

# Customer Connections Steering Group

**Kester Jones**  
Connections Strategy Manager

October 2022

national**grid**



# Agenda

| <b>Agenda</b>                                   |                              |                      |
|---|------------------------------|----------------------|
| Introduction to CCSG                            | Kester Jones                 | 10:00 – 10:05        |
| Director's update                               | Alison Sleightholm           | 10:05 – 10:30        |
| SCR catch up                                    | Kester Jones                 | 10:30 – 10:35        |
| Access SCR update                               | Cuan Rowlands                | 10:35 – 10:45        |
| Boundary SCR update                             | Will Topping                 | 10:45 – 10:55        |
| SCR open discussion – How will it work for you? | Kester Jones                 | 10:55 – 11:15        |
| <b>Refreshment / Comfort Break</b>              |                              | <b>11:15 – 11:30</b> |
| Letter of Authority                             | Kyle Smith                   | 11:30 – 11:45        |
| G99 fast-track overview                         | Kyle Smith                   | 11:45 – 12:00        |
| ICE update                                      | Penny Carolan & Andrew Akani | 12:00 – 12:15        |
| Summary and feedback                            | Kester Jones                 | 12:15 – 12:30        |
| <b>Lunch</b>                                    |                              | <b>12:30pm</b>       |

# Directors Update

**Alison Sleightholm**  
Regulation and Corporate Director  
October 2022

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# National Grid

On 21st September we reached an important milestone on the integration of WPD into National Grid

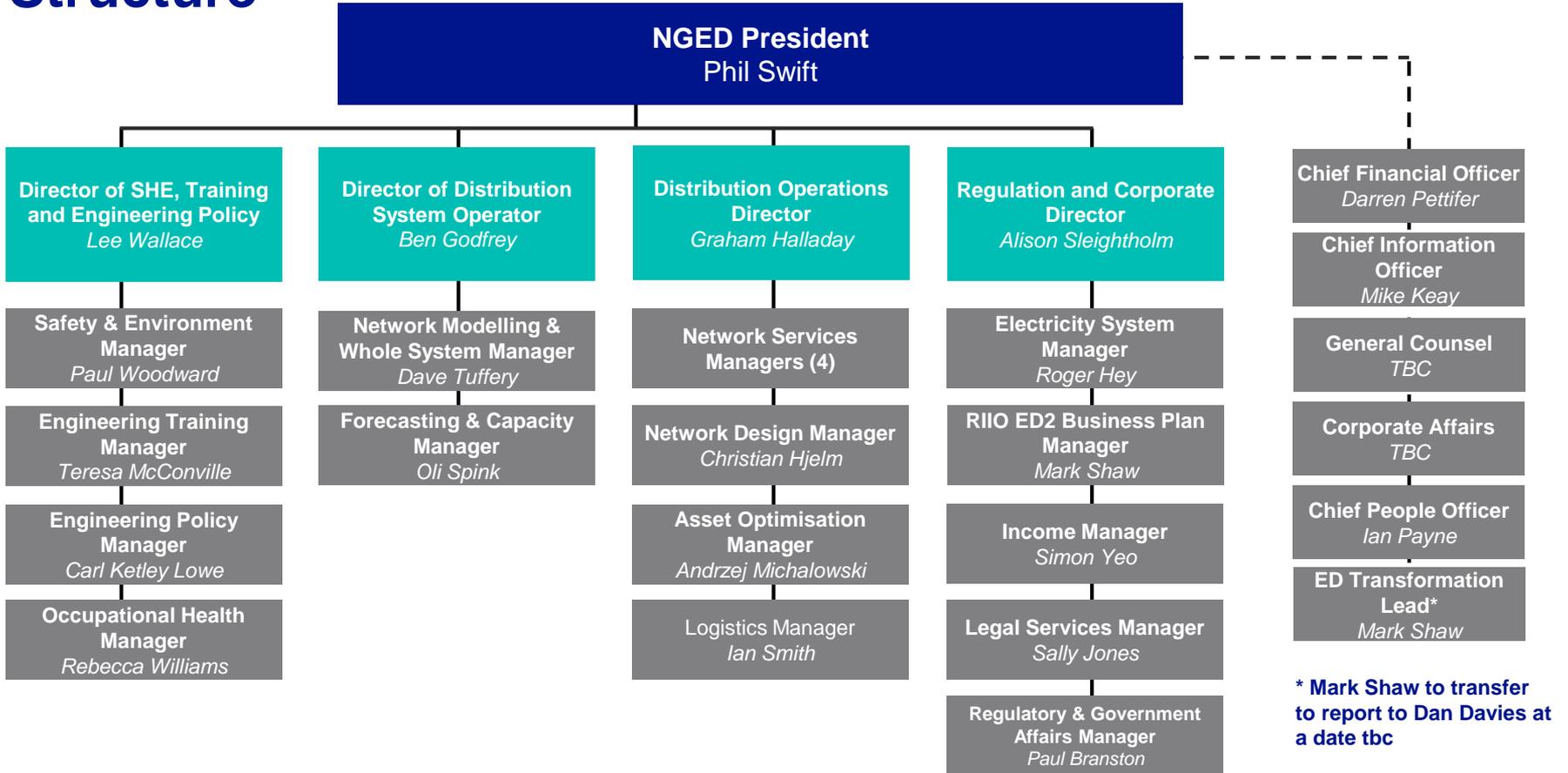
- National Grid is the new name for Western Power Distribution.
- National Grid branding now appears on our website, social media, communications, publications, buildings, vehicles, identity badges and personal protective clothing (PPE).
- We have changed our name, but not our telephone contact details or the great service you expect from us.
- We're still responsible for keeping you connected to the electricity you need in your home or business and connecting you to the network.
- As part of National Grid, we're the largest electricity transmission and distribution business in the UK and we are at the heart of a clean, fair and affordable energy future.



