Dorset Council Scrutiny's Grid Capacity Review

APSE Energy Webinar

18 June 2024

Dorset Council

1. Structure of the process
2. Supporting materials
3. Final report:
    - Issues, impacts & solutions
    - Primary diagnoses
    - Key implications & recommendations
    - Appendix on reforms
4. Outcome and next steps

Key messages

It aimed to convey and elaborate on three fundamental points:

1. There are significant strategic risks regarding the grid, and they threaten to become more severe as further sources of demand and supply aim to connect.
2. There is a significant programme of reform underway nationally from Government, Ofgem and network companies.
3. This presents significant opportunities for the council to play a more strategic role in the emerging future energy system for the benefit of Dorset.

1. Structure of the process

Structure of the process

2hrs | 2hrs | 4hrs | 2hrs | 2hrs

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Session 1: | Session 2: | Session 3: | Session 4: | Session 5:

- What the grid is
- How the grid is changing
- What network operators are
- How forecasting, network planning & investment works
- What are the constraints locally
- How is policy changing

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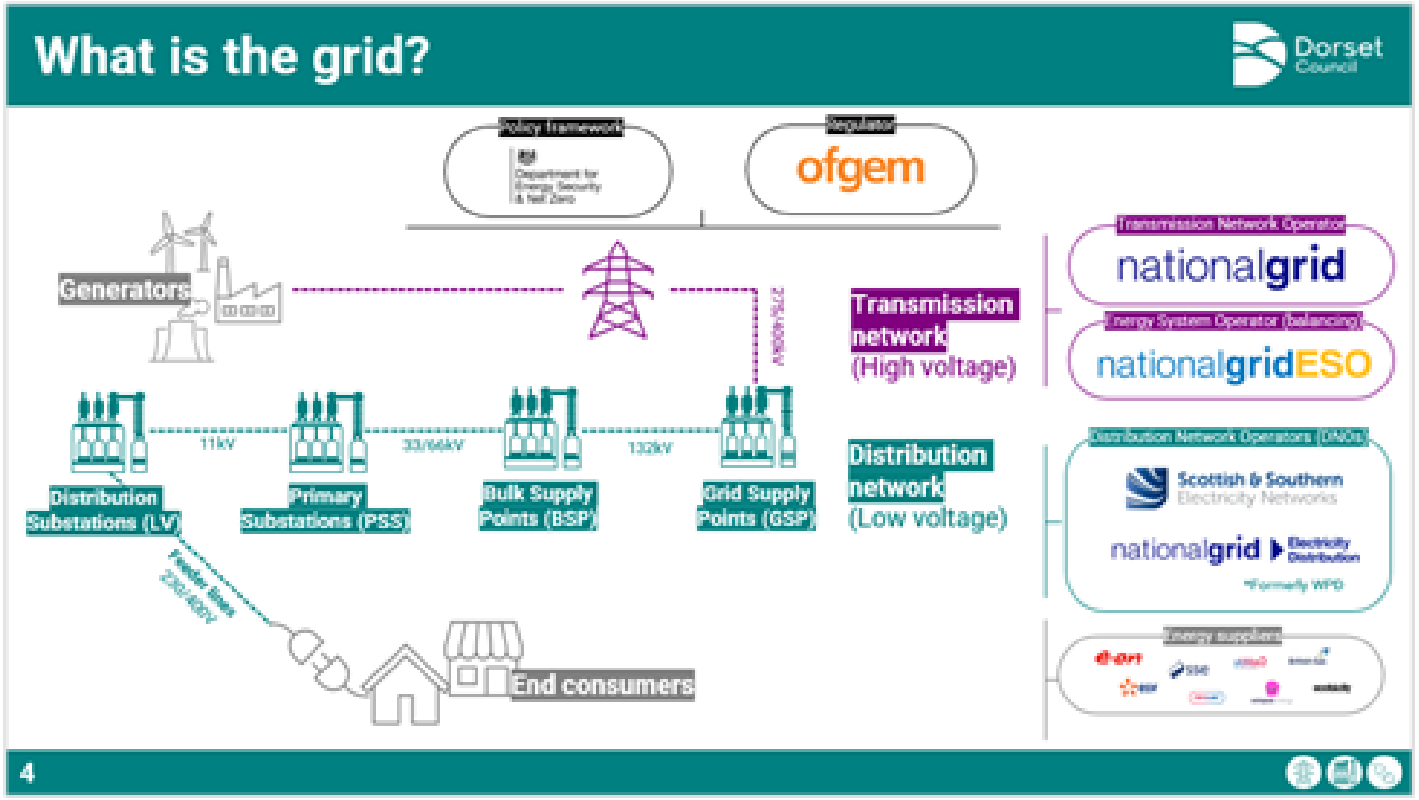

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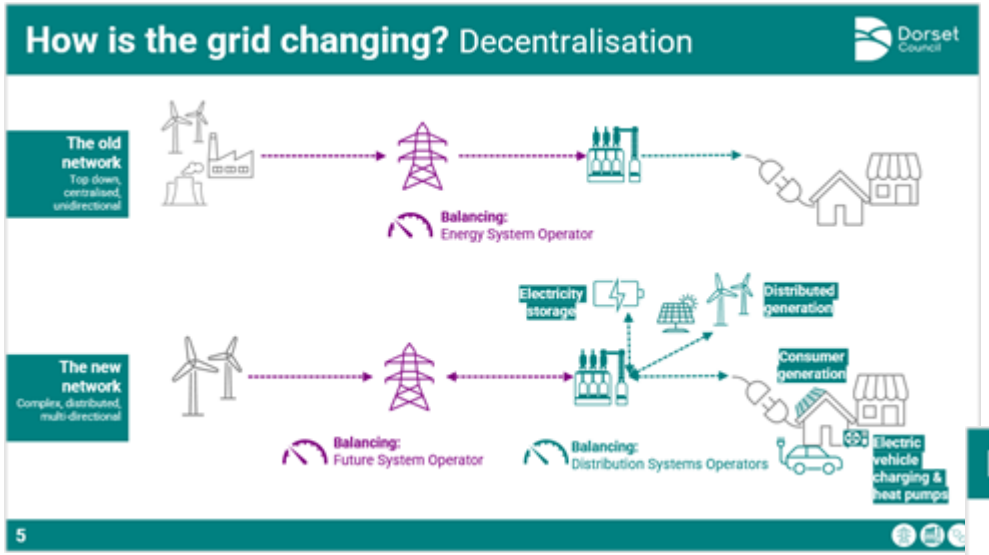

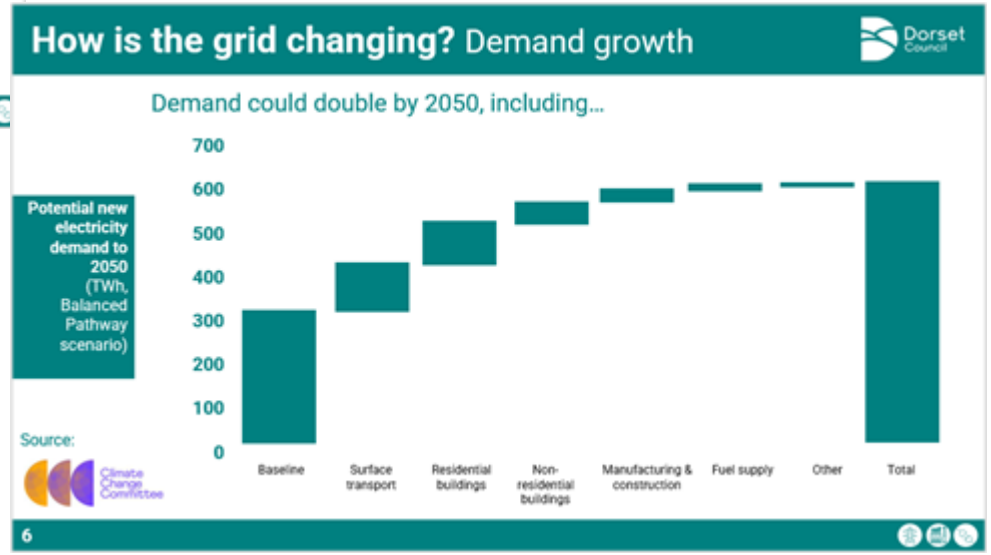

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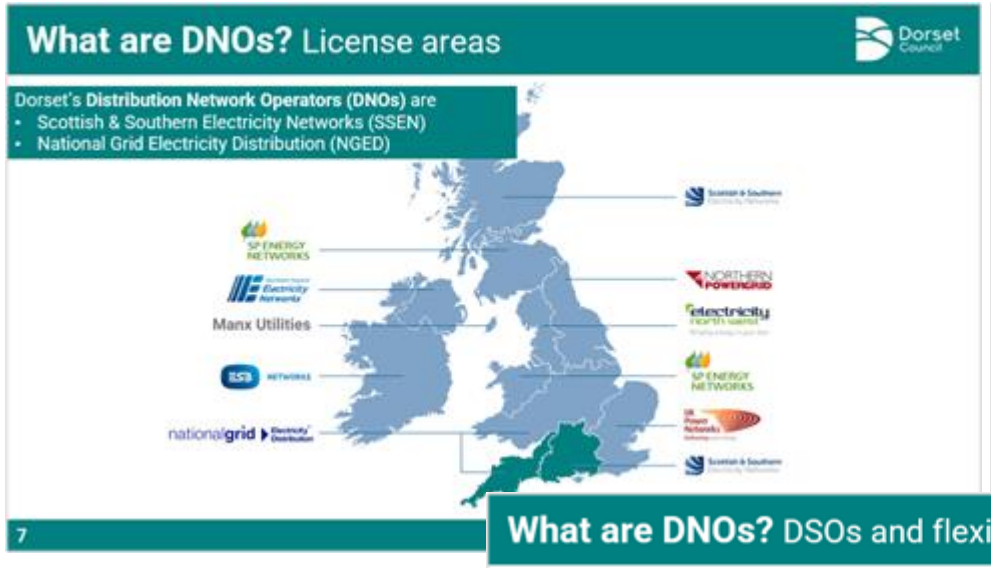

