

## Response to OFGEM Consultation

DNOs' future role in supporting the rollout of low carbon technologies.



# NOTTINGHAM CITY COUNCIL - LOCAL AUTHORITY RESPONSE TO OFGEM CONSULTATION

April 2026

## DNOs' future role in supporting the rollout of low carbon technologies

Response sent to - [DNOLCTPolicy@ofgem.gov.uk](mailto:DNOLCTPolicy@ofgem.gov.uk)

This paper is the Nottingham City Council response to OFGEM Consultation - ***DNOs' future role in supporting the rollout of low carbon technologies*** – issued on 3 March 2026 for response by 2 April 2026.

This consultation forms part of OFGEM's wider consultation on the methodology they should apply for the next electricity price control, known as ED3, covering the 5- year period from April 2028 to March 2032. It considers the role(s) Distribution Network Operators (DNOs) could play in supporting the necessary rollout of various low carbon technologies (LCTs), sometimes described as Distributed Energy Assets (e.g. heat pumps, solar photovoltaic (PV), electric battery storage), in homes. This is an important area for our residents.

We have included an Executive Summary, foreword and introduction to energy landscape, as context for the background considerations to our response on this important area of engagement for the energy transition.

M W Land  
Director of Environment and Sustainability

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Executive Member – Portfolio Lead

## **Response to OFGEM Consultation**

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### **Executive Summary**

Nottingham City Council welcomes the opportunity to respond to OFGEM on this exciting opportunity to consider a more active role for DNOs in supporting the rollout of low carbon technologies.

Our response considers the benefits that can be achieved in collaboration and joint development of programmes of interventions using the geographical and customer experience we currently possess, that could effectively be joined with DNO capability for delivery.

#### **Geographical understanding of residents and domestic stock**

Local authorities have, to-date, been active for the last decade in enabling, developing and deploying energy transition programmes for residents based on analysis of target groups for interventions with a focus on reduced energy consumption (eradicating losses) and increased efficiency. Often the work is enabled and administered with the help of the five Net Zero Hubs (In England).

In Nottingham, a high proportion of interventions has been funded with the support of DESNZ programmes (such as HUG, LAD, SHDF, GHG, WH:LG, and WH:SH) and through schemes such as Electricity Company Obligation (ECO) which have resulted in over 50,000 interventions already.

In Nottingham, the work on the energy transition has led to a broad and deep understanding of our housing stock across tenure in the social-rented, private-rented and owner-occupier property, and an appreciation of the characteristics of our domestic properties in terms of age, construction type, effective measures and impact to EPC certification.

Nottingham is currently achieving one of the highest rates of new EPC lodgements. This will continue over the next five years with the current programmes of interventions in Private Rented and Social Rented Sectors related to Minimum Energy Efficiency Standards (MEES) and with our fuel poverty interventions.

The energy-related activity and programmes over the next two years (funded already) and the period to 2030 and 2035 will be essential to our residents – especially in improving affordability. We will need to work in collaboration to gain maximum impact.

#### **Conclusion**

Nottingham City Council is an active participant in the energy transition journey, with lobbying, enabling, convening and delivering activity as part of our wider collaborative approach.

We have significant insight and experience in intervention programmes and would propose that we are considered a priority partner for our DNO, National Grid Electricity Distribution, in the pilot and roll out of Low Carbon Technology programmes – funded through ED3.

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## Foreword

Nottingham City is the Local Authority area for the City of Nottingham with a population of over 300,000 and is identified as one of the UK core cities. The Council still own 25,000 dwellings in the social rented sector, with a further 11,000 dwellings provided by other social residential providers.

Our actions on climate change and energy transition continue to be part of the leading response in the UK, and our Council Plan includes a desire to Lead Nottingham Forward and to support the Government Clean Energy Superpower mission as captured in the extract of our 'One Council Plan' below.



Figure 1 – extract of Nottingham City Council Plan

In energy terms, Nottingham City uses around 2,100 GWh of natural gas, consumes around 1,600 GWh of petrol products and 1,100 GWh of Electricity as part of its primary energy mix. The emphasis of our actions now is focused on affordability and reduction in use of fossil fuels as we identify the pathways for actions for energy transition and climate change.

Our Council operations have achieved an 80% reduction in emissions compared to 2007 – the baseline used for measuring Scope 1 and 2 contributions. We forecast this figure to rise to at least 90% by the end of 2028.

Our City Wider emissions, which are impacted by the decision for the national and regional energy system, are now below one million tonnes – the first of the core cities in England to reach below that threshold - and this equates to a 50% reduction since 2005 – the baseline for wider city emissions.

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# **Introduction to Nottingham City Council – Energy Landscape**

## **Working with Stakeholders**

Nottingham City Council (NCC) is working across the energy transition landscape with specific delivery of Warm Homes Programmes (Local Grant and Social Housing), Fuel Poverty and Solar portfolios. We are also looking to launch procurement for a Strategic Energy Partner to accelerate progress across energy projects and assets.

NCC works closely with East Midlands Combined County Authority (EMCCA) as the regional MCA. We also actively engage with the Midlands Net Zero Hub (MNZH), East Midlands Councils (EMC), Energy Systems Catapult (ESC) and wider regional and national entities to progress understanding of the challenges of the energy transition and climate change.

