

CMP446 Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment

Workgroup Meeting 2, 30 January 2025

Online Meeting via Teams

WELCOME

Agenda

| Topics to be discussed | Lead |
|--|----------|
| Welcome | Chair |
| Action updates and follow ups from Workgroup 1 | Proposer |
| Workgroup Consultation Update | Chair |
| Any Other Business | All |
| Next Steps | Chair |

Public Expectations of a Workgroup Member

Contribute to the discussion

Be respectful of each other's opinions

Language and Conduct to be consistent with the values of equality and diversity

Do not share commercially sensitive information

Be prepared - Review Papers and Reports ahead of meetings

Complete actions in a timely manner

Keep to agreed scope

Email communications to/cc'ing the .box email

Your Roles

Help refine/develop the solution(s)

Bring forward alternatives as early as possible

Vote on whether or not to proceed with requests for Alternatives

Vote on whether the solution(s) better facilitate the Code Objectives

Workgroup Membership

| Role | Name | Company |
|--------------------------|--------------------|--|
| Proposer | Martin Cahill | NESO |
| Workgroup Member | Brian Hoy | Electricity North West |
| Workgroup Member | Ciaran Fitzgerald | Scottish Power Renewables |
| Workgroup Member | Dan Clarke | National Grid Electricity Transmission (nominated by NESO) |
| Workgroup Member | Drew Johnstone | Northern Powergrid |
| Workgroup Member | Garth Graham | SSE Generation |
| Workgroup Member | Grant Rogers | Qualitas Energy |
| Workgroup Member | Helen Stack | Centrica |
| Workgroup Member | Jack Purchase | National Grid Electricity Distribution |
| Workgroup Member | Joe Colebrook | Innova Renewables |
| Workgroup Member | Kate Teubner | Low Carbon |
| Workgroup Member | Kyran Hanks | WWA (nominated as a CUSC Panel Member) |
| Workgroup Member | Nina Sharma | Drax |
| Workgroup Member | Ross O'Hare | SSEN |
| Workgroup Member | Zivanayi Musanhi | UK Power Networks |
| Authority Representative | Alasdair MacMillan | Ofgem |

What is the Alternative Request?

What is an Alternative Request? The formal starting point for a Workgroup Alternative Modification to be developed which can be raised up until the Workgroup Vote.

What do I need to include in my Alternative Request form? The requirements are the same for a Modification Proposal you need to articulate in writing:

- a description (in reasonable but not excessive detail) of the issue or defect which the proposal seeks to address compared to the current proposed solution(s);
- the reasons why you believe that the proposed alternative request would better facilitate the Applicable Objectives compared with the current proposed solution(s) together with background information;
- where possible, an indication of those parts of the Code which would need amending in order to give effect to (and/or would otherwise be affected by) the proposed alternative request and an indication of the impacts of those amendments or effects; and
- where possible, an indication of the impact of the proposed alternative request on relevant computer systems and processes.

How do Alternative Requests become formal Workgroup Alternative Modifications? The Workgroup will carry out a Vote on Alternatives Requests. If the majority of the Workgroup members or the Workgroup Chair believe the Alternative Request will better facilitate the Applicable Objectives than the current proposed solution(s), the Workgroup will develop it as a Workgroup Alternative Modification.

Who develops the legal text for Workgroup Alternative Modifications? ESO will assist Proposers and Workgroups with the production of draft legal text once a clear solution has been developed to support discussion and understanding of the Workgroup Alternative Modifications.

Timeline for CMP446 on 22 January 2025

| Workgroups | | High Level Objectives |
|--|-------------------------|---|
| CMP446 Workgroup Meeting 1 | 24/01/2025 | Full solution and ToR assessment |
| CMP446 Workgroup Meeting 2 | 30/01/2025 | Any Alternative requests suggestion/ Review of Workgroup Consultation |
| CMP446 Workgroup Meeting 3 | 03/02/2025 | Review of Workgroup Consultation / Contingency |
| CMP446 Workgroup Consultation | 07/02/2025 - 13/02/2025 | |
| CMP446 Workgroup Meeting 4 | 19/02/2025 | Workgroup Consultation feedback and any Alternative votes |
| CMP446 Workgroup Meeting 5 | 24/02/2025 | Finalise legal text and ToR Confirmation, Workgroup Vote |
| CMP446 Workgroup Meeting 6 | 26/02/2025 | ToR confirmation and Workgroup Vote/ Contingency |
| CMP446 Workgroup Report to Panel | 05/03/2025 | |
| CMP446 Panel for ToR sign off | 10/03/2025 | |
| Post Workgroups | | |
| CMP446 Code Administrator Consultation | 10/03/2025 - 17/03/2025 | |
| CMP446 Draft Final Modification Report to Panel | 24/03/2025 | |
| CMP446 Panel Recommendation Vote | 28/03/2025 | |
| CMP446 Final Modification Report to Panel to check Votes | 28/03/2025 | |
| CMP446 Final Modification to Ofgem | 28/03/2025 | |
| CMP446 Decision Date | 29/04/2025 | |
| CMP446 Implementation Date | 02/05/2025 | |