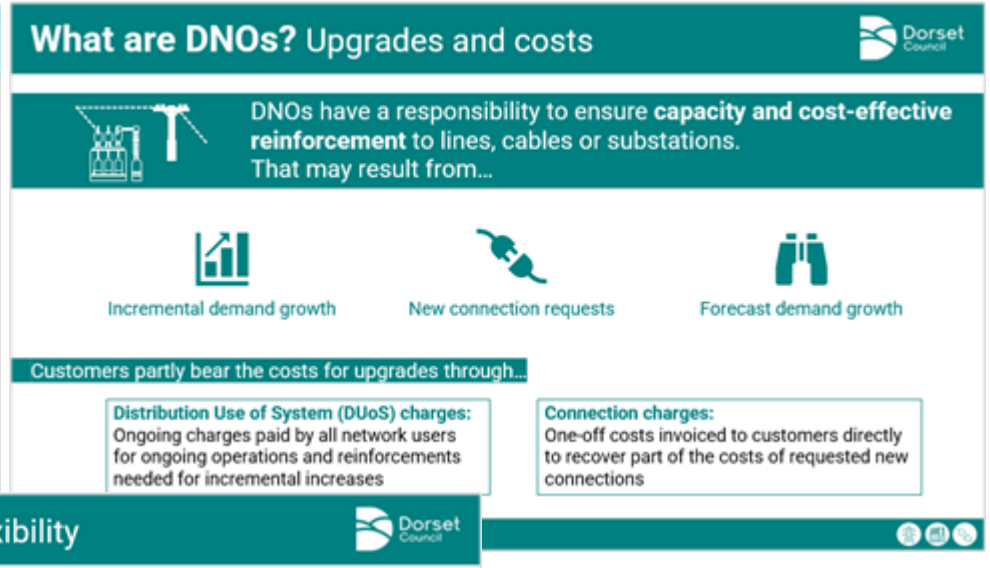

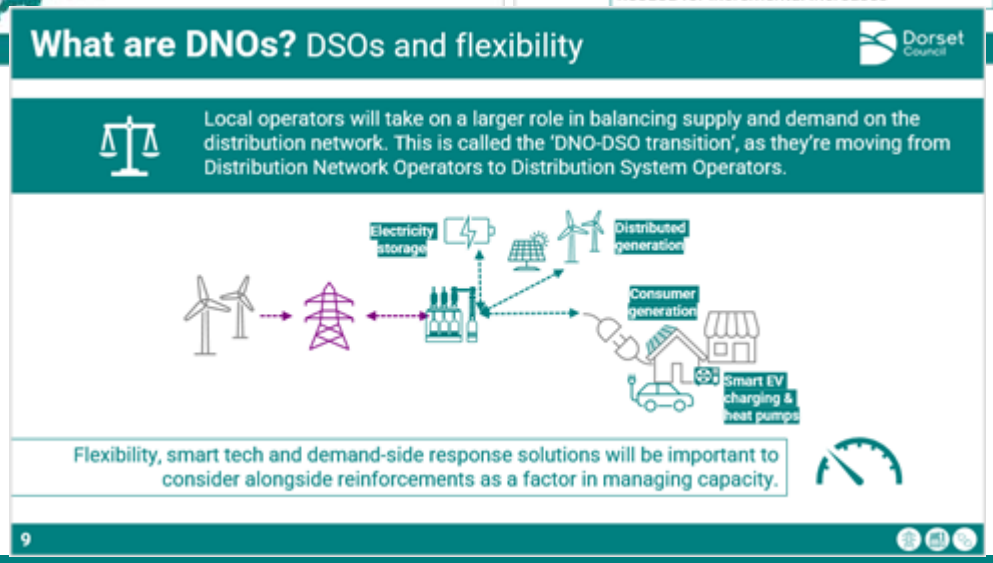

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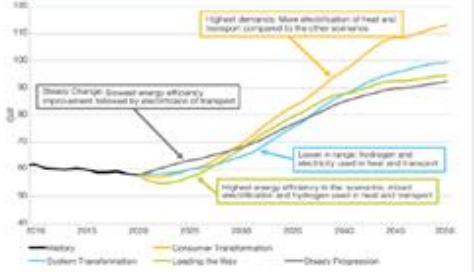
How is demand forecast? Future Energy Scenarios

The four national scenarios

Projected peak demand



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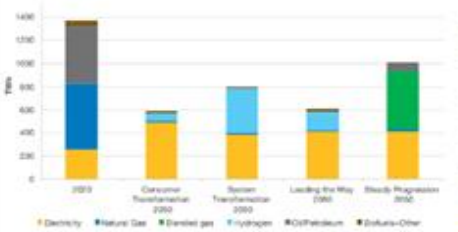
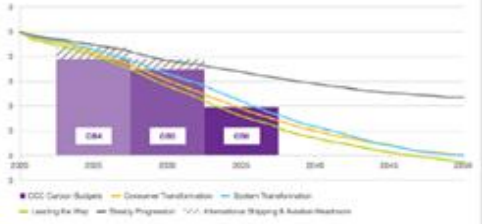
How is demand forecast? Future Energy Scenarios

Demand by fuel type



Implications for national carbon trajectory



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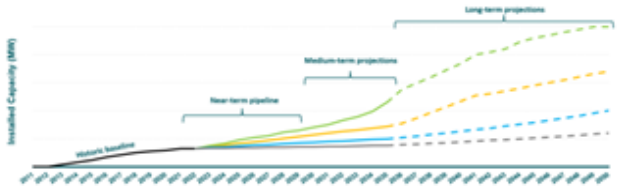
How is demand forecast? Distribution Future Energy Scenarios



There is considerable detail in the forecasting analysis (DFES), projecting growth and deployment estimates locally on a range of factors – from data centre energy demand to heat pumps...

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How is demand forecast? Business planning

The forecasts inform the strategic investment process that determine business plans for every 5-year investment period...

Data, analysis and stakeholder input

Scenario forecasting	Impact Assessment	Options appraisal	Business Planning
The DFES near, medium & long-term projections to 2050	The Network Development Plan (NDP) uses the DFES to identify future constraints	The Distribution Network Options Assessment (DNOA) evaluates means to address constraints	The Business Plan outlines the case for future investment for a given RIIO period

The 5-year control periods are called 'RIIO' (Revenue = Incentives+Innovation+Outputs)
The current period (2023-2028) is called 'RIIO-ED2'