## **Specific National and Regional activities**

The ongoing interface activity in Nottingham related to the energy transition is summarised below for the purpose of this consultation with respect to DNO role in supporting the transition.

### **National Energy System Operator (NESO) tRESP submission – July 2025**

Nottingham is part of the East Midlands Regional Energy Strategic Plan group and have a good relationship with NESO team.

NCC prepared a submission of nine RFIs for the tRESP in July 2025 identifying the advancement of electrification and district heating required to support masterplan regeneration, development and retrofit across the city geography. This resulted in four RFI themes achieving 'strategic need' status, confirmed by NESO in Feb 2026. Five further areas of development were, summarised in individual RFIs but, deemed immature or to follow traditional connections process, including Housing development up to 26,000 new homes, which we would anticipate meeting Future Homes Standards.

### **National Grid Electrical Distribution – DFES – July 2025**

Nottingham is part of the East Midlands Distribution Licence Area and have a good relationship with National Grid Electricity Distribution, as local DNO/DSO.

NCC prepared a submission for the annual Distributed Future Energy Scenario (DFES) process, in July 2025, to articulate the likely pathways for Solar uptake, EV charger deployment and the uptake of heat pumps and district heating. The indicative figures for roll out of Low Carbon technologies was an early output from the LAEP work mentioned above.

**NOTE** - In the period since privatisation, our local DNO has changed from East Midlands Electricity to Central Networks to Western Power Distribution and now operates as National Grid Electricity Distribution. There have in fact been four different ownerships since 1990.

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## Nottingham City Council Activity

### Local Area Energy Plan – March 2026

NCC have been working, with appointed consultants and funding from EMCCA, on the creation of a Local Area Energy Plan (LAEP) to better define the pathways for low carbon technology rollout with the city. The potential pace of penetration for PV Solar, Heat Pumps and EV Chargers – together with programmes of light and deep retrofit have been forecast as part of the initial outputs for consideration. This is supported by a digital twin platform.

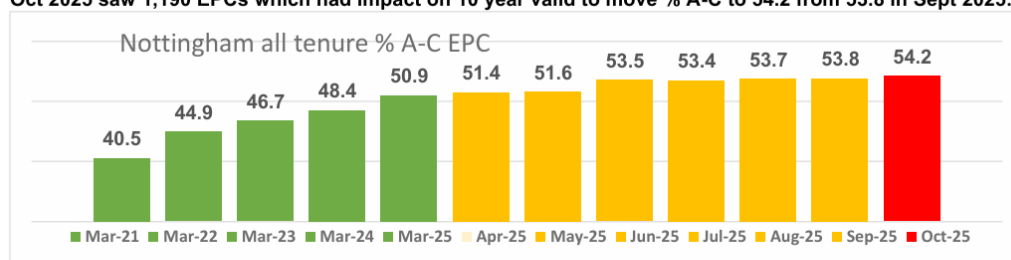
The enablers and barriers to whole system transition to Net Zero in Nottingham include the attainment of specific and combined programmes of work across all tenures of domestic buildings and large-scale interventions for industry and transport. Progression of all domestic properties to 'no fossil-fuel' heating and 'high EPC banding (A-B)' is a feature of Local Area Plan Pathways. This is currently described, in the LAEP, as being achieved through a combination of 'deep' and 'light' retrofit activity to our existing housing stock. A review is underway to normalise our understanding of the final destination and phases on the retrofit journey, and the relative and absolute definitions of a Net Zero Home (existing housing stock).

### EPC Baselines

NCC use access to the Open Data Communities (ODC) platform to reflect and analyse EPC data across the city geography. This is summarised below and gives the distribution of valid EPCs across private rented, owner occupier and social rented sector across Nottingham. (Additional data is included in appendices)

#### ODC release up to end October EPC released 27/11.

Oct 2025 saw 1,190 EPCs which had impact on 10 year valid to move % A-C to 54.2 from 53.8 in Sept 2025.



10 year valid end Oct 2025	All tenure	PRS on EPC	Owner Occupier	NCC HRA	Housing Assoc inc NCHRP	NCHomes owned non RP	Social Housing	Unknown
% A-C	54.2%	51.1%	39.0%	68.9%	73.7%	89.3%	70.2%	68.8%
Target in current consultations		Target 2030 likely to C or above whenever practical	Broad target to C or above by 2035 if not Fuel Poor	Target 2030 likely to C or above whenever practical	Target 2030 likely to C or above whenever practical	Target 2030 likely to C or above whenever practical	Target 2030 likely to C or above whenever practical	
A	0.7%	0.0%	0.6%	1.6%	1.2%	12.8%	1.6%	1.7%
B	10.2%	10.9%	8.2%	7.0%	12.6%	47.1%	8.6%	40.4%
C	43.2%	40.2%	30.2%	59.5%	59.9%	29.3%	59.3%	26.6%
D	35.8%	37.6%	43.6%	30.0%	21.5%	7.9%	27.9%	23.6%
E	9.1%	11.0%	14.8%	1.6%	4.8%	2.9%	2.3%	5.6%
F	0.8%	0.2%	2.2%	0.2%	0.0%	0.0%	0.2%	1.4%
G	0.2%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.5%

Figure 2 - Summary EPC Data – Nottingham City (Oct 2025 release)

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### Fuel Poverty Strategy

NCC are refreshing their Fuel Poverty Strategy after publication of updated national Guidance in January 2026. The previous NCC fuel strategy was 2018 – 2025 and the progress across priority areas is being reviewed to inform a new 2026 -2030 plan within a 2040 anti-poverty framework.