Terms of Reference*

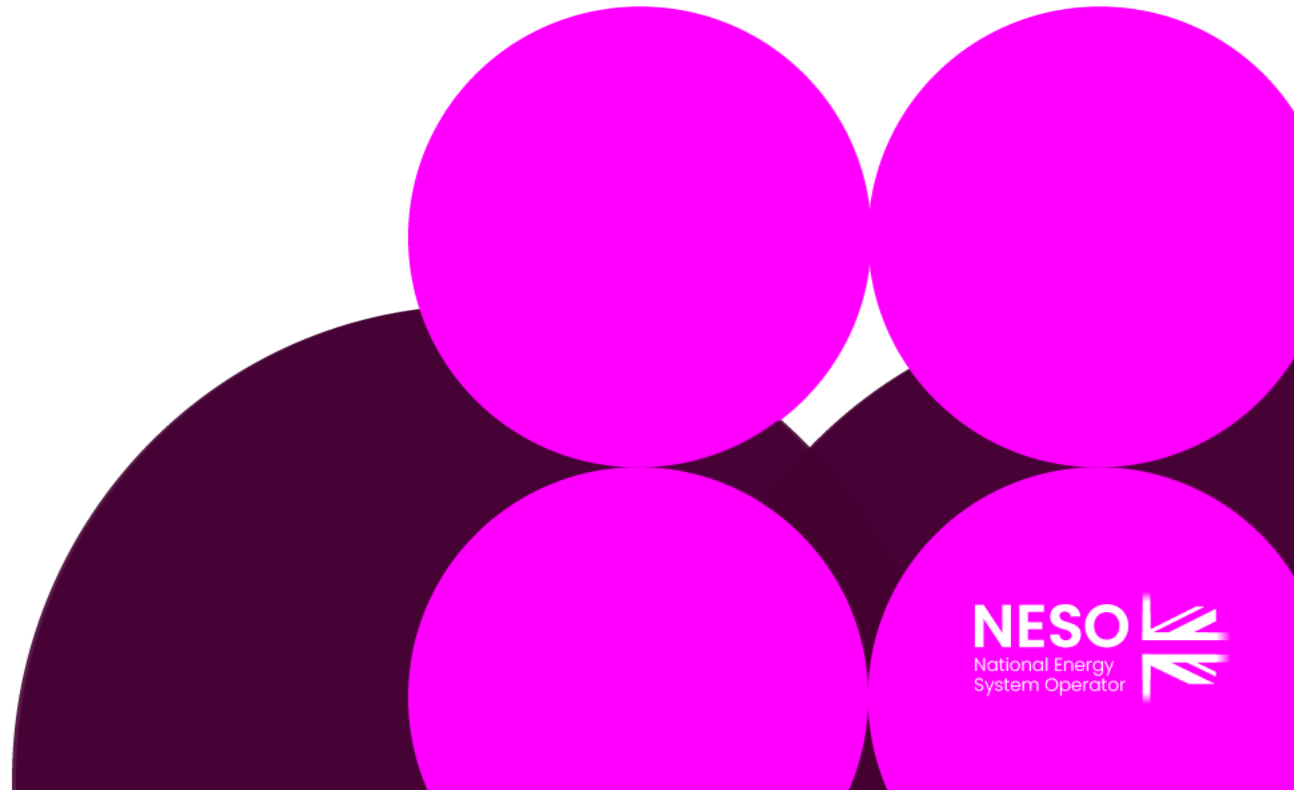
| Workgroup Term of Reference | |
|-----------------------------|--|
| a) | Consider EBR implications |
| b) | Consider the scope of work identified and whether this is achievable within the timeframe outlined in the Ofgem Urgency decision letter. |
| c) | Consider the legal and practical implementation of this modification alongside CMP434/CMP435 and any other relevant in flight CUSC modifications. |
| d) | Consider any cross-code impacts. |
| e) | Consider data and any other requirements from DNOs to implement |
| f) | Consider how CMP446 would be compatible with the requirement for the NESO acting in a non-discriminatory manner |
| g) | Consider how CMP446 would be compatible with the requirement for harmonised rules for generator connections in GB. |
| h) | Consider what the MW capacity relates to: for example, export capacity or installed capacity or developer capacity? |
| i) | Consider if the change applies only to new projects (up to 5MW) or also to existing D connected projects that increase their capacity by up to 5MW (say from e.g. 4MW to 6MW), and projects that reduce to be below the threshold. |
| j) | Consider any legal text interactions with CMP434 and CMP435. |
| j) | Consider potential for interlinked impact of cumulative/aggregated <5MW projects which would otherwise breach the proposed 5MW threshold. |
| k) | Consider the interaction with Technical (Planning) limits and Distribution (DNO) managed Active Network Management (ANM) schemes |