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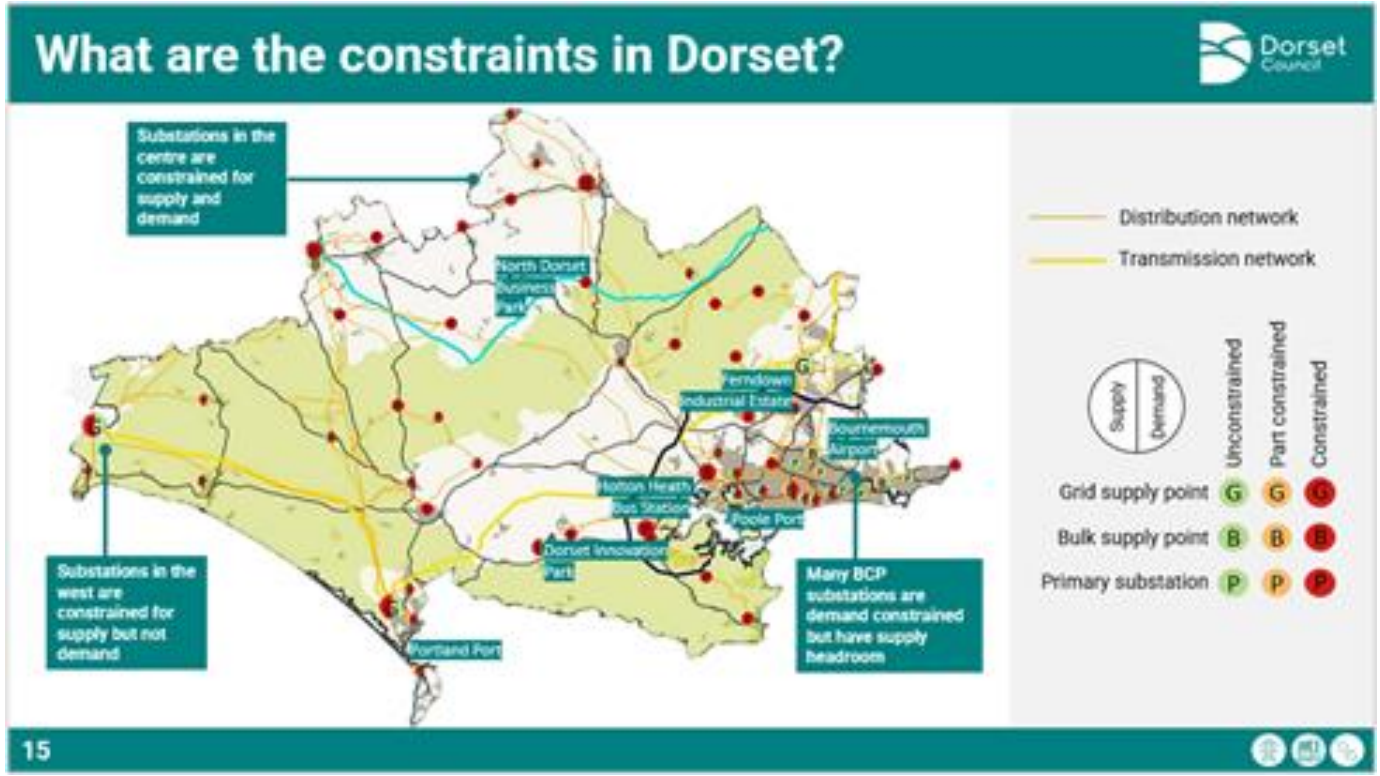

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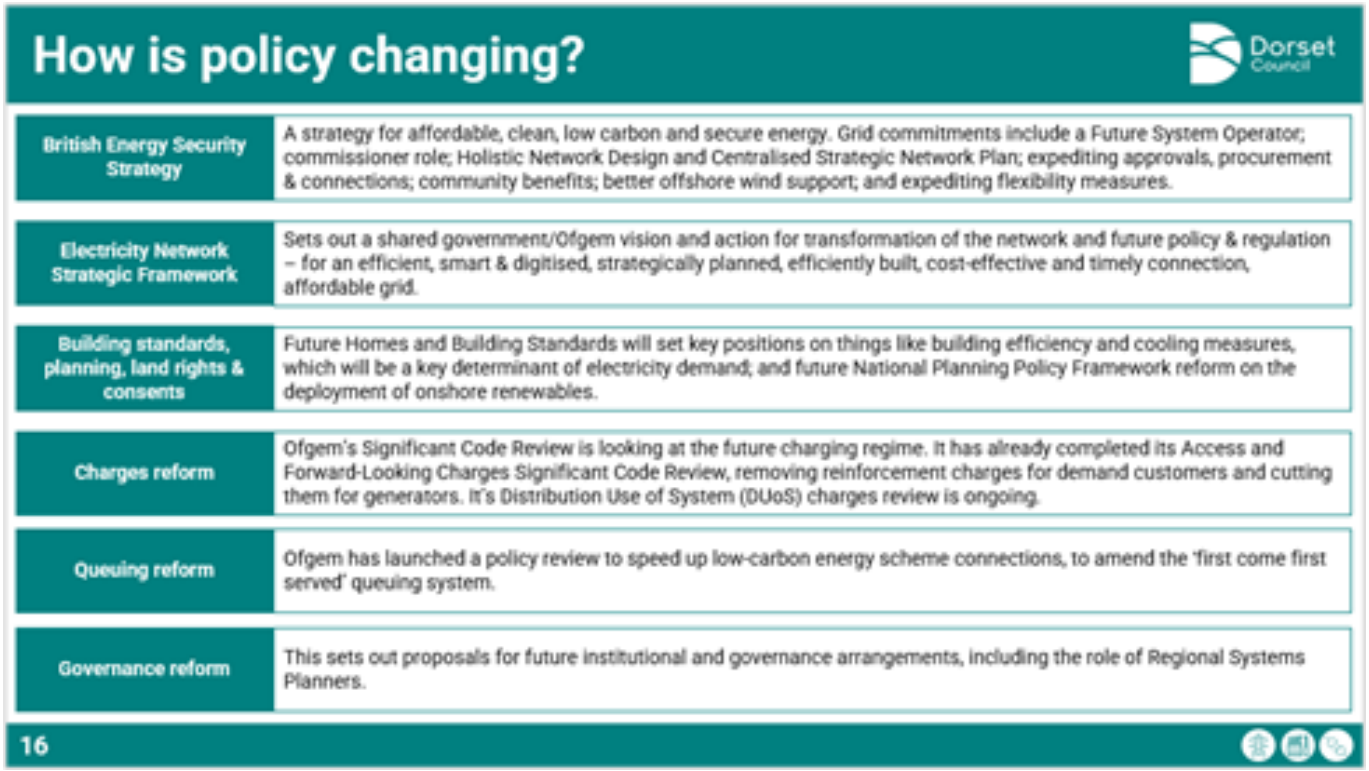

How is policy changing?

British Energy Security Strategy	A strategy for affordable, clean, low carbon and secure energy. Grid commitments include a Future System Operator; commissioner role; Holistic Network Design and Centralised Strategic Network Plan; expediting approvals, procurement & connections; community benefits; better offshore wind support; and expediting flexibility measures.
Electricity Network Strategic Framework	Sets out a shared government/Ofgem vision and action for transformation of the network and future policy & regulation – for an efficient, smart & digitised, strategically planned, efficiently built, cost-effective and timely connection, affordable grid.
Building standards, planning, land rights & consents	Future Homes and Building Standards will set key positions on things like building efficiency and cooling measures, which will be a key determinant of electricity demand; and future National Planning Policy Framework reform on the deployment of onshore renewables.
Charges reform	Ofgem's Significant Code Review is looking at the future charging regime. It has already completed its Access and Forward-Looking Charges Significant Code Review, removing reinforcement charges for demand customers and cutting them for generators. It's Distribution Use of System (DUoS) charges review is ongoing.
Queuing reform	Ofgem has launched a policy review to speed up low-carbon energy scheme connections, to amend the 'first come first served' queuing system.
Governance reform	This sets out proposals for future institutional and governance arrangements, including the role of Regional Systems Planners.

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Session 1: | Session 2: | Session 3: | Session 4: | Session 5:

- Dorset's grid infrastructure
- Network planning and investment
- Example impacted projects
- Case study: EV Chargers

Dorset's key grid infrastructure

Grid Supply Points	Bulk Supply Points (13)	Primary Substations (53)			
Axminster	Bournemouth	Christchurch	Hamworthy	Bourton	West Hendford
Chickrell	Chickerell	Blandford	East Howe	Gillingham	Yeovil
Mannington	Christchurch	Corfe Mullen	Redhill	Shaftesbury	Cerne Abbas
	Lytchett	Creekmoor	Homington	Shroton	Charminster
	Mannington	Winterbourne Kingston	Gussage St Michael	West Stour	Chickerell
	Poole	Ferndown	Minchington	Wincanton	Dorchester Town
	Redhill	Fordingbridge	Tarrant Rushton	Parkstone South	Maiden Newton
	Salisbury	Hinton Martell	Henstridge	Bovington	Redlands
	Shaftesbury	Mannington	Pulham	Bushey	Weymouth
	Wareham	Mill Lane, Ringwood	Sherborne	Swanage	Portland
	Winfrith heath	Rockbourne	Yetminster	Wareham Town	Beaminster (NGED)
	Yeovil	Verwood	Piddletrenthide	Chilton Cantello	Bridport (NGED)
	Woodcote (NGED)	Wimborne	Puddletown	Milborne Port	Penn Cross (NGED)
		Wimborne St Giles			

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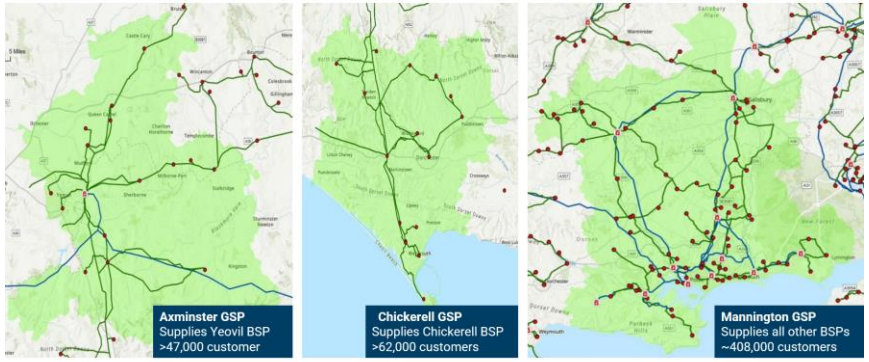
Dorset's key grid infrastructure



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Information & network planning documents

Heat Maps

- Updated regularly.
- Show current constraints and capacity.
- Show where reinforcements would most likely be triggered.