National Grid



# Structure

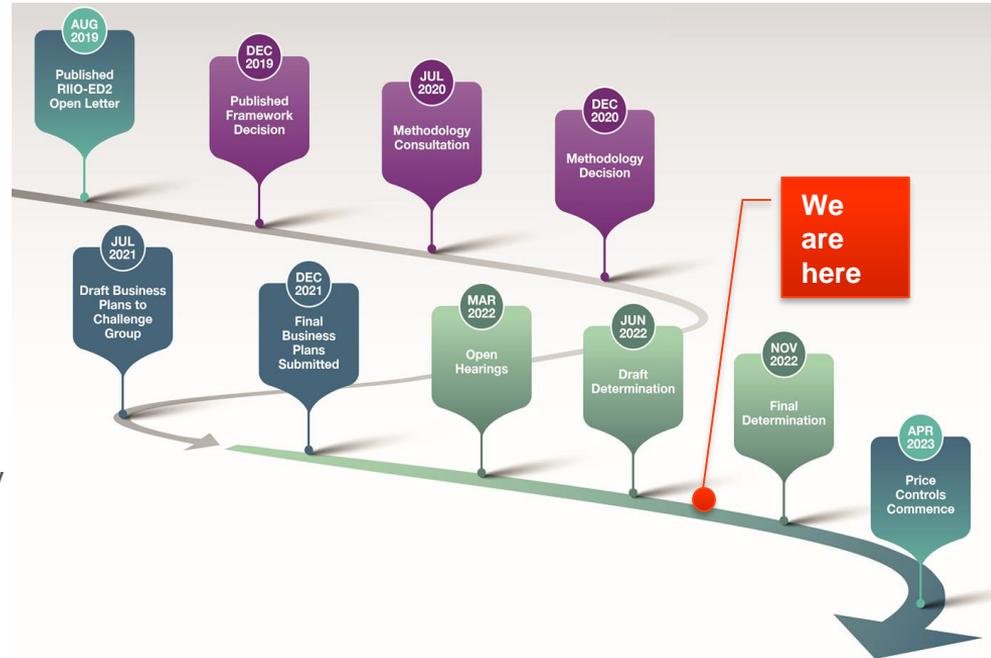


# Recap Business Plan - RIIO-ED2 - Overview

“RIIO-ED2”:

Revenue = Incentives + Innovation + Outputs (Electricity Distribution 2)

- We submitted our final “RIIO-ED2” business plan to Ofgem in December last year covering the 5 years 2023-2028 valued at £6.7bn
- Since then Ofgem have held Open Hearings and published a Draft Determination in June 2022
- Ofgem proposed a reduction in total Business Plan expenditure spread across our entire plan of £1.3bn. Equivalent to about £11 per customer
- This potentially leads to a reduction in ambition for the 42 commitments we gave as part of the plan.
- Some of the reduction has been moved to “uncertainty mechanisms”. For example around £300 million for load related expenditure & cyber security.
- Ofgem publish their Final Determination next month, which we will then either accept or reject



# Recap Business Plan - RIIO-ED2 - Connections

“RIIO-ED2”:

Revenue = Incentives + Innovation + Outputs (Electricity Distribution 2)

