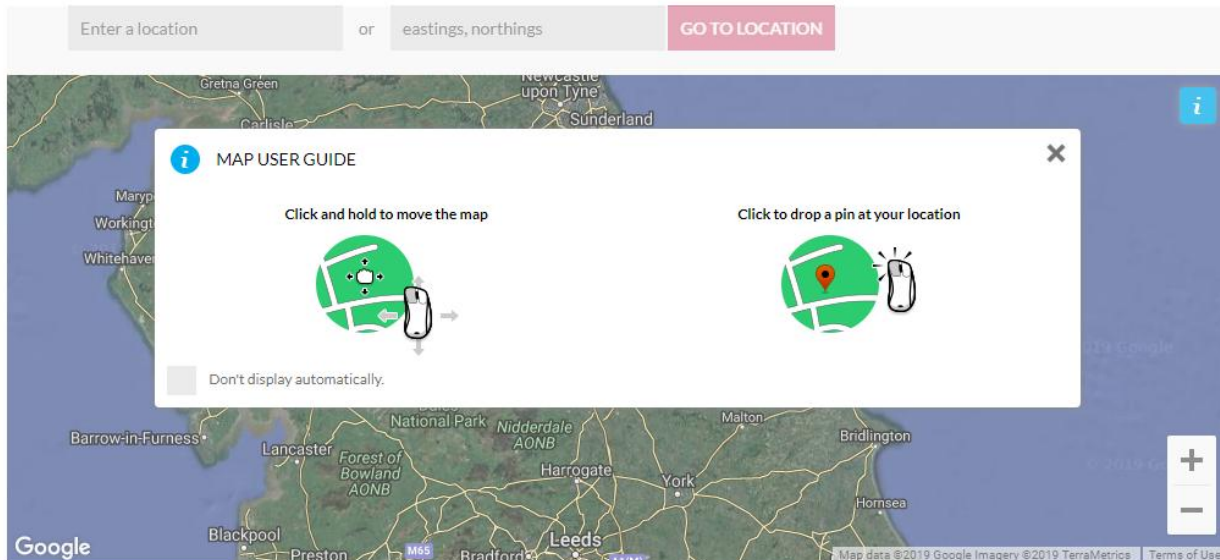
(opens in new window)

# Your site location

Application Reference: SD02740

## YOUR SITE LOCATION

Search the map using a post code or location



# Your site location

## YOUR SITE LOCATION

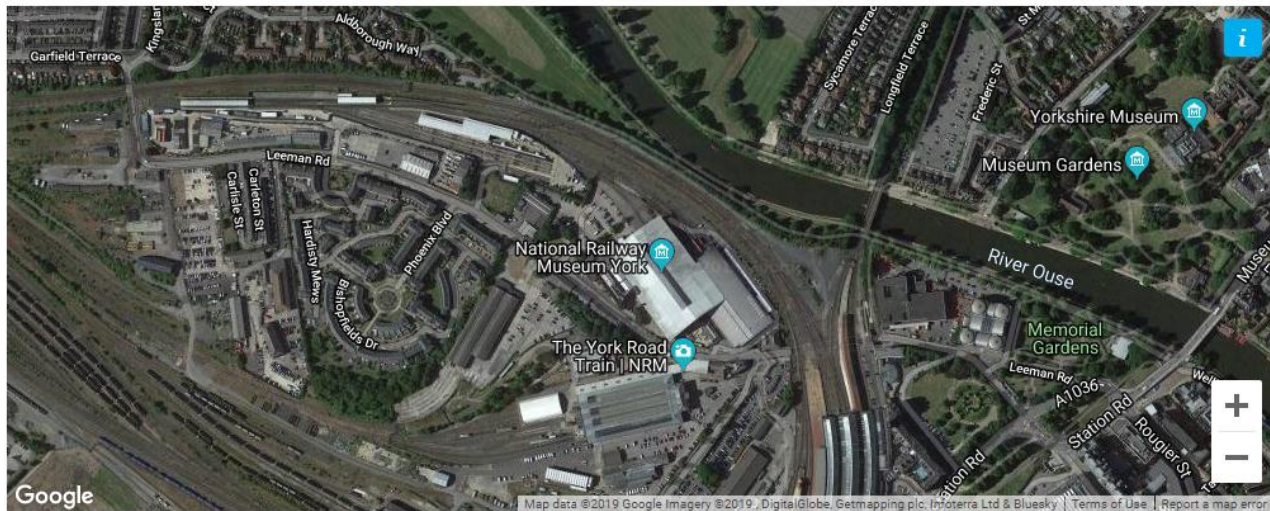
Search the map using a post code or location