Public Actions

| Action number | Action | Status |
|---------------|--|--------|
| 1 | Develop a table or flowchart to illustrate various scenarios for how generators will be treated under the proposed threshold change. This will provide clarity and will be reviewed by the Workgroup to help to refine the proposed solution. To include different MW sized generators, new vs change to capacity, and demand connections with generation attached | Open |
| 2 | Consider potential future risks and mitigations. for discussion at the next Workgroup meeting. Specifically, to consider: <ul style="list-style-type: none"> - What work is already in place to assess cumulative impact of smaller generators - Is there a need to be able to roll back increase if too many projects in 1-5MW range apply - What other mitigations are, or will be in place | Open |
| 3 | With regards to data presented to illustrate the total England and Wales accepted DER by technology, the Proposer took an action to provide up to date data and further clarity on what the data represents. | Open |
| 4 | Send out the draft legal text to Workgroup members to review | Open |
| 5 | The Proposer took an action to develop the implementation timelines for CMP446 in relation to CMP434 and CMP435 further, considering different decision outcomes | Open |
| 6 | The Proposer took an action to keep the Workgroup of Modification GC0139 updated on the progress of this Modification in case there is any cross over | Open |
| 7 | Clarify the definition of MW capacity to be used, as different terms such as installed capacity, export capacity, and developer capacity are used inconsistently | Open |
| 8 | Provide a clear explanation and documentation on why Scotland codification is excluded from the defect, including legal, strategic, and practical reasons | Open |
| 9 | The Chair took an action to remove item J from the Terms of Reference. There was also a minor amendment to item (i) | Open |
| 10 | Provide explanation of CP30 interaction at TI and DNO level | Open |

Action updates and follow ups from Workgroup 1

Martin Cahill / Alex Markham - NESO



Action 1 - Scenarios

| Scenario for small/medium PS in E&W only | MW requested | Do I need to go through Evaluation Transmission Impact process | Example |
|--|---|--|---|
| New EG project , not yet on BCA | <5MW | No | |
| New EG project, not yet on BCA | ≥5MW | Yes | |
| Existing EG project not yet connected | <5MW (total MW applies to accumulative value) | No | 2MW EG project wants to add 2 MW, does not need to go through process as total MW does not exceed 5MW. |
| Existing EG project not yet connected | ≥5MW (total MW applies to accumulative value) | Yes | 2MW EG project wants to add 4 MW, does need to go through process as total exceeds 5MW. |
| Existing Demand Project | Any size MW | Process n/a – out of scope of mod | N/A |
| New Demand Project | Any size MW | Process n/a – out of scope of mod | N/A |
| Demand Project wanting to add Generation | Generation <5MW (total MW applies to accumulative generation value) | No | Demand capacity n/a. Demand project wants to add 2MW of generation, does not need to go through process. |
| Demand Project wanting to add Generation | Generation ≥5MW (total MW applies to accumulative generation value) | Yes | Demand capacity n/a. Demand project wants to add 6MW of generation, does need to go through process. |

Action 2: Future Risks and Mitigations

- We do not envisage including a 'roll back' option where the threshold in England and Wales is decreased again.
- If for any reason a different limit was thought more appropriate this would need to be changed through the code process and raised as a new modification.
- DNOs already:
 - Provide a list of all embedded Small Power Stations with a Registered Capacity equal to or greater than 1MW
 - Carry out assessment on application for all connections to DNO
 - Include all connected and contracted embedded Small Power Stations in fault level infeed data
- As per action 3 slide, 1-5MW generators make up around 0.7% of the distribution connections queue. Even a significant increase to this would still mean a very low % of projects which have a TIA exception.
- As part of this proposal, we haven't proposed to include any cap of MWs at any connection site.

Providing data to NGET for projects between 1>MW - <5MW

- The technical data currently provided by DNOs to NGET via a SoW-PP data template, currently captures Registered Capacity and Technology Type, for each GSP for projects over 1MW
- Propose to amend this template to capture on a separate tab, projects under the lower TIA threshold, ensuring that NGET have this visibility to enable network planning activity

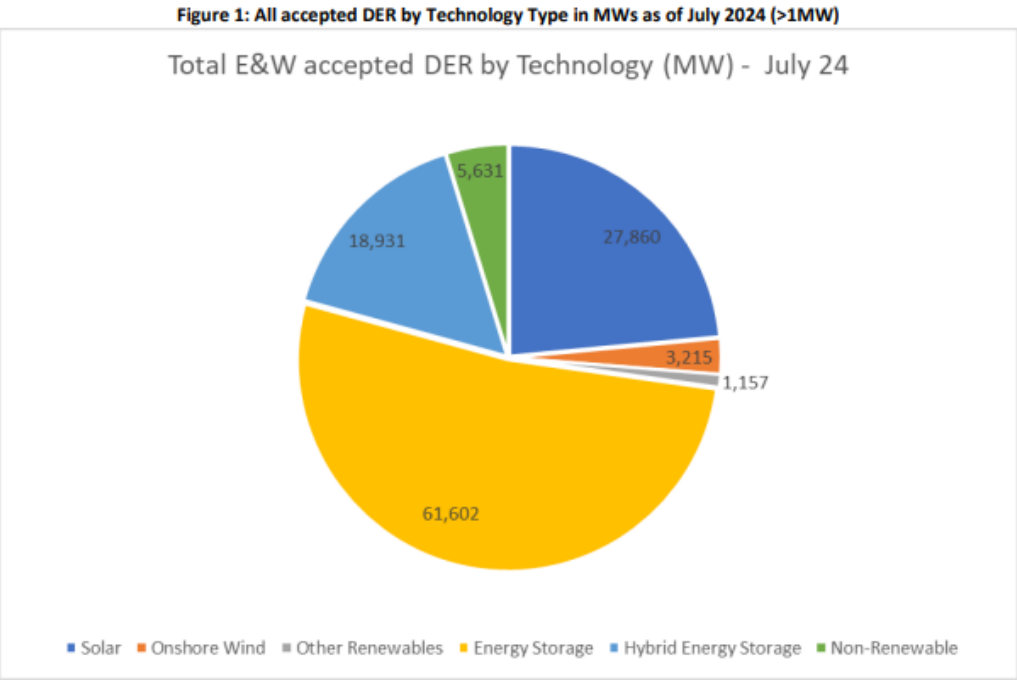
| Embedded Small Power Stations < 1MW | | | THIS DATA IS REQUIRED TO BE UPDATED FOR EVERY STATEMENT OF WORKS APPLICATION |
|-------------------------------------|-------------------------------|----------------|--|
| Fuel Type | Aggregate Registered Capacity | Number of PGMs | Comments |
| Biomass | | | |
| Fossil brown coal/lignite | | | |
| Fossil coal-derived gas | | | |
| Fossil gas | | | |
| Fossil hard coal | | | |
| Fossil oil | | | |
| Fossil oil shale | | | |
| Fossil peat | | | |
| Geothermal | | | |
| Hydro pumped storage | | | |
| Hydro run-of-river and poundage | | | |
| Hydro water reservoir | | | |
| Marine | | | |
| Nuclear | | | |
| Other renewable | | | |
| Solar | | | |
| Waste | | | |
| Wind offshore | | | |
| Wind onshore | | | |
| Other | | | |
| Total MW | 0 | 0 | |