Long-term Development Statements

- Annual statements (November).
- Rolling 5yr view.
- Show expected constraints for the next 5 years.

Distribution Future Energy Scenarios

- Annual analysis
- Scenario-based, projections.
- Forecast constraints to 2050.

RIIO-ED Business Plans

- Produced for each 5yr RIIO-ED period (now 2023-28).
- Approved by Ofgem.
- Informed by the DFES.

Network Development Plans

- 10yr plan.
- Show intent…
- …but can be modified by new DFES analysis and are subject to Business Plan approval.

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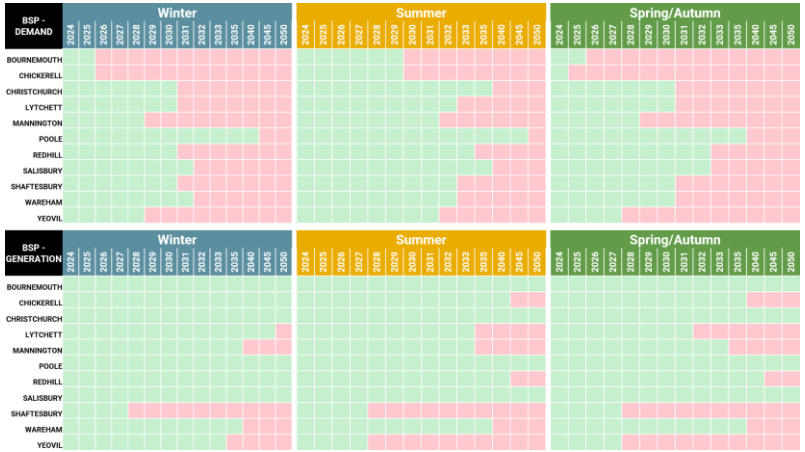

Network Development Plans

The **Network Development Plan** (NDP) (specifically, the 'Network Scenario Headroom Report' it contains) overviews **forecast headroom capacity** (or the lack of it) for **Bulk Supply Points** and **Primary Substations** to **2050**.

It forecasts where there is capacity, where more is needed, and where flexibility services might be needed.

It considers all four of the DFES scenarios. The 'Consumer Transformation' scenario is considered most likely.

The faster we decarbonise, the faster constraints might bite – i.e. they're a limiting factor on the pace of decarbonisation.

We show here the earliest date constraints could bite, which is not necessarily the most likely date.

Note two key things:

- Red doesn't mean you can't connect without reinforcement – other options (like flexibility) may be available.
- **There are also upstream *transmission* constraints at our Grid Supply Points until 2036.**

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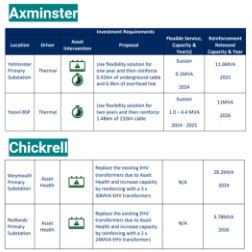
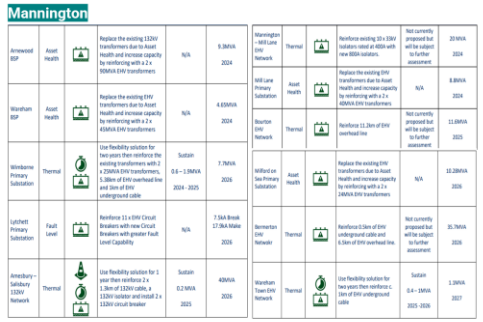
SSEN's proposed investments 2023-2028





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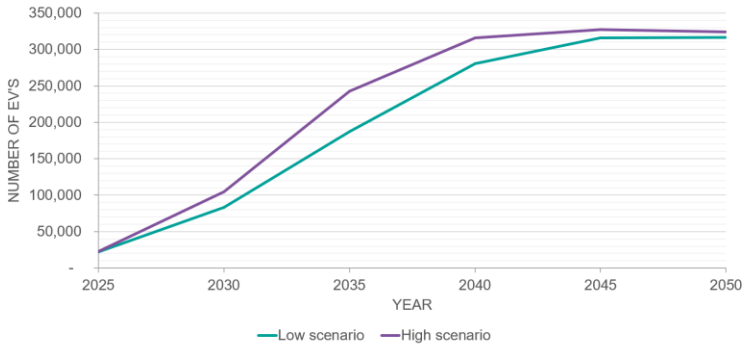
EV uptake forecast to 2050

Forecast number electric vehicles in Dorset



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EV infrastructure forecast to 2035

Public EVCP Sockets Required in Dorset

	2025	2030	2035
Fast	210 - 640	430 – 1,570	1170 – 3,880
Rapid	10 - 60	10 - 100	80 - 320
TOTAL	**230 - 700**	**440 – 1,670**	**1250 – 4,200**

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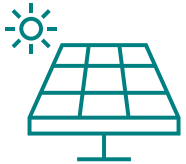
Council officers discussion



Sustainability/Energy team

Estate retrofit team

Planning team

Transport team

Structure of the process

Session 1: | Session 2: | Session 3: | Session 4: | Session 5:

- Renewables, Retrofit and Electric Vehicle Chargers
- Public sector and community projects
- Business & economic development
- Housing development

Participation from:

- Dorset Council's Cabinet
- Regen and the South West Net Zero Hub
- Large and small scale renewables developers
- Retrofitters
- EV chargepoint installers
- Public sector partners
- Community energy initiatives
- High energy-using businesses
- Economic development representatives
- Housing developers and housing associations

Structure of the process

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SSEN	Local Area Energy Planning	Regional Energy Strategic Planners	LENZA	Innovation Funding	RIIO-ED2 process and uncertainty mechanisms
National Grid	Data and visualisation	Connections charges	Connections queuing	Connections and Transmission Action Plans	Business Planning and the shift to anticipatory investment

Key takeaway: Lots of opportunity and enthusiasm for more regular strategic dialogue

Structure of the process

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Summary

Discussion on recommendations

Overview the discussions from previous sessions, and provide steer on the content of the final reporting – identifying suggested recommendations or areas for further research.

20 longlist recommendations

(LAEP, RESP, Lobbying, Planning Policy, DNO Engagement, data sharing, comms, developer engagement, resourcing…)

6 Final recommendations

(DNO engagement, RESP, LAEP, Embedding in policy, Strategic Innovation Fund, Lobbying)

2. Supporting materials

Supporting materials

- Scoping document & terms of reference
- Structured agendas and slides
- Background briefing notes
- Issues tracker and narrative

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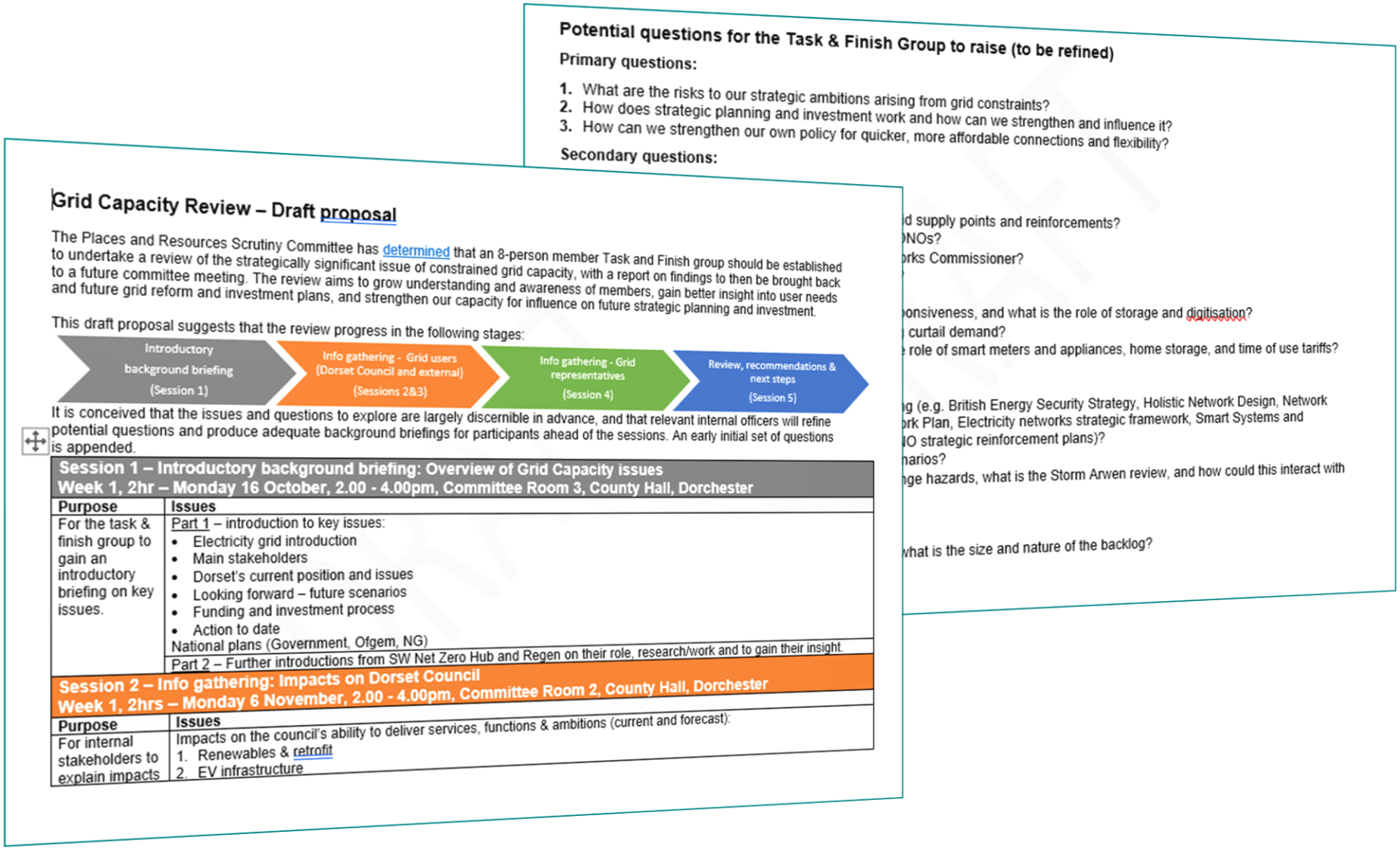