York YO26 4XJ, UK

or

eastings, northings

GO TO LOCATION



# Your site location

## YOUR SITE LOCATION

BACK TO GOOGLE MAP

POINT

POLYGON

LINE

CLEAR



Scale 1:1000



# Creating your site location

BACK TO GOOGLE MAP

POINT

POLYGON

LINE

CLEAR



Scale 1 : 1000



Estimated pages required: 1

based on an A4 Landscape plan at 1:500 scale

# Output preferences

## OUTPUT PREFERENCES

\* Signifies mandatory fields

What size would you prefer your plan to be? \*



A4



A3

What orientation would you prefer your plan to be in? \*

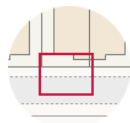


Portrait

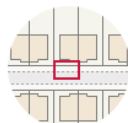


Landscape

What scale would you prefer your plan to be in? \*



1:250



1:500

What size would you prefer your plan to be? \*



A4



A3

What orientation would you prefer your plan to be in? \*

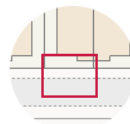


Portrait



Landscape

What scale would you prefer your plan to be in? \*



1:250



1:500



**Estimated pages required: 1**

based on an A3 landscape plan at 1:500 scale





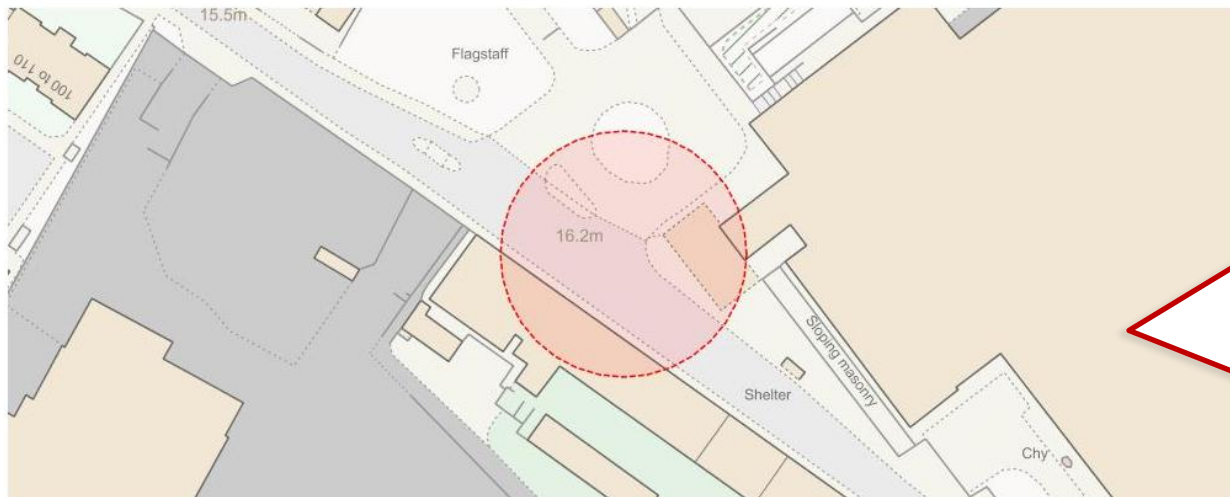
# Confirming your details

## CONFIRM YOUR DETAILS

### SCHEME REFERENCE

York Railway Museum

### CHOSEN AREA



### JOB DETAILS

Job start date: 30/04/2019  
Job finish date: 30/04/2019  
Plans required for: Onsite Works  
Working on behalf of: Local Authority  
Name of authority: York  
Main on site activity: Digging By hand  
Main workplace: Public land  
Additional notes:

### CONTACT DETAILS

Name: Mr Ian Foster  
Company: Northern Powergrid  
Address: New York Road  
Shiremoor  
Newcastle upon Tyne

# Request completed

EMERGENCY 24 HOUR NUMBERS:  
NORTH EAST ☎ 0800 66 88 77

YORKSHIRE & N. Lincs ☎ 0800 375 675

HELLO, IAN.  
[MY ACCOUNT](#) | [LOG OUT](#)



JOB DETAILS



CONTACT DETAILS



YOUR SITE



OUTPUT



CONFIRM



SUMMARY

Application Reference: SD02740

## THANK YOU

Your plan is currently being processed. We will send you an email when it is ready. Thank you for using Northern Powergrid's online Safedig mapping system.

### WHERE WOULD YOU LIKE TO GO NEXT?



Homepage



Services Directory



My account

# Outputs

- Email sent when plan available to download.
- Map / legend / letter / and any additional documents we may append.
- Plan stored and regenerated if requested again.

[BACK TO MY SAFEDIG APPLICATIONS](#)

## DOWNLOAD YOUR PLAN

Application submitted on Sunday, 14 Apr 2019.  
This plan generated on Sunday, 14 Apr 2019 at 08:01.