GUIDANCE:

* This table should be updated for all Statement of Works applications with all Embedded Power Stations of a size less than 1MW at each GSP being studied.

* General updates in black but commented accordingly.

Action 3 – clarity on data



| Appendix G Data | All not yet connected DER between 1MW and < 10MW | How many MWs? |
|-----------------|--|---------------|
| NGED | 199 | 850 |
| UKPN | 183 | 745 |
| SPM | 31 | 12 |
| ENWL | 79 | 291.5 |
| NPG | 83 | 303 |
| SSEN | 72 | 330 |
| Total | 572 | 2,531.5 |

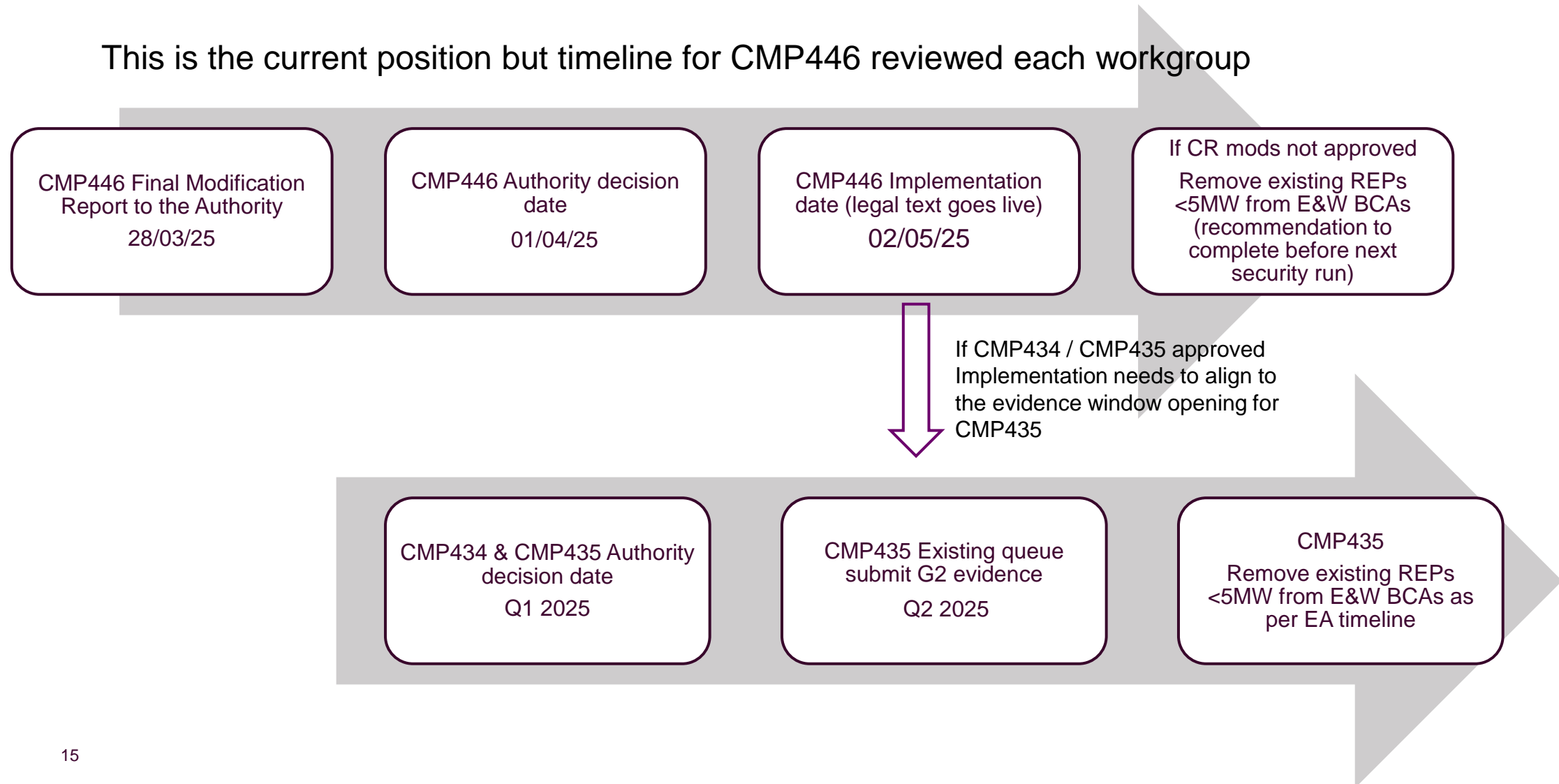
| Table 35b: All not yet connected DER from 1MW > X > 5MW | | |
|---|---|---------------|
| Appendix G Data | All not yet connected DER between 1MW and < 5MW | How many MWs? |
| NGED | 103 | 232.3 |
| UKPN | 114 | 265.7 |
| SPM | 2 | 6 |
| ENWL | 67 | 120 |
| NPG | 67 | 136.4 |
| SSEN | 37 | 92.1 |
| Total | 390 | 852.5 |