Indicative progress on Fuel Poverty in Nottingham since 2010 is summarised below and presents an opportunity for Nottingham to be considered a priority area for DNO actions.

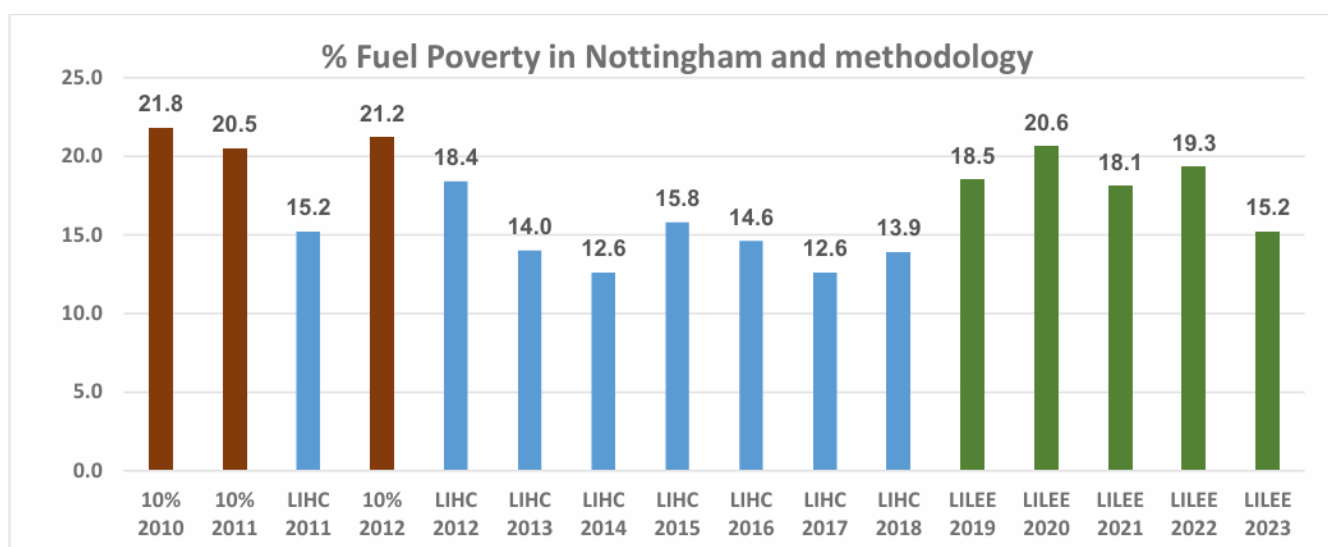


Figure 3 – Fuel Poverty - Nottingham City (National data extract)

The current definition for Fuel Poverty (LILEE) requires a dwelling to have been assessed at 'EPC Band D' or below to allow the household to be included in the fuel poverty identified quadrant. The use of LILEE is indicative of fuel poverty but other low-income resident groups may also be considered in fuel poverty if wider parameters linked to family, health and property were assessed.

The opportunity to explore local issues related to fuel poor categorisation, low-income families and vulnerable residents is an important area of further study for Nottingham – aligning to wider principles of Marmot review related to 'Fair Society, Healthy Lives' – and looking at more evidence-based policy objectives aimed at reducing health inequalities.

We look forward to work collaboratively with our current partners and National Grid Electrical Distribution on this work to ensure we balance priority resident interventions as the social priorities, with technical desire for network capacity upgrades and 'commodity-level' device interventions.

**End of Introduction Section.**

## **RESPONSE TO CONSULTATION**

### **Overarching rationale.**

**Q1. Should DNOs play a role in co-ordinating and supporting a cost-effective energy transition through improved planning and supporting/directing targeted delivery? (DNO role)**

**How can they help make the transition more efficient and affordable for everyone, and do they have a role in supporting lower-income households? (efficient and affordable)**

#### **DNO role**

NCC believes that there is a significant and essential role for DNO to assist in the co-ordination and support to a cost-effective energy transition on a regional and local basis through increased visibility of their networks, capacity, plans, (strategic, load and non-load) reinforcement – allowing clarity in the current and future states of systems (capacity and headroom) over the next few decades (e.g. 2030, 2040, 2050 and 2060ff.)

Currently there appears to be a myriad of approaches and methodologies to energy transition planning based on a variety of beliefs and forecasting, often aligned to 'end date restraints' – which generally align to a 'average roll-out' or 'blended' action - simply calculated as a pace of roll out to reach an 'absolute total fitments' in the end plan.

*An example of this would be the concept of 600,000 individual heat pumps per annum to be delivered nationally (quoted in recent years).*

We would welcome a more focused and aligned approach that addresses the geographical opportunities to plan and deliver in a focused manner, and to prioritise specific areas through a combination of capacity, capability and need. This should also recognise that there are opportunistic areas with mature Local Authority partners that could be '**early to start, early to finish**' in the transition so all remaining areas can achieve their roll out plans by 2050.

The current approach to forecasting for DNOs for low carbon technologies is generally based on National and Distribution level FES scenarios and pathways, and in the short-term is based on the 'able to pay' / 'willing to pay' segment of market, perhaps using 'high' credit rating data to suggest where Consumers are likely to move to EV Charging and Heat Pump and need more individual capacity at connection. This approach is generally 'no or low regrets' consistent with the early part of the S-curve of interventions but may not appropriately target the likely areas of mass-interventions in the later part of the next decade.