- We are currently discussing with our stakeholders how such a cut in funding could be allocated
- The Plan as submitted ensured that customer connections could be accommodated in a timely manner with a tailored process for each market segment
- It included same day digital pathways for mass market and data/systems integration with major customers
- The plan aimed to be proactive with local authorities to support their net-zero plans. We committed that our higher voltage network would be reinforced so as not to be a blocker to connections
- We committed to supporting community energy groups with their plans for connecting distributed generation and low carbon technologies
- The plan would deliver better integration and access to data for ICPs and IDNOs



# Connectability - RIIO-ED2 - Mobilisation

Despite the Draft determination challenges we are continuing to mobilise National Grid for the inevitable increase in customer connections.

|  | Innovation   | Digitalisation  | DSO   |
|--|--|---|---|
|  <p data-bbox="92 500 324 524">Connectability</p> | <p data-bbox="388 423 778 503">Implement a customer portal to provide an online facility to manage the end to end connections process.</p> | <p data-bbox="879 374 1331 552">Digitalise the customer connection journey, developing self-serve online tools to allow customers to self-assess their connection requirements prior to application, obtain a cost of connection, enter into connection offer agreements and track work scheduling.</p> | <p data-bbox="1369 412 1821 511">Ensure that we widen the range of flexible connection alternatives to traditional reinforcement to facilitate quicker connections at a lower cost.</p> |

First phase – information gathering completed

Second phase – scoping for all connection customers and implementation for LCT customers

Future phases – to develop for all connection customers

Gone live with:

New Connections website

New online self serve budget estimating tool

Online application process for 1-4/ small commercial customers

New online domestic EV application due December 2022

Online self serve firm quotation for all LV customers (up to 210kVA) “Click & Connect” due 2023

DSO directorate set up

Work going to establish post Access SCR capabilities to offer and manage Curtailable Connections

# Summary and next steps

Overall the Draft Determinations, while very tough, were a platform to work closely with Ofgem to achieve the very best outcomes for our customers



However if there is no movement we seemingly face two options:

**1) Deliver all 42 commitments but at a reduced level:** reduce the scale of our delivery and ambitions across all commitments by ~20%

**2) Deliver a smaller number of commitments overall and drop some stakeholder priority areas:** Prioritise the top commitments only (e.g. network reliability and safety) do not deliver 5 to 10 commitments in their entirety

We are keen to hear the thoughts of our CCSG members on the challenges ahead.

- What should our priorities be?
- Do you have any suggestions for how to deliver additional efficiencies or savings?

# Connections and Significant Code Review (SCR) catch up

**Kester Jones**  
**Connections Strategy Manager**  
October 2022

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# Access Significant Code Review (SCR) update

## What is a SCR?

- A significant code review (SCR) is a way in which Ofgem(industry regulator) reviews industry codes and speeds up industry reforms and changes.

## What DOES this SCR cover?

- This SCR covers changes to Connection Charges (specifically reinforcement) and the definition and choice of access rights to our network.

## What is changing with connection offers?

- Demand - DNO fully funds reinforcement and recovers through Distribution Use of System (DUoS).
- Generation - customer only contributes to reinforcement at the same voltage level as the Point of Connection.

## What is changing with access?

- Where we can't immediately provide the full capacity requested due to reinforcement requirement then we may need to issue a curtailed offer and estimate and cap the actual curtailment. We can't offer curtailed offers to small users/customers. Curtailed offers will have to have an end date as they are a short term solution whilst we reinforce.

# Access Significant Code Review (SCR) update

## Why now?

- Make it easier to reinforce the electricity grid for our customers.
- To facilitate net zero and the connections of Low Carbon Technologies (LCTs)
- Transforming the way in which the costs associated with new connections are charged and how access to the network is managed, with the aim of accelerating development of a net zero energy system capable of delivering clean and affordable energy.