- Clarity requested on what this slide was depicting
- Source, section 3.3 of the Position Paper on TIA thresholds
 - It was depicting the total accepted DER by technology split (MW) in E&W as of July 2024.
 - Comparing the pie chart against the above tables (which were omitted from WG1 slides), it was demonstrating that DER projects that are 1 – 9.9MW and 1-4.9MW make up a circa 2.5% and 0.7% share of the overall distribution connections queue.

- The paper presented that <10MW and <5MW customers are more likely to connect at much lower voltages (33kW and below), their overall impact on the transmission system is negligible and an exception could be made to remove them from the TIA process.
- Conclusion of report is that NGET and NESO support the proposal to amend the lower TIA threshold to 5MW at this stage for the TIA process

Action 5 – CMP446 timeline

This is the current position but timeline for CMP446 reviewed each workgroup



TM04+ and CMP446 Timing



Following implementation, impacted projects are no longer considered “in scope existing connection contracts” for the purpose of CMP435 Gate 2 criteria. Later a non-material change will be required if CMP435 WACM1 approved, standard legal text applies at implementation. CMP435 will need updated baseline with Appendix G/Schedule 2 exhibit 1A clauses removed.



Because implementation is before CMP435, impacted projects are no longer considered “in scope existing contracts” for Gate 2. If WACM1 is approved, then alternative legal text is used for CMP446. CMP435 will need updated baseline with Appendix G/Schedule 2 exhibit 1A clauses removed.



Positive action required which means that impacted project are no longer considered “in scope existing agreements” for the purpose of Gate 2 window. Implementation should still be before window opening, and legal text will be based off CMP435 decision

Actions 7/8 Legal Text

(e) The **User** may request that the **Evaluation of Transmission Impact** is undertaken by **The Company** using one of the following options:

- i. **Statement of Works and Confirmation of Project Progression** (as documented in paragraph 6.5.5)
- ii. **Transmission Impact Assessment** (as documented in paragraph 6.5.8)

Any other published process as agreed between **The Company** and the **User** following written approval from the **Authority** and consultation with such persons who may be considered to have an appropriate interest.

(f) In England and Wales, it is agreed that only an **Embedded Small Power Station** which is 5MW or above is a **Relevant Embedded Power Station** requiring the submission of an **Evaluation of Transmission Impact** to **The Company** in accordance with Paragraph 5.1(a) above.

CUSC Schedule 2 Exhibit 1A

~~[] 2 — For the purposes of CUSC Paragraph 6.5.1(b), Embedded Small Power Stations of [] MW and above will be deemed to be a Relevant Embedded Small Power Station unless otherwise notified by The Company in accordance with CUSC Paragraph 6.5.1(b).~~

Appendix G

~~3. For the purposes of the Evaluation of Transmission Impact and unless otherwise indicated by The Company under CUSC 6.5.1(b), Embedded Power Stations of 1MW and above will be deemed to have an impact on the National Electricity Transmission System and must be included in Appendix G Schedule 1.~~

- CUSC 6.5.1(f) amendments same as we discussed last time
- Have now removed References in Schedule 2 and Appendix G:
 - Requirement to list Relevant sites in Appendix G is already outlined elsewhere
 - Now that limit is codified in the main CUSC text the additional reference to the threshold for TIA is not required
 - Should avoid gap in CUSC for Scottish generators

Actions Capacity Definition

To discuss in Workgroup

Actions 7/8 Scotland Codification

- Our position is still that Scotland codification is not part of the defect of this modification:
If the Evaluation of Transmission Impact threshold is not urgently addressed, this may cause a significant commercial impact on projects between 1MW and 5MW in England and Wales. Projects would potentially miss out on significant acceleration of timelines which would likely result from not being subject to the cost and timelines associated with transmission assessment and/or reinforcement. This impacts on 850MW (~400 projects) of generation currently, plus any future projects between 1 and 5MW in England and Wales.
- We consider:
 - As today there is a need for different thresholds to be applied to different parts of the system, recognising the operational differences in each region
 - The current 1MW limit is “practically” applied to England and Wales only because it appears in CUSC Schedule 2 Exhibit 1A, and until recently the Appendix G process was only applied to England & Wales
 - The change is just to update the existing figure that already relates to England & Wales
 - Challenges to the process itself more generally are outside the defect of this modification
- Since Workgroup one we have spoken to the Scottish TOs and add the following considerations:
 - SP Energy Networks plan to review their minimum TIA thresholds. The amount of time that will be required to carry out this review is not known yet
 - Both Scottish & Southern Electricity Networks and SP Energy Networks have some GSPs where a threshold lower than 200kW applies, so codifying would not be as simple as adding in one figure for Scotland
 - Codifying the Scotland thresholds at their current levels now as the potential to delay any proposed future changes to thresholds, which we believe is not in keeping with the aim to accelerate the connection of smaller power stations