[SD02740-Safedig-Letter.pdf](#)



[SD02740-Safedig-Plan-v1.pdf](#)



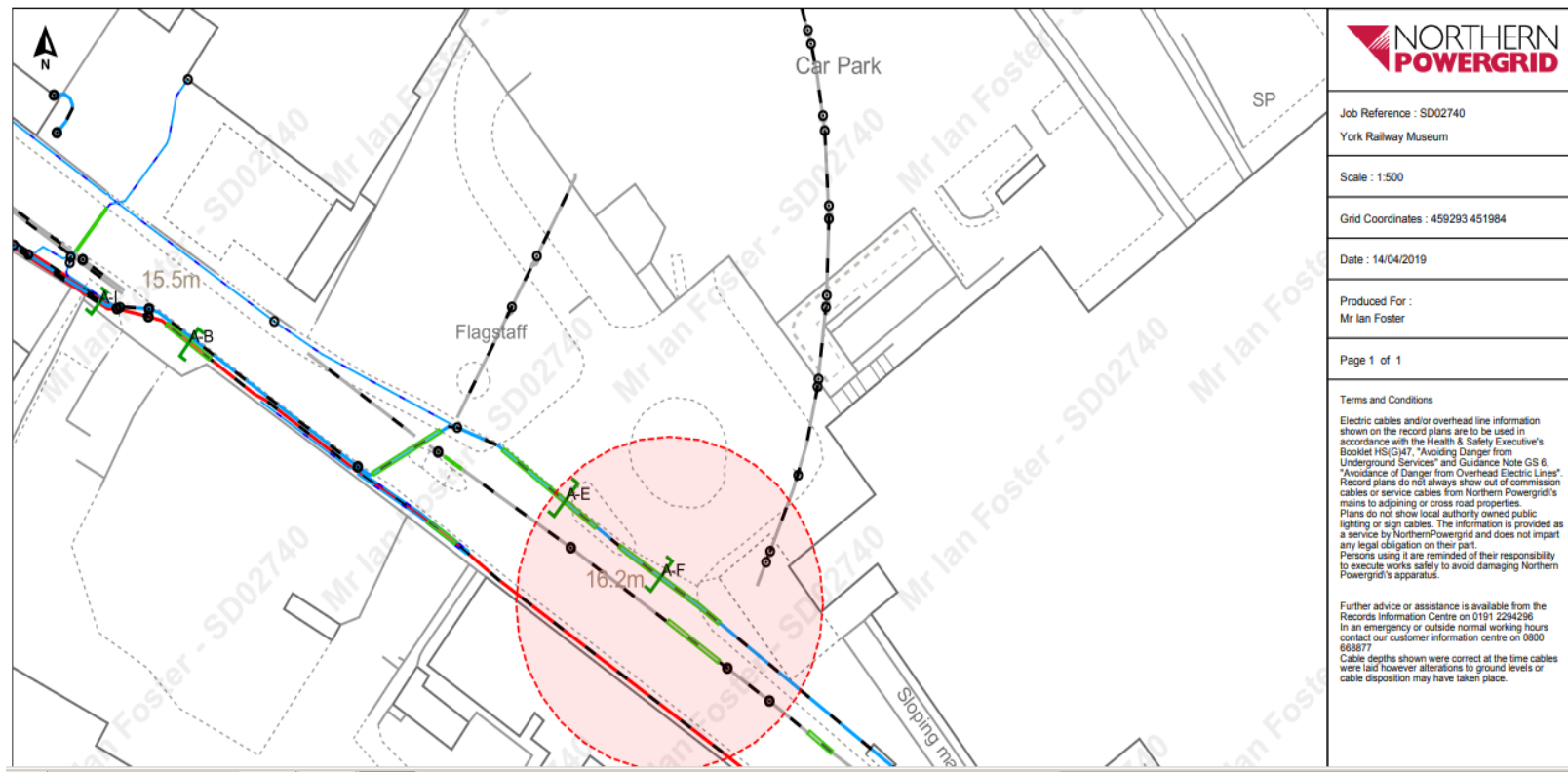
[SD02740-Safedig-Summary.pdf](#)

## ADDITIONAL DOCUMENTS



[Safedig Legend And Useful Contact Details](#)

# Outputs



# LV Budget Estimating Tool

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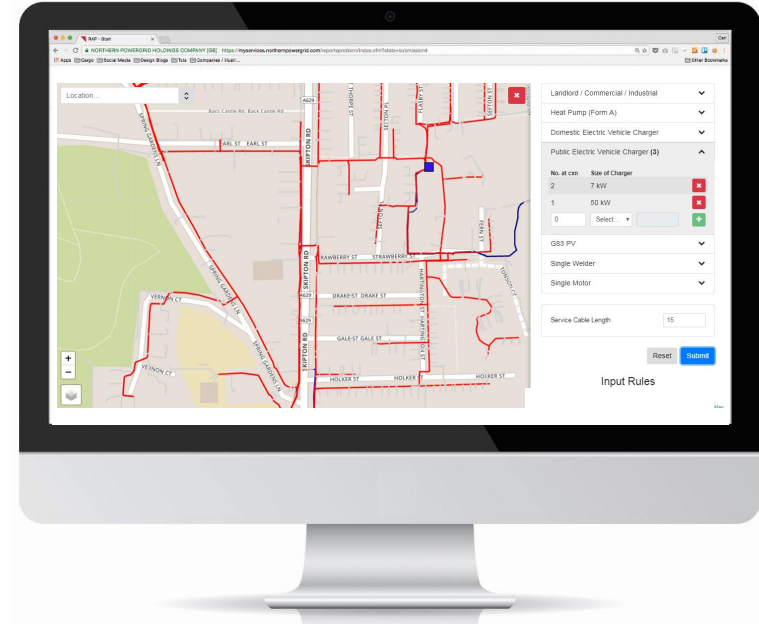
WORKSHOP SESSION



# Concept



- An innovation project delivered in conjunction with EA Technology to provide an online self-serve design function for LV quotations.