## What does this mean for us?

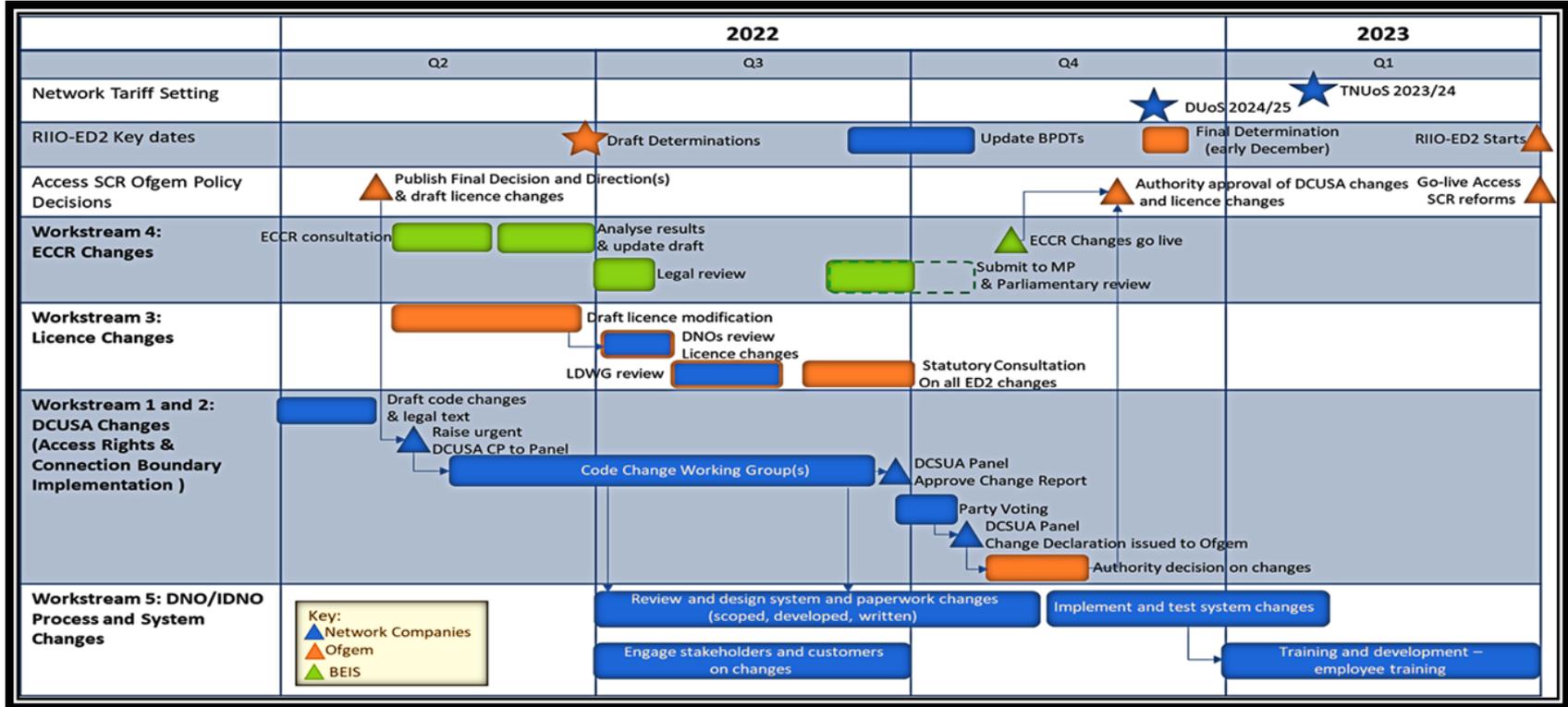
- We'll need to update systems, processes and train those staff planning and delivering new connections.
- We'll need to monitor curtailment (planned v actual) and we may need to purchase flexibility services.



## When do the changes go live?

**1<sup>st</sup> April 2023**

# SCR Timeline



DCUSA consultation completed on 5<sup>th</sup> September

# Connections and Significant Code Review (SCR) access update

Cuan Rowlands  
Connections Strategy Engineer  
October 2022

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# Access SCR overview

## Milestones and Directions

- Ofgem Final Decision and Direction – 3<sup>rd</sup> May 2022
- DNOs to raise proposals to modify the Distribution Connection and Use of system Agreement (DCUSA)
- DCP working groups formed between DNOs to ensure consistency and collaboration
- Submission to Ofgem by 31<sup>st</sup> October 2022



# Working Group - DCP 406

## Changes to Common Connection Charging Methodology (CCCM)

### DCP 406

Implement parts of Ofgem's Access SCR Decision in respect of the CCCM.

Seeks to address paragraphs 12 to 15 and 17 of the Access SCR Direction.

This includes:

- The definition of Demand and Generation connections;
- Reflecting terms throughout Schedule 22 (the CCCM) of the DCUSA.

# Working Group - DCP 407

## Speculative Development

### DCP 407

Implement parts of Ofgem's decision in respect of Speculative Development into the CCCM, with consequential changes to be made into Schedule 32 (Residual Charging Bands) of the DCUSA.

This CP also seeks to address paragraph 16 of the Access SCR Direction.

This includes:

- Greater clarity on the characteristic “the capacity requested caters for future expansion rather than the immediate requirements of (an) end user(s)”;
- Greater clarity on the characteristic “the capacity requested caters for future speculative phases of a development rather than the initial phase(s) of the development”; and
- Consideration of introducing a methodology for connections with planned phases or future expansion”.