*As an example, a more affluent area with high percentage of off-road parking, is currently expected to see a quicker take-up of EV and Heat Pumps per dwelling, causing average diversity to raise from c 3 kWh to around 7 kWh, leading to de-looping and cable and/or fuse upgrades.*

*This approach has often been informed by credit rating analysis.*

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The DNO approach is often different in profile and location priority (system or affluence) to the Local Authority priorities. The latter considering Warm Homes interventions across Social Housing, Owner Occupier and the Minimum Energy Efficiency Standards (MEES) related to private rented sector (PRS) and social rented sector (SRS).

*As an example, Local Authorities will look to intervene in specific resident groups or tenures for housing retrofit, perhaps based on condition surveys of properties built in same era. (see map below). Often there is good alignment between social housing and network arrangements due to phased build out programmes some decades ago but there are also some pockets of geography where social, owner occupier and private rented co-exist.*

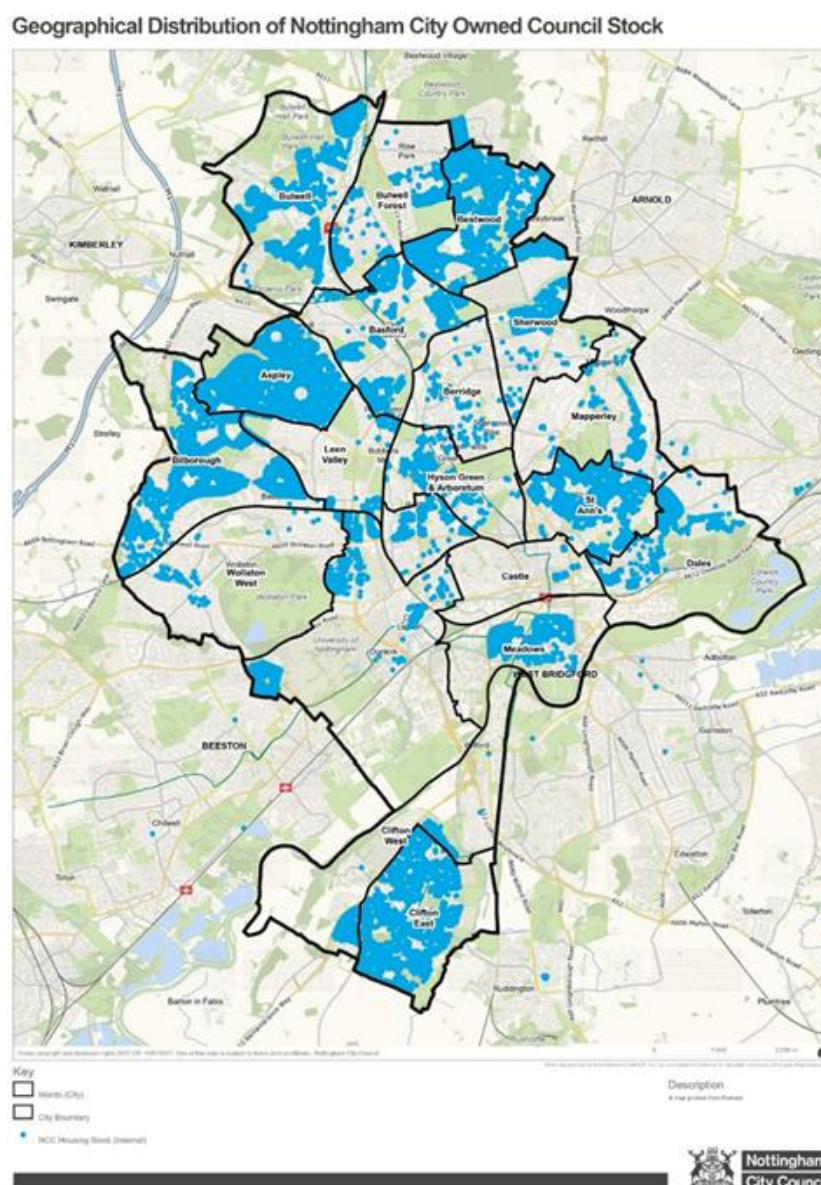


Figure 4 – Distribution of Council Owned Social Housing in Nottingham

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### ***Efficient and affordable***

The DNO could help minimise the future networks costs, contributing to lower bills, by giving more clarity to the system design and capacity for 2050, the point of Net Zero and maximum electrification in most scenarios. (the '**end plan**').

*the '**end plan**' is the intended state of the electrical network in any BSP, Primary and Secondary substation area in 2050 when full electrification has been achieved. The specifics of each geographical system area are different, and relative headroom capacity in each system will be eroded as LCT technology is rolled out, but the threshold for new capacity and equipment will be at a different point in every area.*

*Currently we see 'average' roll-out curves, but we don't see the actual plan of the upgrades and 'step changes in new capacity' in future networks that will allow us to better target intervention areas in a co-ordinated way.*

If the 'end plan' and the phased installation plan to achieve the 'end plan' are more visible then there could be the opportunity for more joint geography-based transition planning in a sequential manner, where some geographies (including their respective electrical and gas networks and sub-systems) can be targeted for completion up to a decade before 2050. This would allow target campaigns for low carbon technology deployment in the mid part of the S-curves – where deployment rates are highest, economies of scale can be driven and geographically delivery is most effective.