Grid Capacity Review – Draft proposal

The Places and Resources Scrutiny Committee has determined that an 8-person member Task and Finish group should be established to undertake a review of the strategically significant issue of constrained grid capacity, with a report on findings to then be brought back to a future committee meeting. The review aims to grow understanding and awareness of members, gain better insight into user needs and future grid reform and investment plans, and strengthen our capacity for influence on future strategic planning and investment.

This draft proposal suggests that the review progress in the following stages:

Introductory background briefing (Session 1) → Info gathering - Grid users (Dorset Council and external) (Sessions 2&3) → Info gathering - Grid representatives (Session 4) → Review, recommendations & next steps (Session 5)

It is conceived that the issues and questions to explore are largely discernible in advance, and that relevant internal officers will refine potential questions and produce adequate background briefings for participants ahead of the sessions. An early initial set of questions is appended.

Session 1 – Introductory background briefing: Overview of Grid Capacity issues Week 1, 2hr – Monday 16 October, 2.00 - 4.00pm, Committee Room 3, County Hall, Dorchester	
Purpose	**Issues**
For the task & finish group to gain an introductory briefing on key issues.	Part 1 – introduction to key issues: • Electricity grid introduction • Main stakeholders • Dorset's current position and issues • Looking forward – future scenarios • Funding and investment process • Action to date National plans (Government, Ofgem, NG)
	Part 2 – Further introductions from SW Net Zero Hub and Regen on their role, research/work and to gain their insight.
Session 2 – Info gathering: Impacts on Dorset Council Week 1, 2hrs – Monday 6 November, 2.00 - 4.00pm, Committee Room 2, County Hall, Dorchester	
Purpose	**Issues**
For internal stakeholders to explain impacts	Impacts on the council's ability to deliver services, functions & ambitions (current and forecast): 1. Renewables & retrofit 2. EV infrastructure

Potential questions for the Task & Finish Group to raise (to be refined)

Primary questions:

1. What are the risks to our strategic ambitions arising from grid constraints?
2. How does strategic planning and investment work and how can we strengthen and influence it?
3. How can we strengthen our own policy for quicker, more affordable connections and flexibility?

Secondary questions:

d supply points and reinforcements?
NOs?
rks Commissioner?

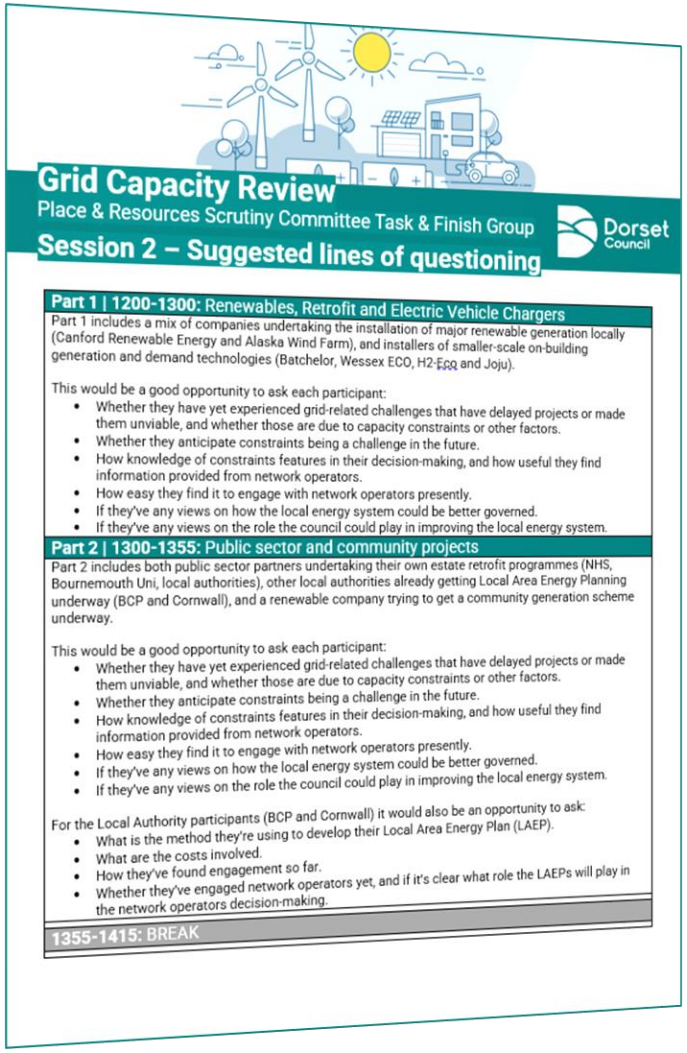
onsiveness, and what is the role of storage and digitisation?
curtail demand?
role of smart meters and appliances, home storage, and time of use tariffs?

g (e.g. British Energy Security Strategy, Holistic Network Design, Network rk Plan, Electricity networks strategic framework, Smart Systems and O strategic reinforcement plans)?
narios?
ge hazards, what is the Storm Arwen review, and how could this interact with

what is the size and nature of the backlog?

Supporting materials

- Scoping document & terms of reference
- Structured agendas, slides and question prompts
- Background briefing notes
- Issues tracker and narrative



Grid Capacity Review
Place & Resources Scrutiny Committee Task & Finish Group
Session 2 – Suggested lines of questioning

Part 1 | 1200-1300: Renewables, Retrofit and Electric Vehicle Chargers

Part 1 includes a mix of companies undertaking the installation of major renewable generation locally (Canford Renewable Energy and Alaska Wind Farm), and installers of smaller-scale on-building generation and demand technologies (Batchelor, Wessex ECO, H2-Eco and Joju).

This would be a good opportunity to ask each participant:

- Whether they have yet experienced grid-related challenges that have delayed projects or made them unviable, and whether those are due to capacity constraints or other factors.
- Whether they anticipate constraints being a challenge in the future.
- How knowledge of constraints features in their decision-making, and how useful they find information provided from network operators.
- How easy they find it to engage with network operators presently.
- If they've any views on how the local energy system could be better governed.
- If they've any views on the role the council could play in improving the local energy system.

Part 2 | 1300-1355: Public sector and community projects

Part 2 includes both public sector partners undertaking their own estate retrofit programmes (NHS, Bournemouth Uni, local authorities), other local authorities already getting Local Area Energy Planning underway (BCP and Cornwall), and a renewable company trying to get a community generation scheme underway.