Action 10 - Clean Power 2030

Demand projects in scope of reform and connecting to the transmission network are by nature strategically important given the size of their connections and will deliver investment and wider social value. It is therefore essential that steps are taken to ensure major demand investors can continue to bring forward and progress investments in Great Britain both ahead of reform and as reforms are progressed.

Similarly, it is important that smaller projects are treated proportionately and are not unduly caught up in transmission processes. Projects connecting to the distribution network that are below regional thresholds for Transmission Impact Assessment (TIA) will not be constrained by the capacity ranges set out in this plan. Currently, the lower threshold for TIA is 1 MW in England and Wales, 200 kW in mainland Scotland, and 50 kW in the Scottish Islands.³

Pathways to Clean Power

Moving from a 'first come, first served' system to one that is strategically aligned requires that we set out the capacities we will need in each technology type. To do this, we have set out national pathway figures for the capacity which should be prioritised for all technologies, and further regional breakdowns for the capacity which should be prioritised for solar, batteries and onshore wind. This will enable network companies to accelerate, and developers to bring forward, projects which best align with strategic need.

Subject to the final agreed approach to connections reform, we expect that NESO will use the top-end of the government's 2030 pathway (i.e. DESNZ 'Clean Power Capacity Range'), to

³ National Grid Electricity Transmission have proposed raising the threshold for TIA in England and Wales, see: [Ofgem Connections Delivery Board - October 2024 minutes](#)

If the proposal to raise the lower threshold is approved, projects that fall under the new minimum threshold for England and Wales, would not count towards the capacity of the Distribution network region 'bucket' – assuming CMP435/434 is approved

Distribution connected technologies

Table 4: Regional capacity breakdowns for distribution connected technologies required for 2030²⁵ and 2035²⁶

| Distribution network region | Solar (MW) 2030 | Solar (MW) 2035 | Onshore wind (MW) ²⁷ 2030 | Onshore wind (MW) 2035 | Batteries (MW) 2030 | Batteries (MW) 2035 |
|--|-----------------|-----------------|--------------------------------------|------------------------|---------------------|---------------------|
| Scottish and Southern Electricity Networks (SSEN) – Scottish Hydro Electric Power Distribution (SHEPD) | 1,100 | 1,700 | 3,500 | - | 900 | 900 |
| SP Distribution (SPD) | 1,100 | 1,800 | 2,700 | - | 800 | 900 |
| Northern Powergrid (NPG) | 4,400 | 6,500 | 1,900 | - | 1,900 | 2,100 |
| Electricity North West (ENWL) | 1,500 | 2,300 | 700 | - | 900 | 1,000 |
| SP Manweb | 1,500 | 2,200 | 1,000 | - | 400 | 500 |
| National Grid Electricity Distribution (NGED) | 13,900 | 19,900 | 2,400 | - | 3,000 | 3,600 |
| UK Power Networks (UKPN) | 8,100 | 11,800 | 900 | - | 2,100 | 2,400 |
| SSEN – Southern Electric Power Distribution (SEPD) | 4,600 | 6,200 | 100 | - | 1,200 | 1,400 |
| GB total | 36,200 | 52,400 | 13,200 | - | 11,200 | 12,800 |

Note: MW capacity figures have been rounded to the nearest 100 MW.

In 2026 - 4MW Solar Farm applies to ENWL. Isn't included within 2030 / 2035 Solar Buckets.