The geographical areas for such target planning could be largely based on helping high areas of fuel poverty, low income, or heating fuel switching in a co-ordinated manner. This could encourage and accelerate the provision of solar into target areas, with both behind the meter connection, as a network load suppressant, and the ability to connect groups of solar in that area as generation asset.

Whilst the DNO's currently have licence obligations to identify 'Vulnerable Customers' for service restoration and support, we also have at the same time 'Vulnerable Customers' identified in the Fuel Poverty Work (Jan 2026) – and whilst the labels are the same - these are not always the exact same groups.

We would want DNOs and other actors (such as NESO, DESNZ, GBE, etc) to work with Local Authorities to plan interventions on a consistent and long-term basis, with common data sets and beliefs, to gain maximum impact both of reducing energy consumption and improving affordability.

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### **Enhanced Co-ordination**

#### **Q2. Do you agree with the overall rationale and scope of 'Enhanced Co-ordination'?**

NCC support the concepts of Enhanced Co-ordination and the government's commitment to local partnerships. NCC also see local actor involvement as a key success factor and have long called for local stakeholders to be enabled to play a greater role in the transition. NCC host the Midlands Net Zero Hub which supports local stakeholders to build capability and capacity for clean generation in the region.

#### **Q3. What are your views of the effectiveness of the existing Collaboration Plan requirements?**

We welcome our engagements with National Grid Electricity Distribution (NGED) as our DNO, but despite our good engagements and discussion so far, we have not yet developed that into any specific understanding of the requirements of a Collaboration Plan or specific terms of engagement for Nottingham.

Through discussions prompted by this consultation, we are aware that NGED have published such a plan, in the form of a Smart Optimisation Output (SOO) Collaboration Plan in April 2025 and that summarises the general overview of approach, data access and engagement. The current plan appears consistent with the willingness and need to increase co-ordination, the movement to have more engagement with stakeholders but also remains a DNO view of how engagement should work.

We are increasingly aware that with the formation of the NESO in late 2024, and the increasing role of the DSO as part of the DNO role, that we have seen multiple periods of consultation and engagement led by OFGEM, NESO and DNO's – but these have not been particularly in any format or to content that we have agreed, or in a timeline that we fully understand.

Generally, activity is still driven by 'industry' timelines that serve a business purpose for electricity sector, and not timelines that recognise regional or local plans, funding cycles for interventions or explorative studies such as Local Area Energy Plans. (LAEPs)

We do think that National Grid Electricity Distribution, as our DNO, are increasingly accessible and looking to collaborate but we are not fully aware of how our information supplied informs and progresses to local outcomes in the current cycles. We miss the feedback to enable confidence that our 'line of sight' of how our inputs to progress to analysis, decisions and outputs/outcomes.

We can see specific programmes of deeper engagement, such as Future Energy Grids for Wales, Equinox and PRIDE and look forward to the sharing of the feedback, knowledge and learning from these activities in other licence areas.

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### **Do you think the enhanced Community Collaboration Plans we have described would be helpful to stakeholders and, if so, how best should they be monitored?**

We think that the opportunity to establish Community Collaboration Plans would be useful for future transition planning including addressing the following thematic areas,

- proactive identification of key stakeholders
- setting out planned stakeholder engagements
- integrating stakeholder plans into network planning
- entering into Scheduling and Co-ordination Agreements **with timetables**
- **clear and consistent data field requests and feedback on acceptance and impact**
- including Community Collaboration Plan engagement in annual reporting

We would be very keen to ensure that there is real feedback on the information and evidence provided by Local Authorities individually or through Combined Authorities, recognising that not all entities have the same level of planning and technical capacity and competence to submit information and receive the processed and determined outputs.

We would hope that the information gathering process is improved to have one protocol for data exchange between stakeholders, such as Nottingham City Council, and DNOs and NESO so we have a single source of truth for energy transition planning.

We would like to see the Community Collaboration Plans agreed with stakeholders as a formative part of the DFES and NESO RESP process, ensuring that the process for information exchange, review and processing, and feedback for decision making is clear. It will also ensure that there is a single process for providing information (input or cut sheets) to DNO's, NESO and other parties that require the same information.

### **Q4. How useful is the data currently published by DNOs, and is it presented adequately?**

NCC are aware of a wide range of data available from NGED as our local DNO, and access various documents and online platforms to try and understand the potential for connections at specific locations, the capacity and headroom in each ward or LSOA/MSOA area, the capacity for wide area programmes of intervention work and the changes in headroom and capacity for major regeneration, development and retrofit.

As non-domain experts we feel that the information and insight is useful but rarely leads to any conclusion on availability of capacity or plans for upgrade that align to our spatial planning.