# **DCP 406 and 407 To Date**

**Meetings have been held at least once per week.**

**Collaborating to create a unified modification has been key.**

**Currently, both groups are refining the legal text and change proposal documents.**

**These will go for review with the DCUSA legal team, prior to submission to Ofgem on 31<sup>st</sup> October 2022.**

# Connections and Significant Code Review (SCR) curtailment update

**Will Topping**  
**Primary System Design Engineer**  
October 2022

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# DCP 404: Access SCR changes to terms of connection for curtailable customers

## Overview

- Ofgem have decided to introduce new non-firm (curtailable) access rights for distribution connected users
- DNO will set the curtailment limit and include this in the connection offer
- Curtailment limit tool is the same for all
- If the DNO needs to curtail above the agreed limit, then they must procure this service from the market, where it is economic and efficient to do so
- An 'exceeded curtailment price' will be used to compensate if a connection is curtailed beyond their limit
- End dates are defined

# DCP 404 update

## Curtailment limit

- Using a standardised tool
- Limit included in Connection offer and Connection agreement
- Quarterly reports of curtailment will be published
- NGED will still provide a curtailment estimate



# DCP 404 update

## Exceeded Curtailment Price

- Calculated based on tendered Flexibility unit cost – outliers excluded
- 20% uplift applied to this cost
- Annual payments made for exceeding limit

## Curtailment end date

- Date reinforcement is complete or DNO uses Flexibility to avoid curtailment
- Date included in Connection offer and Connection agreement and fixed (subject to exclusions)

# DCP 405: Access SCR: Managing curtailable connections between licensed distribution networks'

## Application for IDNOs

- Requirements and conditions follow those in DCP 404
- Relationship between DNOs, IDNOs and Connectee defined



# Connections and Significant Code Review (SCR) catch up

**Kester Jones**  
**Connections Strategy Manager**  
October 2022

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# Access Significant Code Review (SCR) update

## Open discussion

Are you aware of Access SCR?

Are you delaying any schemes to the 1<sup>st</sup> April 2023 as a result of Access SCR?

What communication about Access SCR would you like to see?