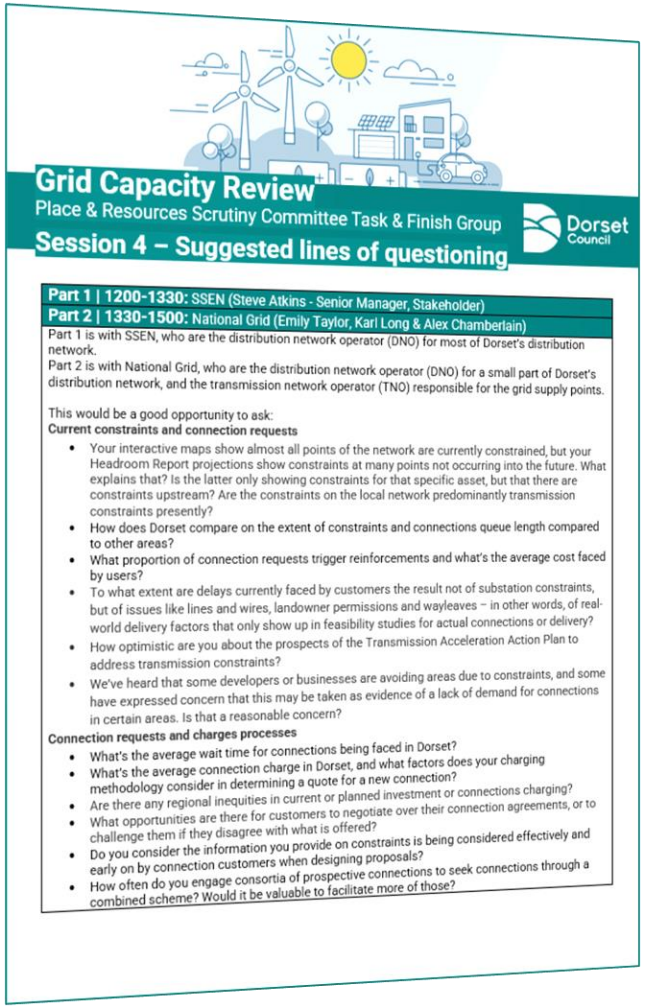
This would be a good opportunity to ask each participant:

- Whether they have yet experienced grid-related challenges that have delayed projects or made them unviable, and whether those are due to capacity constraints or other factors.
- Whether they anticipate constraints being a challenge in the future.
- How knowledge of constraints features in their decision-making, and how useful they find information provided from network operators.
- How easy they find it to engage with network operators presently.
- If they've any views on how the local energy system could be better governed.
- If they've any views on the role the council could play in improving the local energy system.

For the Local Authority participants (BCP and Cornwall) it would also be an opportunity to ask:

- What is the method they're using to develop their Local Area Energy Plan (LAEP).
- What are the costs involved.
- How they've found engagement so far.
- Whether they've engaged network operators yet, and if it's clear what role the LAEPs will play in the network operators decision-making.

1355-1415: BREAK



Grid Capacity Review
Place & Resources Scrutiny Committee Task & Finish Group
Session 4 – Suggested lines of questioning

Part 1 | 1200-1330: SSEN (Steve Atkins - Senior Manager, Stakeholder)
Part 2 | 1330-1500: National Grid (Emily Taylor, Karl Long & Alex Chamberlain)

Part 1 is with SSEN, who are the distribution network operator (DNO) for most of Dorset's distribution network.
Part 2 is with National Grid, who are the distribution network operator (DNO) for a small part of Dorset's distribution network, and the transmission network operator (TNO) responsible for the grid supply points.

This would be a good opportunity to ask:

Current constraints and connection requests

- Your interactive maps show almost all points of the network are currently constrained, but your Headroom Report projections show constraints at many points not occurring into the future. What explains that? Is the latter only showing constraints for that specific asset, but that there are constraints upstream? Are the constraints on the local network predominantly transmission constraints presently?
- How does Dorset compare on the extent of constraints and connections queue length compared to other areas?
- What proportion of connection requests trigger reinforcements and what's the average cost faced by users?
- To what extent are delays currently faced by customers the result not of substation constraints, but of issues like lines and wires, landowner permissions and wayleaves – in other words, of real-world delivery factors that only show up in feasibility studies for actual connections or delivery?
- How optimistic are you about the prospects of the Transmission Acceleration Action Plan to address transmission constraints?
- We've heard that some developers or businesses are avoiding areas due to constraints, and some have expressed concern that this may be taken as evidence of a lack of demand for connections in certain areas. Is that a reasonable concern?

Connection requests and charges processes

- What's the average wait time for connections being faced in Dorset?
- What's the average connection charge in Dorset, and what factors does your charging methodology consider in determining a quote for a new connection?
- Are there any regional inequities in current or planned investment or connections charging?
- What opportunities are there for customers to negotiate over their connection agreements, or to challenge them if they disagree with what is offered?
- Do you consider the information you provide on constraints is being considered effectively and early on by connection customers when designing proposals?
- How often do you engage consortia of prospective connections to seek connections through a combined scheme? Would it be valuable to facilitate more of those?

Supporting materials

- Scoping document & terms of reference
- Structured agendas and slides
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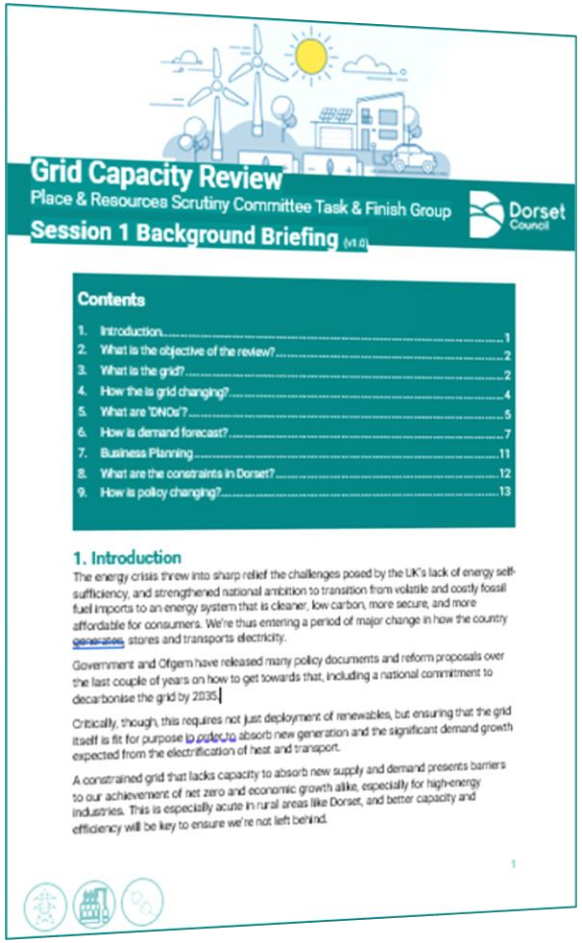
- Issues tracker and narrative



Grid Capacity Review
Place & Resources Scrutiny Committee Task & Finish Group
Session 1 Background Briefing (v1.0)

Contents

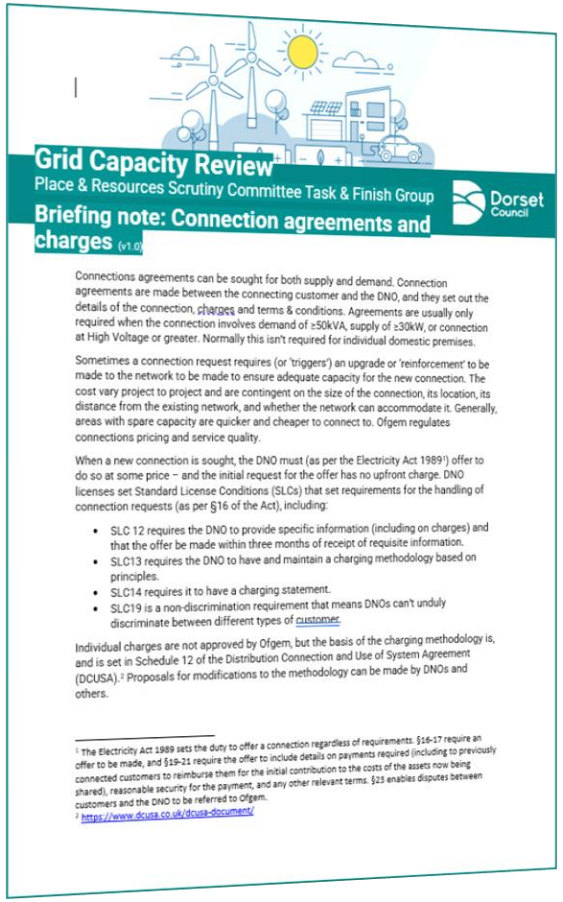
1. Introduction

The energy crisis threw into sharp relief the challenges posed by the UK's lack of energy self-sufficiency, and strengthened national ambition to transition from volatile and costly fossil fuel imports to an energy system that is cleaner, low carbon, more secure, and more affordable for consumers. We're thus entering a period of major change in how the country generates, stores and transports electricity.

Government and Ofgem have released many policy documents and reform proposals over the last couple of years on how to get towards that, including a national commitment to decarbonise the grid by 2035.

Critically, though, this requires not just deployment of renewables, but ensuring that the grid itself is fit for purpose to enable to absorb new generation and the significant demand growth expected from the electrification of heat and transport.

A constrained grid that lacks capacity to absorb new supply and demand presents barriers to our achievement of net zero and economic growth alike, especially for high-energy industries. This is especially acute in rural areas like Dorset, and better capacity and efficiency will be key to ensure we're not left behind.



Grid Capacity Review
Place & Resources Scrutiny Committee Task & Finish Group
Briefing note: Connection agreements and charges (v1.0)

Connections agreements can be sought for both supply and demand. Connection agreements are made between the connecting customer and the DNO, and they set out the details of the connection, charges and terms & conditions. Agreements are usually only required when the connection involves demand of ≥50kVA, supply of ≥30kW, or connection at High Voltage or greater. Normally this isn't required for individual domestic premises.