# Scope

- The project scope will attempt to encompass all LV connection design requests which are particularly suited to an automated, self-service approach.
- The project target is to develop a system that is capable of dealing with 50% of design budget requests with either no or very limited intervention by engineering design resource.





# Driving factors

- Number of customer enquiries.
- A&D fees - ability for customers to self quote without incurring fees.
- Improved customer service - 'same day quotations'.
- Opportunity to provide an industry leading design system.
- Opportunity to provide improved design tools for internal staff.
- Uptake in Electric Vehicles.

"A lot of my enquires are at planning stage and the costs I am looking for are general... I would like to know if there is a speedier avenue for budget/indicative cost?"



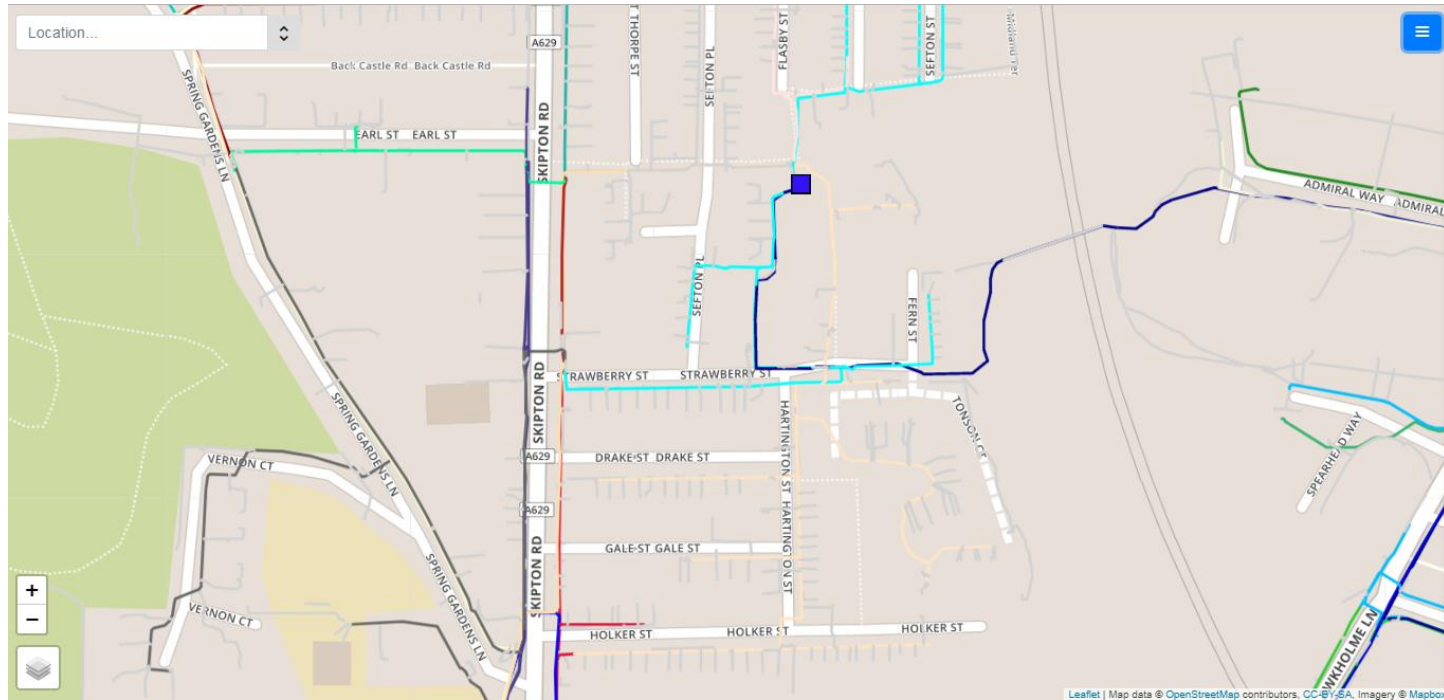


# Timescales

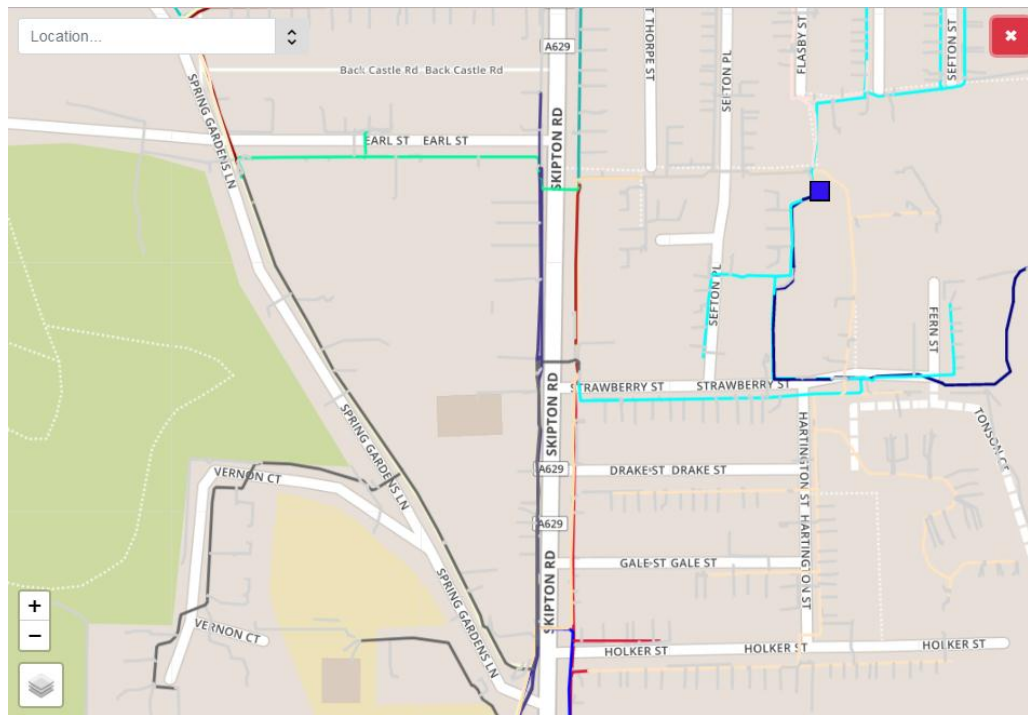
- The project will be delivered in four separate phases:

Stage	Name	Description	Target Date
Stage 1	Feasibility studies & planning	Assessment of data quality issues Identification of key design rules and assessment of feasibility of approach and production of a fully designed plan for subsequent stages.	Mar 2018
Stage 2	Algorithms	Identification and assessment of appropriate and efficient algorithms to perform network assessments at Low Voltage.	Dec 2018
Stage 3	Phased pilot	Phased pilot introduction and implementation of tool, based on stage 2 outcomes, to internal users.	Sept 2019
Stage 4	Customer tool	Development of user-friendly online connections tool.	Jan 2020

# Initial view



# Load type options



## New Connection Request

Electrically Heated House	▼
Non-Electrically Heated House	▼
Electrically Heated Flat / Apartment	▼
Non-Electrically Heated Flat / Apartment	▼
Landlord / Commercial / Industrial	▼
Heat Pump (Form A)	▼
Domestic Electric Vehicle Charger	▼
Public Electric Vehicle Charger	▼
G83 PV	▼
Single Welder	▼
Single Motor	▼