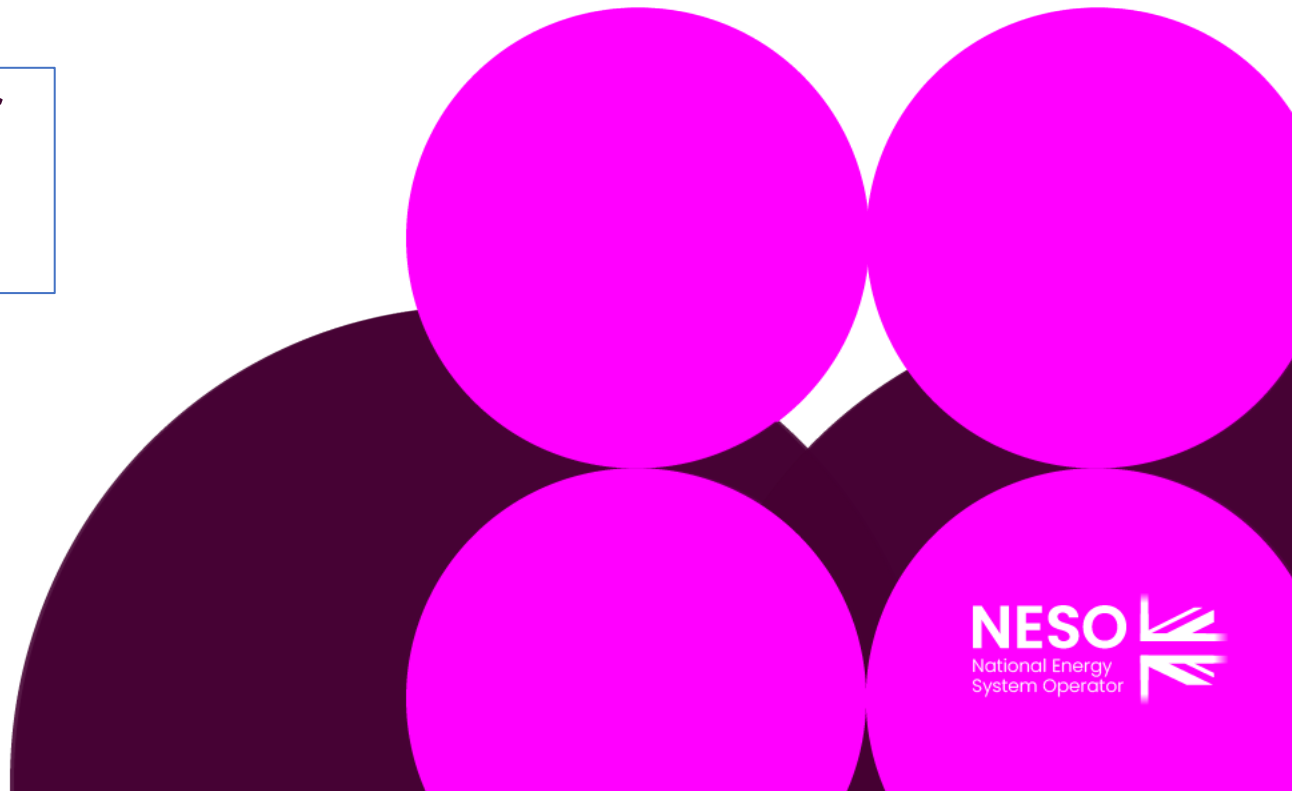
Public Updated slide: How BEGA process will work for projects under 5MW in E&W

| New Customers wanting a BEGA | Existing REPs Customers wanting a BEGA |
|---|---|
| 1. Customer has an accepted offer with DNO | 1. Customer already has an accepted offer with DNO |
| 2. EG submits BEGA application to NESO – at any point in the year. | 2. EG submits BEGA application to NESO – at any point in the year |
| 3. NESO notify the DNO of BEGA application (via modification notice) | 3. NESO notify the DNO of BEGA application (via modification notice) |
| 4. DNO submits Modification Application (Exhibit I) to NESO (so for clarity not via Project Progression in today's world or via Transmission Evaluation Application under CMP434) | 4. DNO submits Modification Application (Exhibit I) to NESO (so for clarity not via Project Progression in today's world or via Transmission Evaluation Application under CMP434) |
| 5. Modification Application is not via the gated process | 5. Modification Application is not via the gated process |
| 6. Technical data submitted by DNO as part of Modification Application submission | 6. Technical data submitted by DNO as part of Modification Application submission |
| 7. Contracts issues to customer and DNO | 7. Contracts issues to customer and DNO |

On the TEC register as of 24th Jan, we have no existing BEGA customers in E&W under 5MW – shouldn't impact the process outlined under CMP435 for Embedded Small customers