*As an example, we have recently reviewed the Network Development Report (NDP) - The Nottingham Group - to better understand how well the three BSPs in the Nottingham area are prepared for our energy transition over the period to 2050.*

*The report offers a view to 2034 and identifies works likely to be required on a quarter of the Nottingham group primary substations or related circuits between 2028 and 2034. (5 of 20 primary). The options for upgrades are varied, including replacement and increased*

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*capacity for 60-year-old transformers. It is not clear how long the capacity created by 2034 will last – and there is no indication of headroom being available for the other 15 primary locations to 2050.*

### **Q5. What are your views on strengthening the System Visualisation Interface requirement, and would it be valuable for DNOs to collate and publish additional non-network datasets, if so, which datasets would be most beneficial?**

The move towards a single source of data (community and energy related) would be valuable but requires alignment and agreement on the baseline, parameters and periods for review and refresh. This could be a specification agreed between NESO, DNO and Local Authorities.

NCC are currently in the final process of creation of a Local Area Energy Plan (LAEP) which is accompanied by a digital twin. This will be viewed locally through licenced software, and some data will link to our existing GIS data platforms to enable city wide review of energy data and trends including EPC building certification (current and new HEMS standard in 2027). We don't currently have a plan to load SMART meter data but believe this will be possible by 2027-28 to create a dynamic model of energy use by residents across the City.

The common data sets held by Local Authorities for infrastructure and related activity are generally referenced by Unique Property Reference numbers (UPRN) which gives a common reference to all meta-data, enabling common storage and processing of multiple categories.

We would promote the use of UPRN to allow better data exchange without loss of fidelity.

The use of wider data sets such as Indices of Multiple Deprivation (IMD), Income and benefits data and other Case data is all part of exploring the target groups for evidence and decision making on early-stage intervention for energy transition and affordability. The requirements for data should be clearly stated and data owners agreed before additional visualisation platforms are used. This will prevent the current occurrence where visualisation is based on different baseline data dates and potentially inaccuracy / low quality of data records.

We have seen various data platform offerings that allow a data observatory of up to 500 parameters per domestic dwelling and think that a common requirement addressing concerns on GDPR and commercial data should be established.

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**Q6. What are your views on the Working with Local Authorities and others proposals we have set out above? What if any, would be the key elements of this?**

**Are you aware of particular entities who would benefit from such advice?**

NCC believe it is essential to work closely with Local Authorities which can provide an in-depth view of their local area.

We remain concerned that the most capable Local Authorities, including Nottingham as one of UK core cities, are not in an initial group for priority discussion on how to advance the proposals for better data and alignment of investment to local priorities.

We would also highlight the valuable role of the Net Zero Hubs, five across England, that provide a collegiate view and enabler for all Local Authorities. The Net Zero hubs have supported all Local Authorities in England over the last decade through DESNZ funding and helped the uptake of Low Carbon Technology and delivered retrofit programmes.

**Our recommendation would be to ensure that any pilot or demonstrator work is focused on core cities and similar Local Authorities, and that each of the five Net Zero hubs are supported by OFGEM/DNO to have capacity to roll out better data and evidence and the customer journey programmes for the next decade.**

**If OFGEM funding is provided directly (and only) to DNOs then a condition should be the engagement of regional teams (Net Zero Hub and other) as a partner. NCC would like to be part of significant pilot projects and work closely with the Midlands Net Zero Hub and the East Midlands Combined County Authority.**

**Q7. How could iDNOs support the proposals in this portion of the consultation? How could either private wire connected properties or license-exempt networks feature in these proposals?**

No response provided.

**Q8. We are keen to understand how these proposed Enhanced Co-ordination activities could best integrate with NESO's RESP processes in the near and long term, and how these proposals could complement, or be in tension with, RESP development?**

The integration of approach by NESO to FES, tRESP and RESP and the DNO approach to DFES, NDP and ED3 is essential to ensure that network development and strategic needs are aligned and that there is only one requirement to provide data from Local Authorities, and that annual dates for submission and data change management processes are identified.

*As an example, NCC were asked to provide data in different forms and with different horizons on different timelines (between 23 July and 30 Sept 2025) to NESO for tRESP and NGED for DFES. This could have been a single submission book with the same data and baseline data date for each party*

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We are concerned that the intention to move from an annual FES to a three year RESP process has potentially serious consequences for our energy transition programme and is perhaps motivated more by RIIO cost periods for T4 and ED4 than for the need to share Local development data and investment intent in a progressive manner where maturity and certainty of data exchanges improve and align future plans.

We would also like to see better understanding of the discussion and baseline between NESO, NGET and NGED in respect of transmission and network planning.

*As an example, Nottingham has no NGET Grid Supply Points (GSP) and then the Nottingham Group has three NGED Bulk Supply Points and twenty primary installations. It is not clear what transmission reinforcement is needed or when this will happen to ensure BSPs have sufficient capacity for energy transition in Nottingham.*

## Expanded Role

### **Q9. Do you think if DNOs adopted the type of Expanded Role described above this would add value and support the rollout of LCTs and EE?**

We support the concept of the Expanded role and the need for alignment between spatial planning and system planning.

We stress the need to use the Net Zero Hubs and Local Authorities as a partner and not to allow DNO to be the single party with the role. The DNO's general motivation is for assets to be installed and secure – whereas local requirements are for capacity and connection at right time as both load and generation assets (including solar).

### **Could this model provide an effective and viable way to deliver network and system benefits? If so, could this be achieved while also prioritising support for low-income households?**

We believe that a deeper local understanding of the final plan for 2050 and the intermediate phasing of network upgrades has to be a joint effort that can deliver effective benefits.

In forming a close working relationship then supporting the biggest clusters of low income households, the fuel poor and fuel poverty priorities could be better achieved.