Load  
type  
options

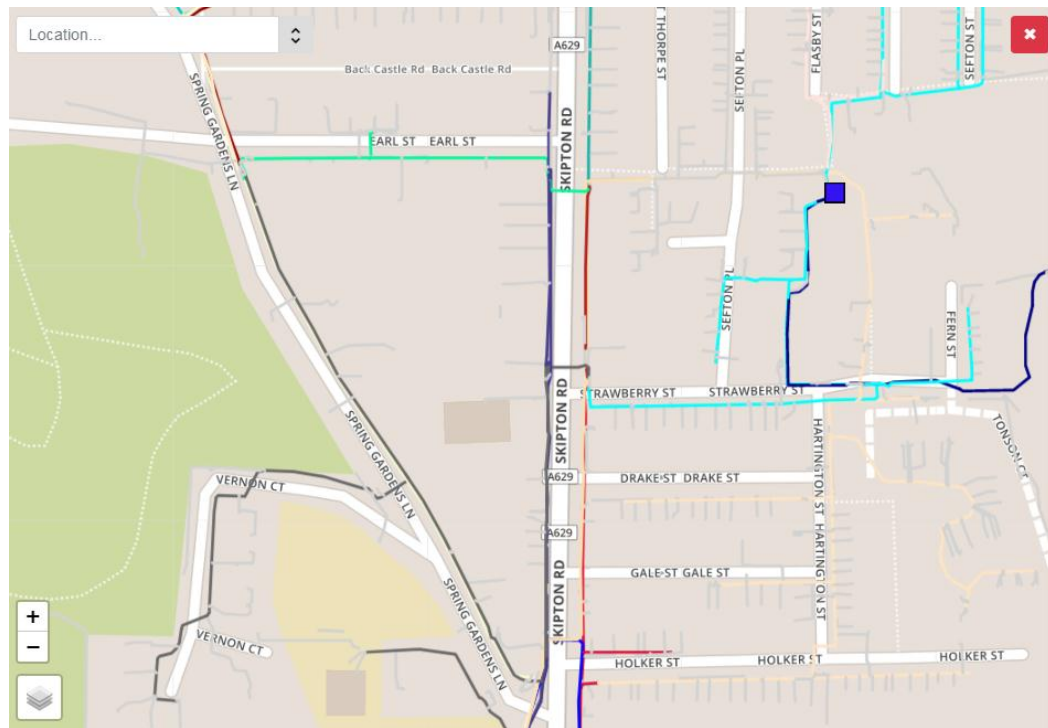
Service Cable Length

Reset

Submit

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# Public EV load types



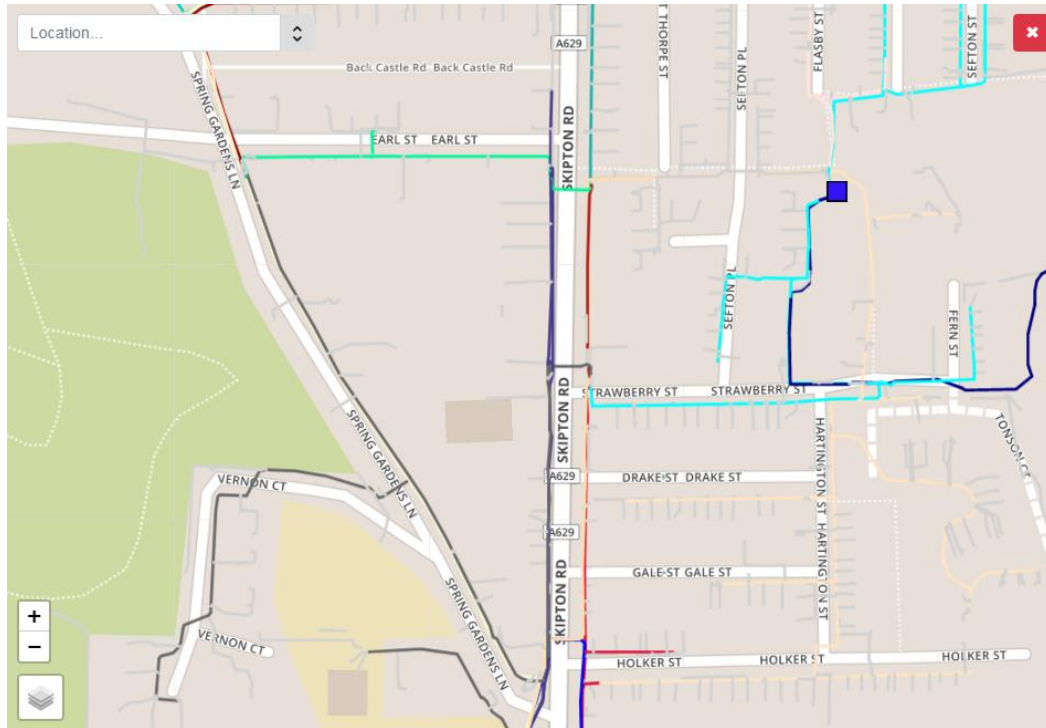
## New Connection Request

Electrically Heated House	▼
Non-Electrically Heated House	▼
Electrically Heated Flat / Apartment	▼
Non-Electrically Heated Flat / Apartment	▼
Landlord / Commercial / Industrial	▼
Heat Pump (Form A)	▼
Domestic Electric Vehicle Charger	▼
<b>Public Electric Vehicle Charger</b>	<b>▲</b>
No. at cxn	Size of Charger
0	Select... <input type="text"/> +
G83 PV	▼
Single Welder	▼
Single Motor	▼

Service Cable Length

Leaflet | Map data © OpenStreetMap contributors, CC-BY-SA, Imagery © Mapbox

# Load details



Electrically Heated House

Non-Electrically Heated House

Electrically Heated Flat / Apartment

Non-Electrically Heated Flat / Apartment

Landlord / Commercial / Industrial

Heat Pump (Form A)

Domestic Electric Vehicle Charger

Public Electric Vehicle Charger (2)