- On our website
- Signposted on offer letters
- Social media



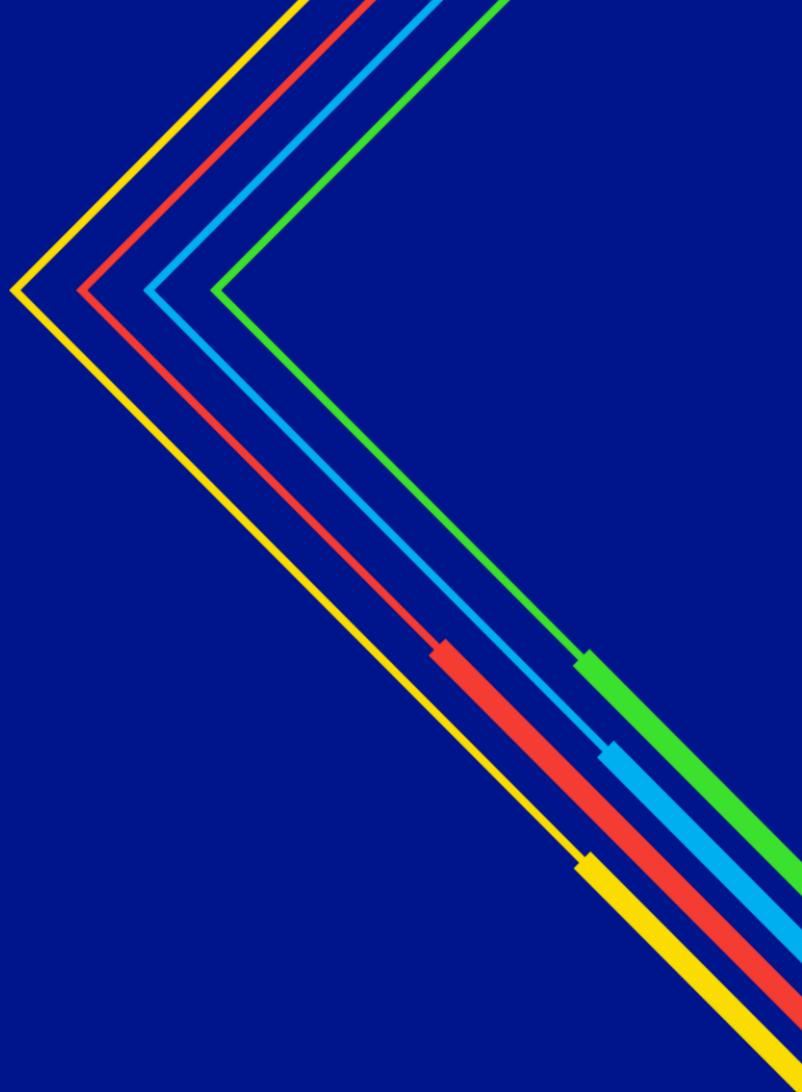


**Electricity  
Distribution**

# **Letter of Authority (LoA)**

**Kyle Smith**  
Connection Strategy Engineer

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# Letter of Authority

## Now

### Our Current Position

- We require an LoA from all generation applicants who are not the land owner / occupier.
- Forms part of the Minimum Information required for a quotation.

## Why

### Why implemented

- Large amount of speculative enquiries being requested for generation to be installed.
- Being sent in before any correspondence with land owners.

## Why Change

### Why now

- Now seeing these requests coming in from demand connections, such as for EV chargers.
- Some of these are speculative.

# Proposed change

## NGED propose a change to the following:

- Change the request of an LoA to be across a range of applications. This will apply for any applicant requesting a formal quotation for demand or generation who is not the land owner
- Budget estimate applications will still remain the same and do not require an LoA.
- We feel taking this step will help aid connecting customers in a multitude of ways.



# Benefits

## This allowed NGED to provide the following benefits:

Provide quotations to parties who require them

Right first time

Quotation times improved

Customer satisfaction for applicants

Positive customer experience on LCT's and aiding Net Zero

## What are your thoughts?

**LETTER OF AUTHORITY**  
TO BE COMPLETED AND RETURNED TO WPD IF THE CUSTOMER IS NOT THE LANDOWNER OF THE LAND

[[/We]..... (full names),  
of.....  
..... (address)  
Email address:.....  
Telephone number:.....  
hereby confirm that [I am/ We are] the registered land owner of the land at:  
.....  
..... (the "Land")  
[[/ We] enclose either:

1. For registered Land:  
(a) Official Copy of the Registered Title of the Land; and   
(b) Official Copy Title Plan of the Land.

**OR**

2. For unregistered Land, evidence of ownership of the Land including, for example, a letter from a solicitor or a land agent confirming ownership

[[/We] give permission for..... (insert name of Customer) (which includes its employees, agents and any successors) to apply for a connection offer for their proposed development at the Land and agree that if at any time we withdraw our permission we will notify WPD (at the address below) of such withdrawal in writing.

Signature:..... Date:.....  
Signature:..... Date:.....

**[to be signed by landowner(s)]**



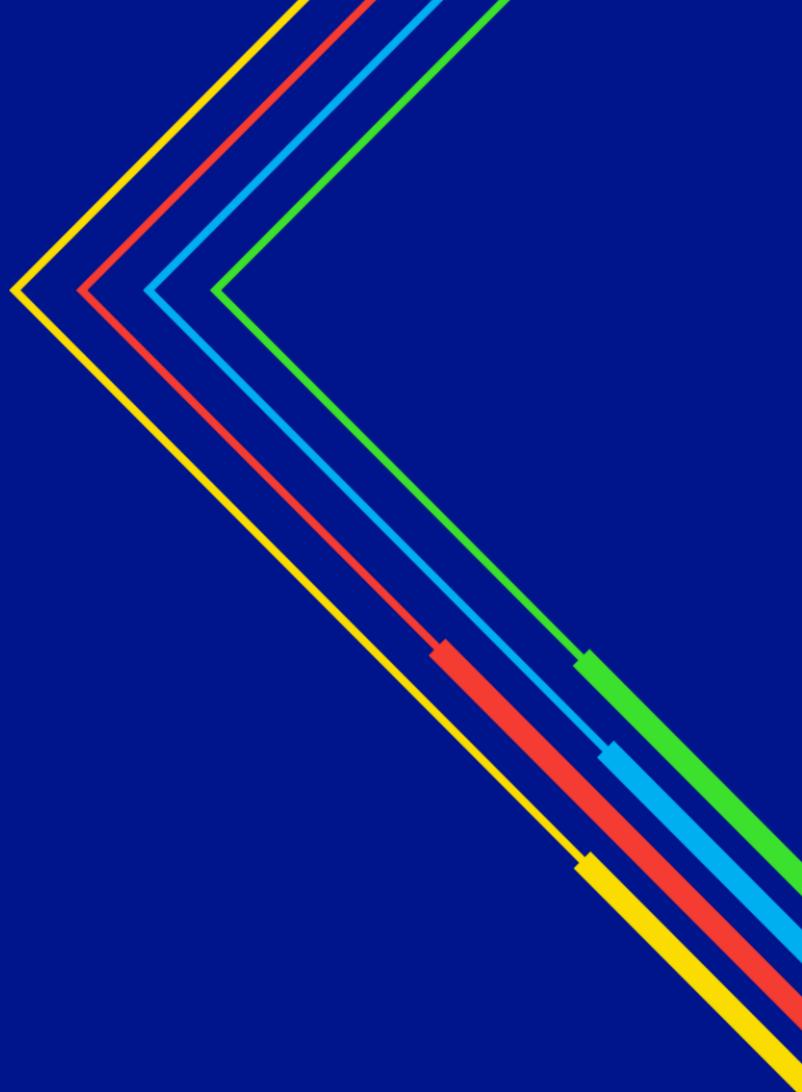
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# G99 Small Generation Installations (Fast Track)