### **Q10. What are your views on us considering these proposals using a network benefit and wider system benefits approach?**

*We have not had the opportunity to properly consider this aspect and would wish to be involved in the discussion in the future.*

*We envisage that a clear plan of network upgrade – coupled with a joint understanding of the impact of large solar to the network below 11 kV (and the potential need for community-scale batteries to offset need for peak solar generation export capacity) – could show network and wider system benefits.*

*We are not clear to the current level of system design for a network with high solar penetration if we achieved say 2,000 PV solar fitments behind a single 11 kV transformer set.*

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### **Do you have relevant information on the likely network, system, consumer or efficiency benefits of such an approach?**

We have not had the opportunity to properly consider this aspect and would wish to be involved in the discussion in the future.

We think the lack of joint planning in this area leaves it difficult to assess the order of capacity changes for electrification in a City and the best method to ensure highest need residents are helped first.

### **Q11. Do you have any views on the archetypes presented and their implications? Do you have any other approaches we should consider?**

The archetypes appear to be more of a context of intervention role/scale i.e. a phase of activity rather than a specific archetype of housing stock, products, retrofit solutions or customers – our normal use of archetypes.

We support the idea of cluster level interventions – and for bulking the approach to benefit from economies of scale. We would welcome participation in pilots or trials similar to the Laying the Groundwork scenario. These are similar to retrofit interventions we have already administered for HUG, LAD, SHDF and Warm Homes programmes. Through these schemes MNZH have already supported over **7,000** fuel poor households to have solar installed and become 'prosumers'.

The opportunity for widening participation to clusters and whole areas at LSOA/MSOA scale would be welcome – with priority focus on areas where suitable projects, suitable residents in suitable tenures exists.

We are not clear the interactions are available to Private Rented Sector (PRS) where MEES is now a requirement/aspiration for 2030. NCC currently have c 18,000 properties in the PRS that are EPC Band D or below. Would a bulk programme be available to Private Landlords using their obligation as part of funding or match funding?

### **Do you have any evidence on key components notably: On the technologies and measures that should be supported: Do you have evidence on the relative costs and benefits of different technologies?**

We currently envisage that around 50,000 domestic roof top solar fitments can be installed by 2050, adding to the 10,000 installations already present in Nottingham. We anticipate that the capacity of the solar could be around 200 MW given the improvements in panel output.

It would be useful to understand if this level of self-generation is valued as priority by the network and where best to focus first.

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DNOs' future role in supporting the rollout of low carbon technologies.

### **How could heat pumps and other low-carbon heating technologies be included whilst still offering wider system benefits?**

We have not had the opportunity to properly consider this aspect in full and would wish to be involved in the discussion in the future.

We do see that for Heating; there will be a balance between the District Heating areas identified and the proposal for Individual Heat Pumps. We believe that some Community scale Heat Pumps will be required, perhaps at an equivalent to 10, 20, 50, 100 house range – perhaps located adjacent to DNO local substations or close to property clusters.

Nottingham is identified by DESNZ for Advanced Heat Zone studies and the need for primary geographical identification of areas for district heating may be key to avoid the roll out of individual heat pumps in same area – which become stranded assets if a full area heat network with Requirement to Connect (RTC) is later endorsed.

### **On the identification of suitable properties and consumer engagement: Would DNOs be well placed to proactively identify suitable properties and/or engage with consumers, or are there other actors better placed to perform these functions?**

We think this role, to identify priority areas of action for properties and residents, is best done by organisations such as Local Authorities and their partners that have already been operating in this space for the last decade. We would welcome the insights and scale of support from the DNO's but as a partnership relationship with shared knowledge, so we continue to build trust in the energy transition programme together.

*As an example, NCC work with Nottingham Energy Partnership (NEP) to manage the identification of residents for Warm homes local grant programmes and other measures. NEP manage the whole customer journey from initial reach-out, to progressing applications and close out – building trust through the process of being independent. These have established relationships with the local communities and have gained substantial knowledge in past decade of operations.*

### **On the potential funding approaches and implications: what are your views on the feasibility, or risks from these approaches; do you have evidence from other sources that is relevant to these considerations?**

We have not had the opportunity to properly consider this aspect and would wish to be involved in the discussion in the future and we are not yet sighted on the how the Warm Homes Agency will operate in this space.

However, it is clear that there will be a need for a variety of funding approaches to accelerate interventions in different resident groups. We would like to see enduring programmes that build the scale for long term delivery and for ongoing O&M services to be offered.

## **Response to OFGEM Consultation**

DNOs' future role in supporting the rollout of low carbon technologies.

Where grants exist, then we would like the grant monies to be spent in an efficient manner – benefitting from scale and repeatability. Where Grants don't exist – then we see the potential for regional schemes where elements of low cost financing and resident contributions could hopefully be combined to produce an attractive model for deployment.

It is not clear whether this consultation is considering that DNO will work with Private Landlords on their Minimum Energy Efficiency Standards (MEES) programme – that has identified a £10,000 cap per property – and whether bulk delivery in this programme is deemed viable.

### **On responsibility for installations: what are the risks and opportunities if DNO's were responsible for installations?**

We have not had the opportunity to properly consider this aspect and would wish to be involved in the discussion in the future.

The scale of ambition suggests that there are economies of scale to be gained by using a lead delivery organisation.

We would want to see a consistent approach to using local labour and increasing the social value of any programme within the community.