No. at cxn	Size of Charger
2	7 kW

0 Select... +

G83 PV

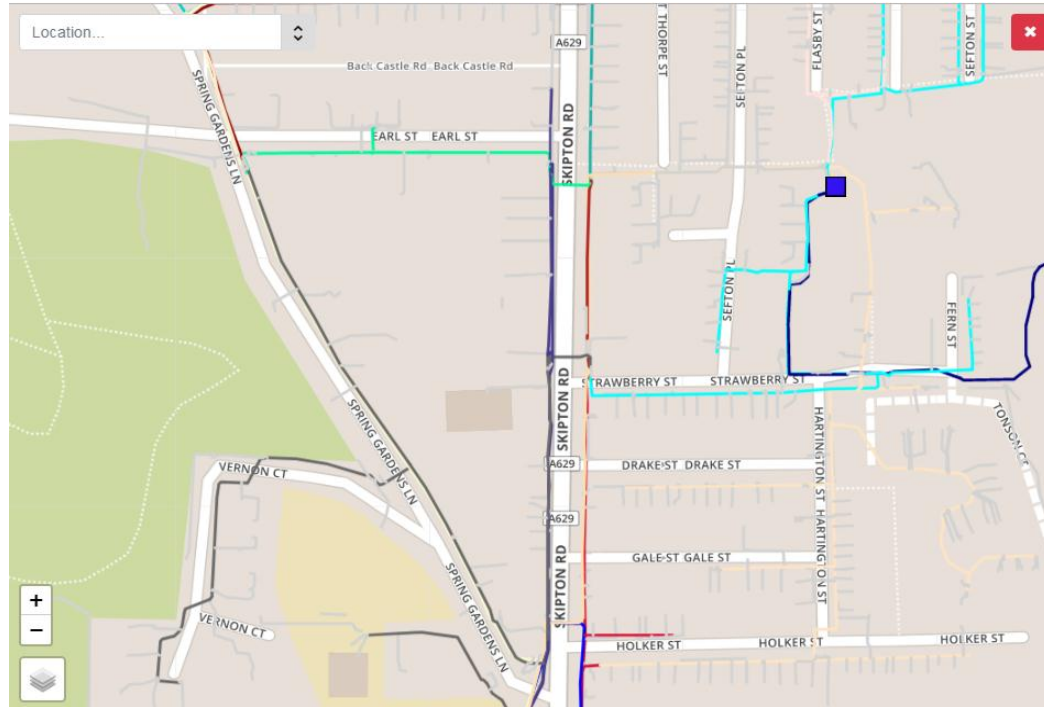
Single Welder

Single Motor

Service Cable Length

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# Load details



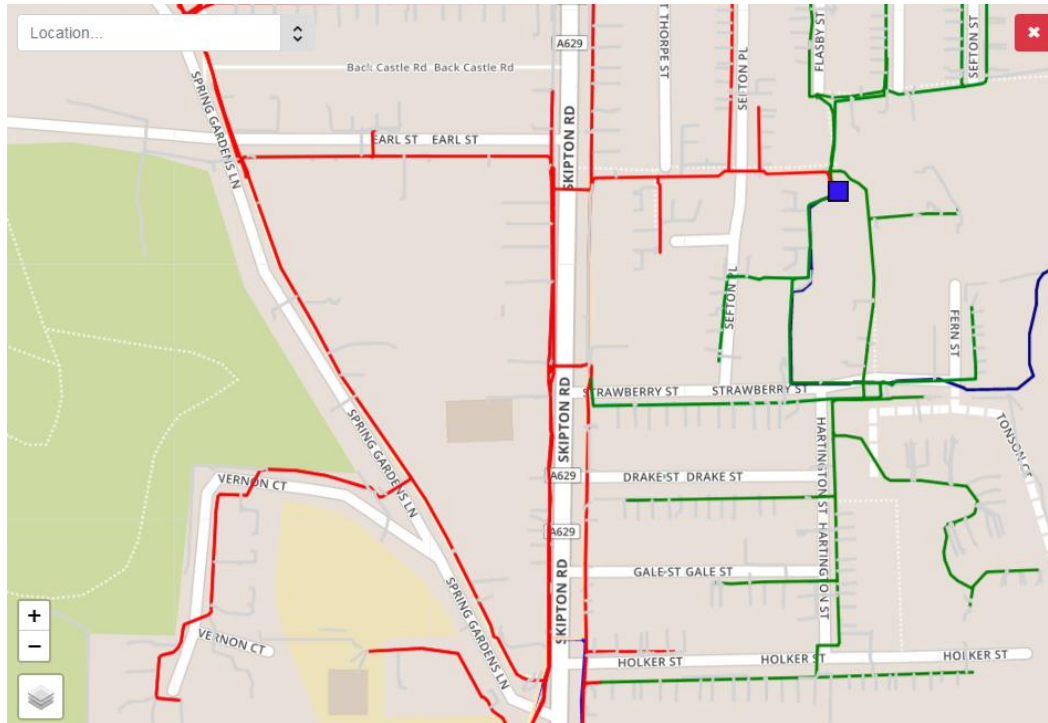
Non-Electrically Heated House	▼
Electrically Heated Flat / Apartment	▼
Non-Electrically Heated Flat / Apartment	▼
Landlord / Commercial / Industrial	▼
Heat Pump (Form A)	▼
Domestic Electric Vehicle Charger	▼
Public Electric Vehicle Charger (2)	▲
No. at cxn	Size of Charger
2	7 kW
0	Select... ▼
Service Cable Length 15	