**Kyle Smith**

Connection Strategy Engineer

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# G99 Small Generation Installations

## G99 Fast Track modification.

Following a Distribution Code modification proposal and review, (DCRP/21/08 'Fast Track'). Ofgem have approved the modification.

Subsequently from 9<sup>th</sup> November, the G99 fast track process will be split into three different SGI processes.

NGED have also developed an internal fourth process to aid the transition to a net zero future.



# G99 Small Generation Installation 1 (G99 SGI-1)

## SGI 1

All generation/storage devices are each rated\* at no more than 16A and the total of all ratings\* is also no more than 16A.

## Requirements

- All generation is installed on an existing premise.
- All existing and new generation is fully type tested (G59,G83,G98,G99)
- Basic design capacity of each generation unit is 32A or less.
- Any generation unit with a basic design capacity more than 16A is limited to 16A or below, utilising the manufacturers facility to limit.
- Sum of all the ratings of all equipment is no more than 16A per phase.

# G99 Small Generation Installation 2 (G99 SGI-2)

## SGI 2

All generation/storage devices are each rated\* at no more than 16A and the total of all ratings\* is no more than 32A.

A G100 Scheme limits the export to the distribution network to no more than 16A.

## Requirements

- All generation is to be installed on an existing premise.
- All existing and new generation is fully type tested (G59,G83,G98,G99)
- Basic design capacity of each generation unit is 32A or less.
- Any generation unit with a basic design capacity more than 16A is limited to 16A or below, utilising the manufacturers facility to limit.
- Sum of all the ratings of all equipment is no more than 32A per phase.
- A G100 export limitation scheme limits the export onto the distribution network to no more than 16A.

# G99 Small Generation Installation 3 (G99 SGI-3)

## SGI 3

All generation/storage devices are each rated\* at no more than 32A and the total of all ratings\* is no more than 60A.

A G100 Scheme limits the export to the distribution network to no more than 32A.

## Requirements

- All generation is to be installed on an existing premise.
- All existing and new generation is fully type tested (G59,G83,G98,G99)
- Basic design capacity of each generation unit is 32A or less.
- Sum of all the ratings of all equipment is no more than 60A per phase.
- A G100 export limitation scheme limits the export onto the distribution network to no more than 32A.
- \*\*The Earth loop impedance at the point of supply is to be checked by the DNO\*\*

# NGED G99 5+5

## NGED G99 5+5

All generation/storage devices are each rated at no more than 5kW and the total of all ratings is no more than 10kW.

A G100 Scheme limits the export to the distribution network to no more than 5kW.

## Requirements

- All generation is to be installed on an existing premise.
- All existing and new generation are fully type tested (G98,G99)
- Basic design capacity of each generation unit is 5kW or less.
- Sum of all the ratings of all equipment is no more than 10kW.
- A G100 export limitation scheme limits the export onto the distribution network to no more than 5kW.
- \*\*The Earth loop impedence at the point of supply is to be checked by NGED\*\*

# SGI1-3 and NGED 5+5 process

- **SGI 1** – This is a fit and inform process.
- **SGI 2** – This is an apply before connection process, and the acceptance will be sent to the customer within 10 working days of application.
- **SGI 3 & NGED 5+5** – This is an apply before connection process. We will send acceptance or notification of the outcome of the study\* within 10 working days.

\* When the study is carried out and we assess that the application does not adhere to the G99 fast track process or NGED 5+5, we will continue with a standard G99 application.