Sometimes a connection request requires (or 'triggers') an upgrade or 'reinforcement' to be made to the network to be made to ensure adequate capacity for the new connection. The cost vary project to project and are contingent on the size of the connection, its location, its distance from the existing network, and whether the network can accommodate it. Generally, areas with spare capacity are quicker and cheaper to connect to. Ofgem regulates connections pricing and service quality.

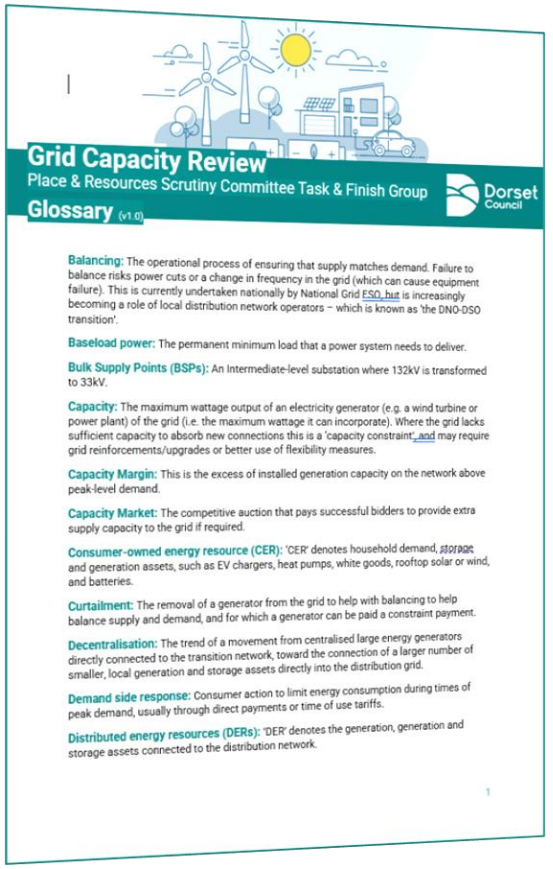
When a new connection is sought, the DNO must (as per the Electricity Act 1989[1]) offer to do so at some price – and the initial request for the offer has no upfront charge. DNO licenses set Standard License Conditions (SLCs) that set requirements for the handling of connection requests (as per §16 of the Act), including:

- SLC 12 requires the DNO to provide specific information (including on charges) and that the offer be made within three months of receipt of requisite information.
- SLC13 requires the DNO to have and maintain a charging methodology based on principles.
- SLC14 requires it to have a charging statement.
- SLC19 is a non-discrimination requirement that means DNOs can't unduly discriminate between different types of customer.

Individual charges are not approved by Ofgem, but the basis of the charging methodology is, and is set in Schedule 12 of the Distribution Connection and Use of System Agreement (DCUSA).[2] Proposals for modifications to the methodology can be made by DNOs and others.

[1] The Electricity Act 1989 sets the duty to offer a connection regardless of requirements. §16-17 require an offer to be made, and §19-21 require the offer to include details on payments required (including to previously connected customers to reimburse them for the initial contribution to the costs of the assets now being shared), reasonable security for the payment, and any other relevant terms. §23 enables disputes between customers and the DNO to be referred to Ofgem.

[2] https://www.dcusa.co.uk/dcusa-documents/



Grid Capacity Review
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Glossary (v1.0)

Balancing: The operational process of ensuring that supply matches demand. Failure to balance risks power cuts or a change in frequency in the grid (which can cause equipment failure). This is currently undertaken nationally by National Grid ESO, but is increasingly becoming a role of local distribution network operators – which is known as 'the DNO-DSO transition'.

Baseload power: The permanent minimum load that a power system needs to deliver.

Bulk Supply Points (BSPs): An Intermediate-level substation where 132kV is transformed to 33kV.

Capacity: The maximum wattage output of an electricity generator (e.g. a wind turbine or power plant) of the grid (i.e. the maximum wattage it can incorporate). Where the grid lacks sufficient capacity to absorb new connections this is a 'capacity constraint' and may require grid reinforcements/upgrades or better use of flexibility measures.

Capacity Margin: This is the excess of installed generation capacity on the network above peak-level demand.

Capacity Market: The competitive auction that pays successful bidders to provide extra supply capacity to the grid if required.

Consumer-owned energy resource (CER): 'CER' denotes household demand, storage and generation assets, such as EV chargers, heat pumps, white goods, rooftop solar or wind, and batteries.

Curtailment: The removal of a generator from the grid to help with balancing to help balance supply and demand, and for which a generator can be paid a constraint payment.

Decentralisation: The trend of a movement from centralised large energy generators directly connected to the transition network, toward the connection of a larger number of smaller, local generation and storage assets directly into the distribution grid.

Demand side response: Consumer action to limit energy consumption during times of peak demand, usually through direct payments or time of use tariffs.

Distributed energy resources (DERs): 'DER' denotes the generation, generation and storage assets connected to the distribution network.