Reset Submit

Leaflet | Map data © OpenStreetMap contributors, CC-BY-SA, Imagery © Mapbox



# Calculation results

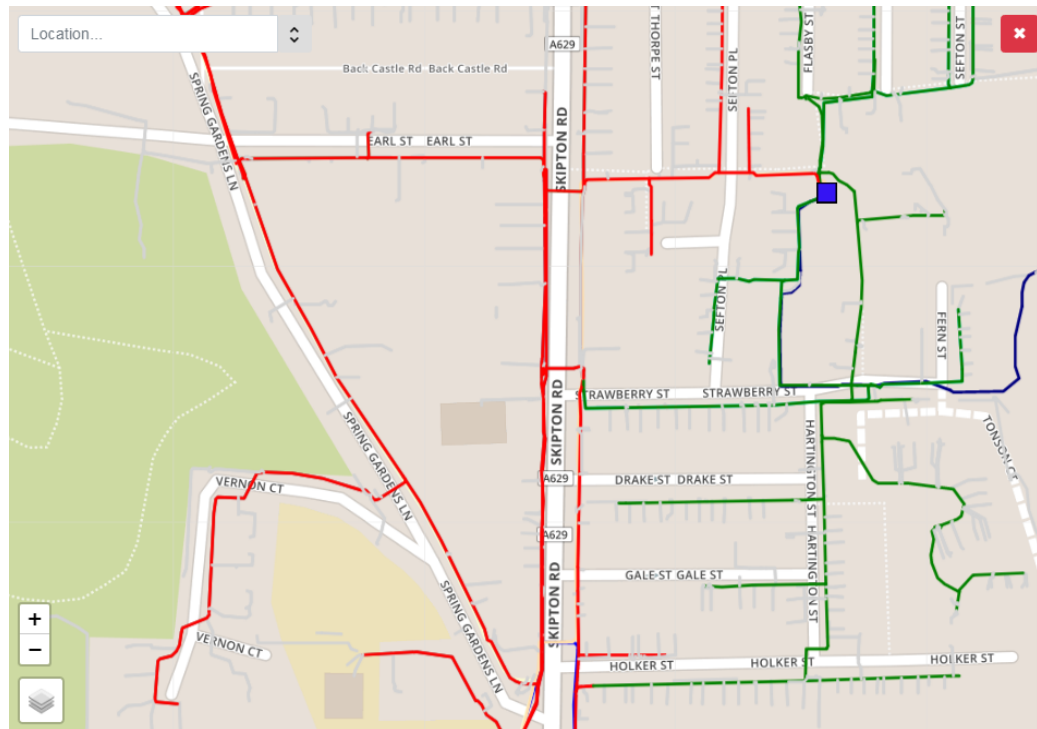


Non-Electrically Heated House	▼
Electrically Heated Flat / Apartment	▼
Non-Electrically Heated Flat / Apartment	▼
Landlord / Commercial / Industrial	▼
Heat Pump (Form A)	▼
Domestic Electric Vehicle Charger	▼
Public Electric Vehicle Charger (2)	▲
No. at cxn	Size of Charger
2	7 kW
0	Select... ▼
Reset Submit	
Service Cable Length 15	

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# Additional load



Landlord / Commercial / Industrial

Heat Pump (Form A)

Domestic Electric Vehicle Charger

Public Electric Vehicle Charger (3)

No. at cxn	Size of Charger
2	7 kW
1	50 kW
0	Select...

G83 PV

Single Welder

Single Motor

Service Cable Length 15

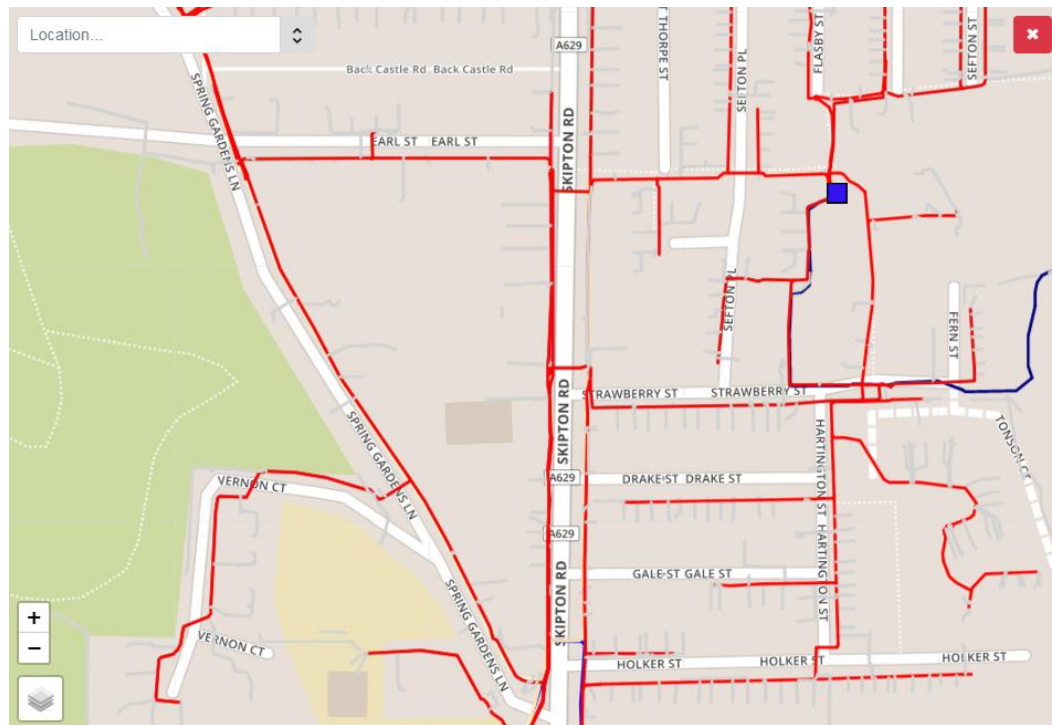
Reset Submit

Input Rules

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# Recalculated results



Landlord / Commercial / Industrial	▼
Heat Pump (Form A)	▼
Domestic Electric Vehicle Charger	▼
Public Electric Vehicle Charger (3)	▲
No. at cxn	Size of Charger
2	7 kW
1	50 kW
0	Select...
G83 PV	
Single Welder	
Single Motor	
Service Cable Length	
15	
Reset	
Submit	

Input Rules

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# Questions?



# End

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