# ICE update

**Penny Carolan**  
Connections Strategy Engineer

**October 2022**

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# ICE Consultation 2022 update

- Our ICE report 'looking back, looking forward' was published on our website 31<sup>st</sup> May 2022
- The ICE consultation with major customers was opened 19<sup>th</sup> July 2022
- On 5<sup>th</sup> September 2022 Ofgem asked for our reply to the customer responses on the issues raised within the ICE consultation – 5 consultation responses
- Feedback was generally positive and we replied on 30<sup>th</sup> September to Ofgem with issues raised.
- We await the final decision



# Outcomes from previous ICE commitments

## Trigger point – EHV reinforcement – started December 2021

### How it works

- Trigger point information included in Point of Connection (PoC) letter for the connections:
  - Major connections at 33kV and above (EHV)
  - Dedicated EV charging hub requiring 1MVA or more
  - Generation at existing premises with supplies up to 100A per phase: trigger point identified for the load that can be accommodated on the existing connection without requiring chargeable connection works.
- Customers are given an opportunity to reduce their requested capacity to avoid or reduce the reinforcement costs, if they choose to.
- Customers have 2 working days to respond in writing (email) otherwise the offer is progressed on basis of initial requested capacity.



# Trigger point – EHV reinforcement

## Feedback

- 60% of applicants have opted for a lower capacity to avoid reinforcement costs and timescales.
- Still early days, but some customers are evidently taking the opportunity to revise their capacity and avoid reinforcement.
- Some instances:
  - ❑ Initial application request for 100MW Battery Energy Storage System (BESS). Point of Connection (PoC) Info Letter advised a reduction to 35MW would avoid significant reinforcement. Customer accepted the reduced capacity.
  - ❑ Initial application request for 49.5MW PV & BESS. Customer reduced capacity to 40MW following the trigger point information.
  - ❑ Initial application request for 99.9MW BESS. Subsequent PoC Info Letter advised a reduction to 45MW would avoid significant reinforcement. Customer accepted the reduced capacity.



# Outcomes from previous ICE commitments

## Multiple budget estimating charging – EHV update

### Why

Key items of note over the last 3 years

Increasing volumes of options of up to 18 options.

- 17% asked for 6 options last year.

Top ten customers are responsible for over 40% of the total budget volumes.

### Outcome

- Up to 2 free budget options per site (over a 6 month period).
- A restriction of six months will apply from issue of the budget estimate(s) for further free budget estimates to be issued at a site.
- £300 charge per additional budget option afterwards (within the 6 months period).
- Only applicable to multiple budget estimates (22kV and above) from February 2022.

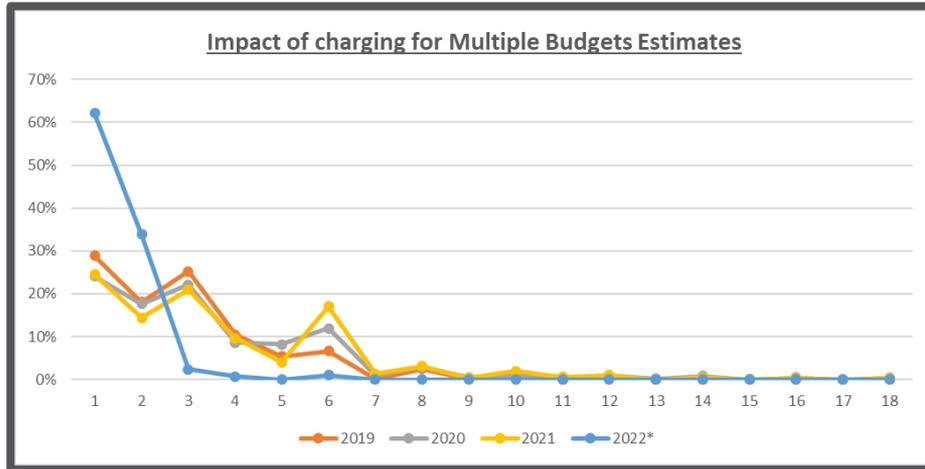


<https://connections.nationalgrid.co.uk>

# Budget estimating charging – EHV update

## Outcome update

The 2022 data is only based on a 6 months period following implementation of the revised approach.



Single and dual capacity applications accounted for 96% of the budget volumes so far as opposed to 39% in 2021 following the revised approach.



<https://connections.nationalgrid.co.uk>

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# Summary and feedback

## Summary

### Feedback

- Any further feedback on today's topics

## What would you like next time

### CCSG

- Is there a topic you would like to be discussed in our next meeting?

## Other events

### Events

- Connections Workshop 16<sup>th</sup> November – Villa Park, Birmingham