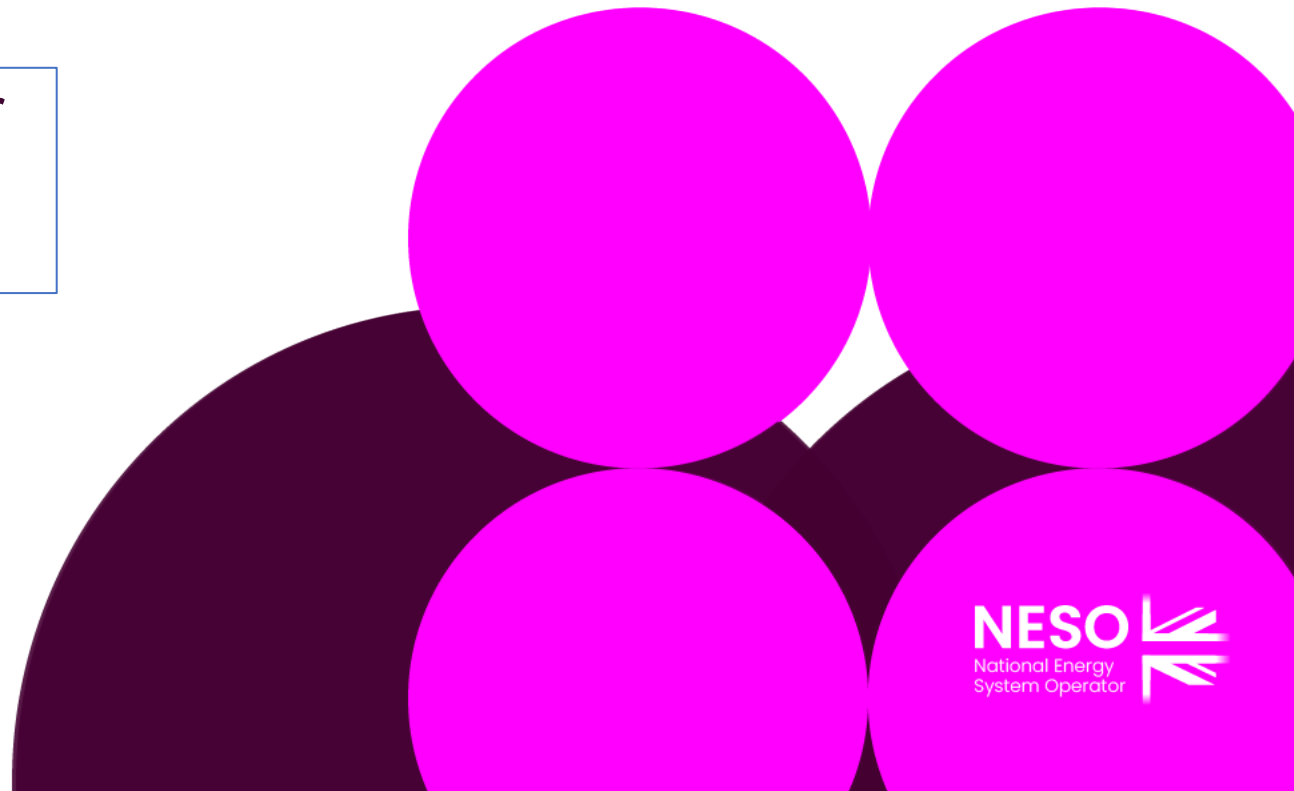
Workgroup Consultation Update

Milly Lewis – NESO Code Administrator



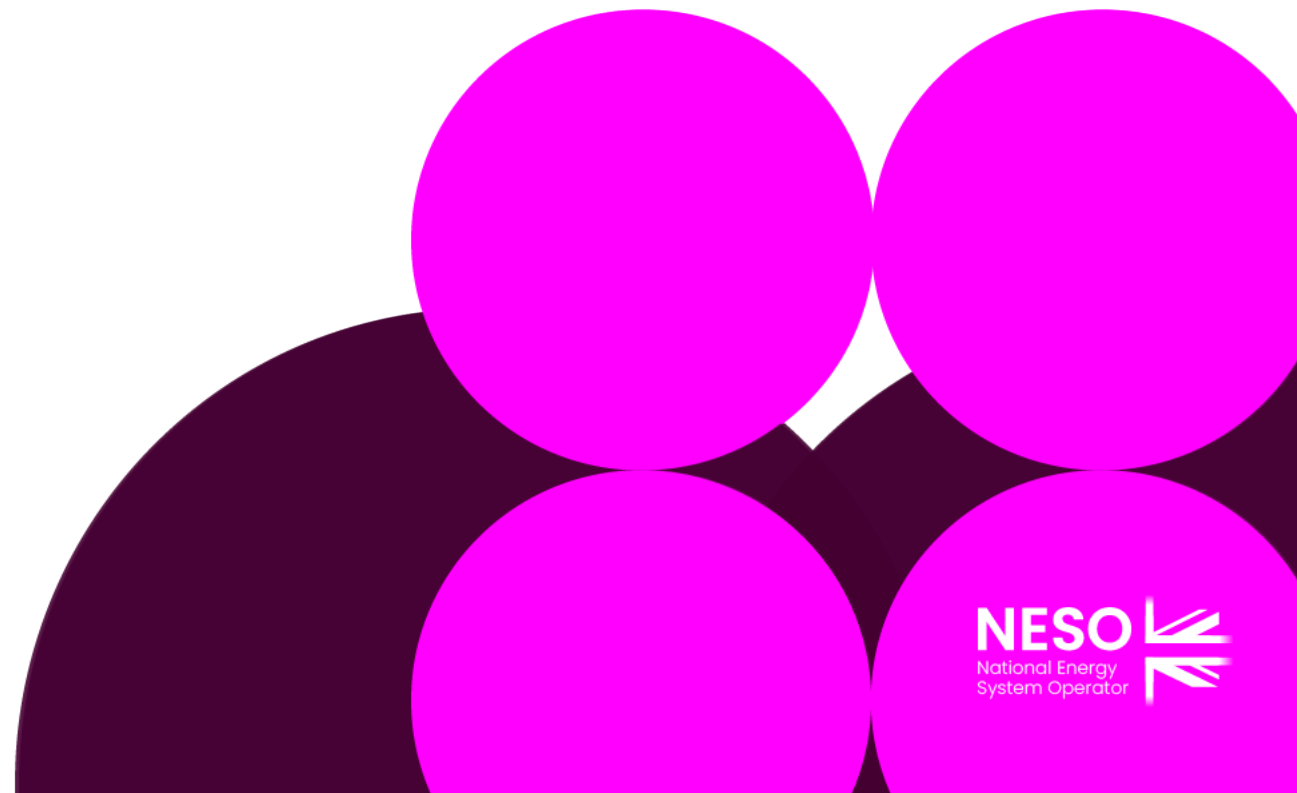
Any Other Business

Milly Lewis – NESO Code Administrator



Next Steps

Milly Lewis – NESO Code Administrator



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