### **What are the options for partnerships and how could different responsibilities offer better outcomes?**

We support the concept of DNO's being required to work with Local Authorities, Mayoral Combined Authorities (MCA) and Net Zero hubs to deliver regional focused change – at a pace that recognises the ability of core cities and others to move faster than the average in dense areas.

As Nottingham we believe that we could be a primary partner with our DNO, and include other entities in our partnership arrangements. Other Local Authorities may need the DNO to provide more capacity.

Nottingham also hosts one of the five Net Zero Hubs in UK, which has already started to work closely between Local Authorities and DNOs, as summarised below. We see the Midlands Net Zero hub also being part of the partnership arrangements.

The Midlands Net Zero hub have worked closely with multiple DNOs and DSOs in the area. Examples of our previous work include;

- Communicating with the DNO on specific connection projects e.g. solar array projects.
- Including the DNOs in multiple Hub projects as a valued stakeholder in project initiation to manage any constraints and requirements are understood early on.
- Connecting Local Authorities or other stakeholders with the DNOs and guiding them through the process including connection requests
- Providing DNO with information on any Local Area Energy Plans the hub are involved in to support future plans and give good data for concept projects. We have fed these into the RESP process and have good relationships with our RESP counterparts across the midlands.

## Response to OFGEM Consultation

DNOs' future role in supporting the rollout of low carbon technologies.

- Working with technology providers to support with their potential to expand/ enhance the network: e.g. working with a local Nottingham supplier to provide a 'demonstrator' substation battery which provides increased capacity without substantive investment, our role was to support them with the agreements with 4 DNOs.
- Feeding back the constraints projects are finding with the network which can highlight why certain areas have low levels of projects- example one LA has high grid constraints which meant that the GBE Solar funding for the NHS couldn't be taken up as the DNO would not connect even with the designers providing multiple mitigations.
- Using our stakeholder relationships with project owners to understand if historic connection requests are likely to go ahead, if not supporting with advising the DNO so that capacity within the connection pipelines can be released.

Overall, we have significant 'placed based' knowledge of the midlands areas and this includes understanding of the DNO in our areas. This enables us to communicate with stakeholders on capacity, constraints and changes to the network in our areas and to involve the DNO with projects once they become viable.

### ***On ownership and control of assets: how can necessary level of network or system benefits be achieved without DNO control and ownership?***

We have not had the opportunity to properly consider this aspect and would wish to be involved in the discussion in the future.

We can see merits in DNO ownership of assets behind the meter but would need to understand the mechanisms and how fairness in the energy transition is assured.

### **Q12. Do you have views on whether pilots of these approaches would be valuable? And, if so, whether the pilots should potentially include a range options across archetypes, or whether the scope should be narrowed in advance? What should be the main focus of any pilots?**

NCC supports an area-based approach.

A trial area of, for instance,

1,000 – 2,000 homes could be useful in building a pilot for gauging ease of uptake, and learning from experience of how to engage with a full 'community'.

An option to consider is Energy as a service, where customers pay a subscription fee for energy services rather than paying upfront capital costs for equipment.

### **Q13. How could iDNOs support the proposals in this portion of the consultation?**

*We have not had the opportunity to properly consider this aspect.*

## Response to OFGEM Consultation

DNOs' future role in supporting the rollout of low carbon technologies.

## Additional Information

### Example - Programmes

Nottingham City Council have delivered small-scale programmes of intervention in low-income households, that have established principles for the initial customer reach out, customer support journey, and for supply chain delivery methods.

The programmes to-date tend to be limited in funding and time scale and would benefit from a multi-year approach such as ED3 2028-2032 (five years) to allow greater certainty on funding, scale and economies to complete cluster programmes of intervention.

An example of typical programme intervention is summarised below.

Nottingham City Council - Intervention Sample Programme		
<b>A&amp;A Spend</b>	£328,040.76	
<b>Capital Spend</b>	£3,296,426.02	
<b>Total Spend</b>	£3,624,466.78	
<b>Homes Completed</b>	328	
<b>Average Spend per Home</b>	£10,050.08	
<b>Measures Installed</b>	333	
<b>Measure Mix</b>		
Double Glazing	2	
Cavity Wall Insulation	2	
External Wall Insulation	39	
Internal Solid Wall Insulation	2	
Room-in-Roof Insulation	4	
Flat Roof Insulation	1	
Under-Floor-Insulation	1	
Loft Insulation	16	
Solar PV	266	
<b>EPC Impact</b>		
<b>Pre EPC</b>	<b>Post EPC</b>	
	1	<b>A</b>
	52	<b>B</b>
	169	<b>C</b>
185	94	<b>D</b>
125	11	<b>E</b>
16	1	<b>F</b>
2		<b>G</b>
<b>Pre-EPC % Properties A - C</b>	<b>Post-EPC % of Properties A - C</b>	
0%	68%	
<b>Pre-EPC % of Properties D - G</b>	<b>Post-EPC % of Properties D - G</b>	
100%	32%	

Figure 4 – Typical intervention programme

**NOTE** - The above data is typical of a 300-home intervention programme. Future intervention programmes would be looking to target clusters of 1,000 – 2,000 properties. The clusters would potentially be geographical sequenced and against property families (similar build - similar age) and allow high economies of scale, repeat processes and digitalisation within specific network asset groups.

END.