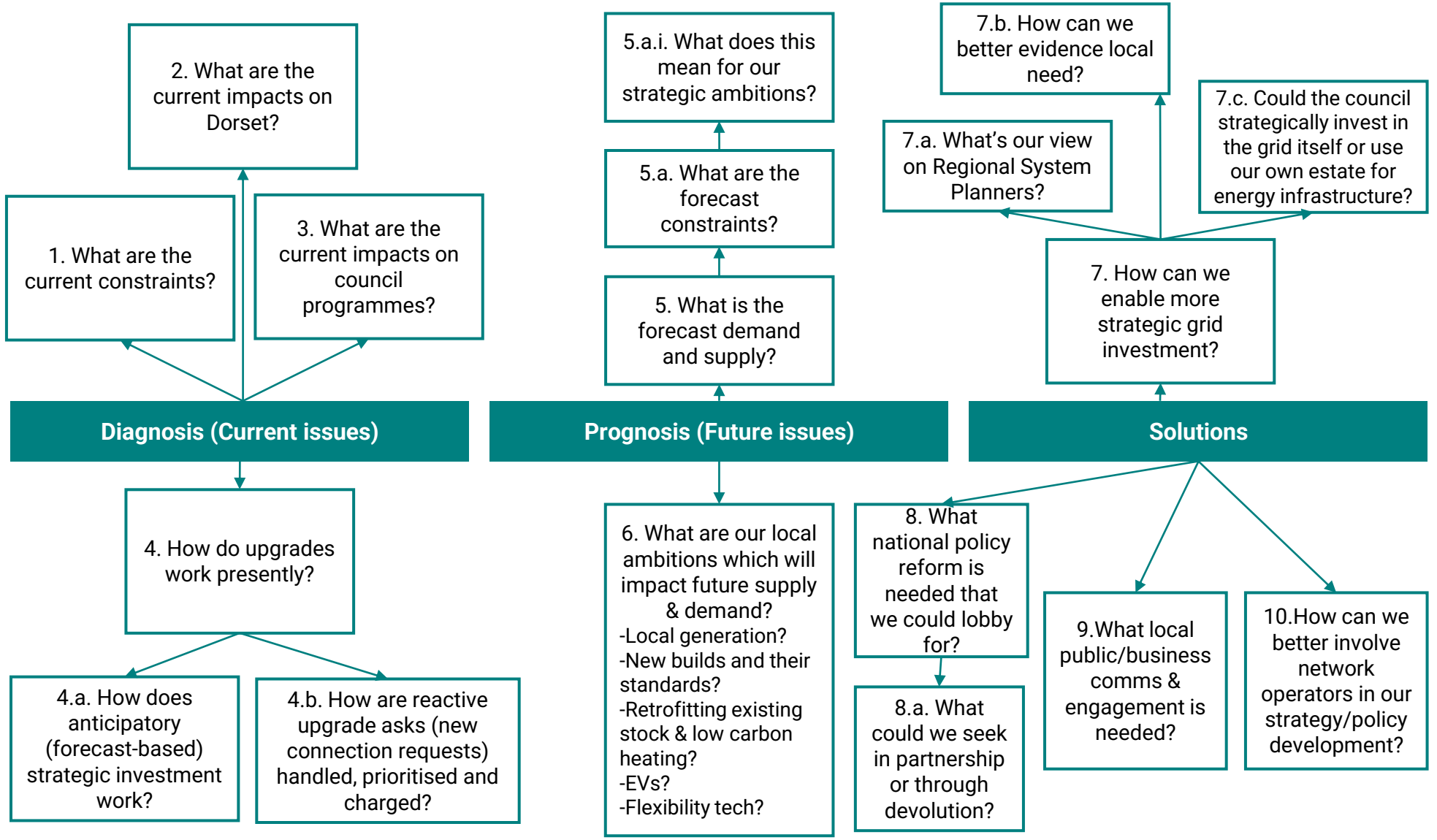
Supporting materials

Scoping document & terms of reference

Structured agendas and slides

Background briefing notes

Issues tracker and narrative



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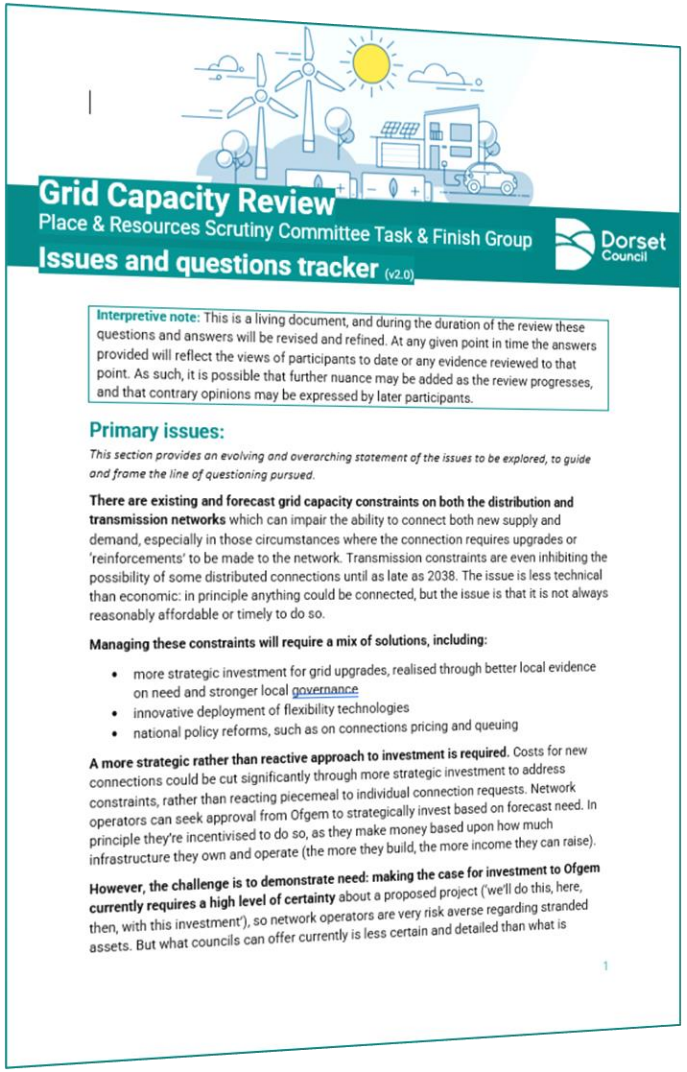

Grid Capacity Review

Place & Resources Scrutiny Committee Task & Finish Group

Issues and questions tracker (v2.0)

Dorset Council

Interpretive note: This is a living document, and during the duration of the review these questions and answers will be revised and refined. At any given point in time the answers provided will reflect the views of participants to date or any evidence reviewed to that point. As such, it is possible that further nuance may be added as the review progresses, and that contrary opinions may be expressed by later participants.

Primary issues:

This section provides an evolving and overarching statement of the issues to be explored, to guide and frame the line of questioning pursued.

There are existing and forecast grid capacity constraints on both the distribution and transmission networks which can impair the ability to connect both new supply and demand, especially in those circumstances where the connection requires upgrades or 'reinforcements' to be made to the network. Transmission constraints are even inhibiting the possibility of some distributed connections until as late as 2038. The issue is less technical than economic: in principle anything could be connected, but the issue is that it is not always reasonably affordable or timely to do so.

Managing these constraints will require a mix of solutions, including:

- more strategic investment for grid upgrades, realised through better local evidence on need and stronger local governance
- innovative deployment of flexibility technologies
- national policy reforms, such as on connections pricing and queuing

A more strategic rather than reactive approach to investment is required. Costs for new connections could be cut significantly through more strategic investment to address constraints, rather than reacting piecemeal to individual connection requests. Network operators can seek approval from Ofgem to strategically invest based on forecast need. In principle they're incentivised to do so, as they make money based upon how much infrastructure they own and operate (the more they build, the more income they can raise).

However, the challenge is to demonstrate need: making the case for investment to Ofgem currently requires a high level of certainty about a proposed project ('we'll do this, here, then, with this investment'), so network operators are very risk averse regarding stranded assets. But what councils can offer currently is less certain and detailed than what is

1

3. Final report

Report key points

Grid constraints are a drag on decarbonisation, business expansion, development, investment and economic growth.

Local projects already face delays, curtailment or cancellation owing to prohibitive connection costs or grid strengthening delays – and in some cases it has impaired project viability entirely. Some are unable to connect until 2036.

But stakeholders identified clear opportunities for the council, such as:

- Strengthening the evidence base for local network investment need and the strategic planning of the future grid;
- Strengthening collaboration with network companies;
- Lobbying to expedite upgrades;
- Facilitating constraint mitigations like flexibility measures, microgrids, or alternative low carbon heat sources.

Report key points: Main issues

Dorset Council

Extreme delays to 2036 for connection times owing to transmission-level constraints.	A very lengthy queue for connections, and its congestion with often speculative and unviable projects.	More strategic projects often being stuck behind less strategic projects in the queue, owing to non-discrimination requirements in the process.
Delays arising from non-infrastructural factors like wayleaves.	Customer service issues for connecting customers, such as long waits for quotes or the inefficiency of having to manage non-standardised processes that vary across different network operators.	Barriers to connecting due to inadequacies how the anticipated impacts of new connections are modelled overestimating risk, particularly for battery storage, and solar PV outside of summer peak.
Requests for significant deposits (e.g. £200k) even for projects that have been given 10-12yr connection dates.	Lack of upfront clarity about network infrastructure's precise location of condition, with the risk that further significant challenges can emerge once detailed feasibility work for individual connections is undertaken.	Limited awareness by connecting customers on the extent of competitive demand for individual connections, and thereby of the likelihood of attaining one without incurring significant costs – to inform earlier customer decision-making about siting and the worthiness of sinking resource into an application.

Report key points: Main impacts

Reinforcement costs and delays threatening the timeliness or viability of projects – including risks to renewable deployment, business expansion and development.,	Significant project cost uncertainties owing to connection costs tending to increase substantially if requoted (sometimes by tens or hundreds of thousands).	Delayed or deterred investment, particularly in renewable generation.
Constraints to business growth potential or to the siting and relocation of high-energy using industries.	Impediments to plant electrification to decarbonise high-energy industry.	Limits on export rates for renewable generation impairing their income generation potential.
Systemic incentives to install smaller capacity assets (under ‘connect and notify’ rules) in order to avoid the risk of connection delays.	Missed opportunities to install heat pumps when boilers need replacing due to the risk of connection delays (during which period the building would lack heating or hot water), with the result that new gas boilers are instead locked in for the duration of their lifetime.	Knock-on strategic economic risks, such as for investment in renewables, or to the tourism economy through impediments to EV charger provision or shore power/cruise electrification – and risk of exacerbating rural/urban disparity.

Report key points: Proposed solutions

Dorset Council

Better evidencing the local need for network investment.

Forging stronger strategic and collaborative relationships with network operators.

Supporting better strategic planning of the network at a regional and local scale, to better fit local knowledge and ambition on net zero, development and economic growth.

Lobbying on key constraints (e.g. Mannington GSP) to aim to expedite upgrades.

Enabling wider use of constraint mitigation measures, including flexibility measures and energy storage, microgrids, alternative low carbon heat sources like geothermal, energy efficiency measures, and renewable colocation.

Working cross-boundary and at a regional scale to make the case for investment.

Better embedding the issue within local policy framework and decision-making, particularly planning.

Exploring the opportunities for innovation projects and of Ofgem innovation funding.

Report key points: Main diagnoses

Dorset Council

A lack of strategic anticipatory investment

A lack of strategic network planning

Inadequate connection queue processes

Poor coordination and sub-national governance

Poor infrastructure build times

Immature flexibility markets

Report key points: Highlighting key reforms

Thankfully, there is a programme of significant but complex policy and regulatory reform being implemented by Government, Ofgem and industry – much of which was released during this inquiry. Most notably…

Improvements to the **RIIO price controls process to grow anticipatory investment** in the grid – including new uncertainty mechanisms.

A strengthened system of strategic planning – including **national and regional strategic plans**.

New regional governance structures (Regional Energy Strategic Planners)

But…there also remains a potential opportunity for more granular ***Local Area* energy plans**, to complement the national and regional plans.

Report key points: Recommendations

- Energy infrastructure must be seen through the same lens as other strategic infrastructure, with investment better aligned to local knowledge, ambition and decision-making.
- Our ambitions for net zero, development and economic growth will require us to play a much more central role in local energy planning in the future – and strengthening our collaboration with energy networks will be essential.

Establish regular quarterly strategic meetings with network operators

Seize the opportunity of Regional Energy Strategic Planners

Strengthen the evidence on local investment need through a cost-effective approach to a Local Area Energy Plan

Ensure that grid constraints and constraint mitigation measures are embedded in our strategies, policy and decision-making

Explore the opportunities of Ofgem's Strategic Innovation Fund and our devolution asks

Lobby our MPs, government, Ofgem and network operators

4. Outcomes and next steps

Outcomes & next steps

Working with our Net Zero Hub and SSEN on developing a LAEP

Advert out to recruit an energy officer

Thanks

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em peak demand demonstrating the impact of shifting
lower levels of electricity demand

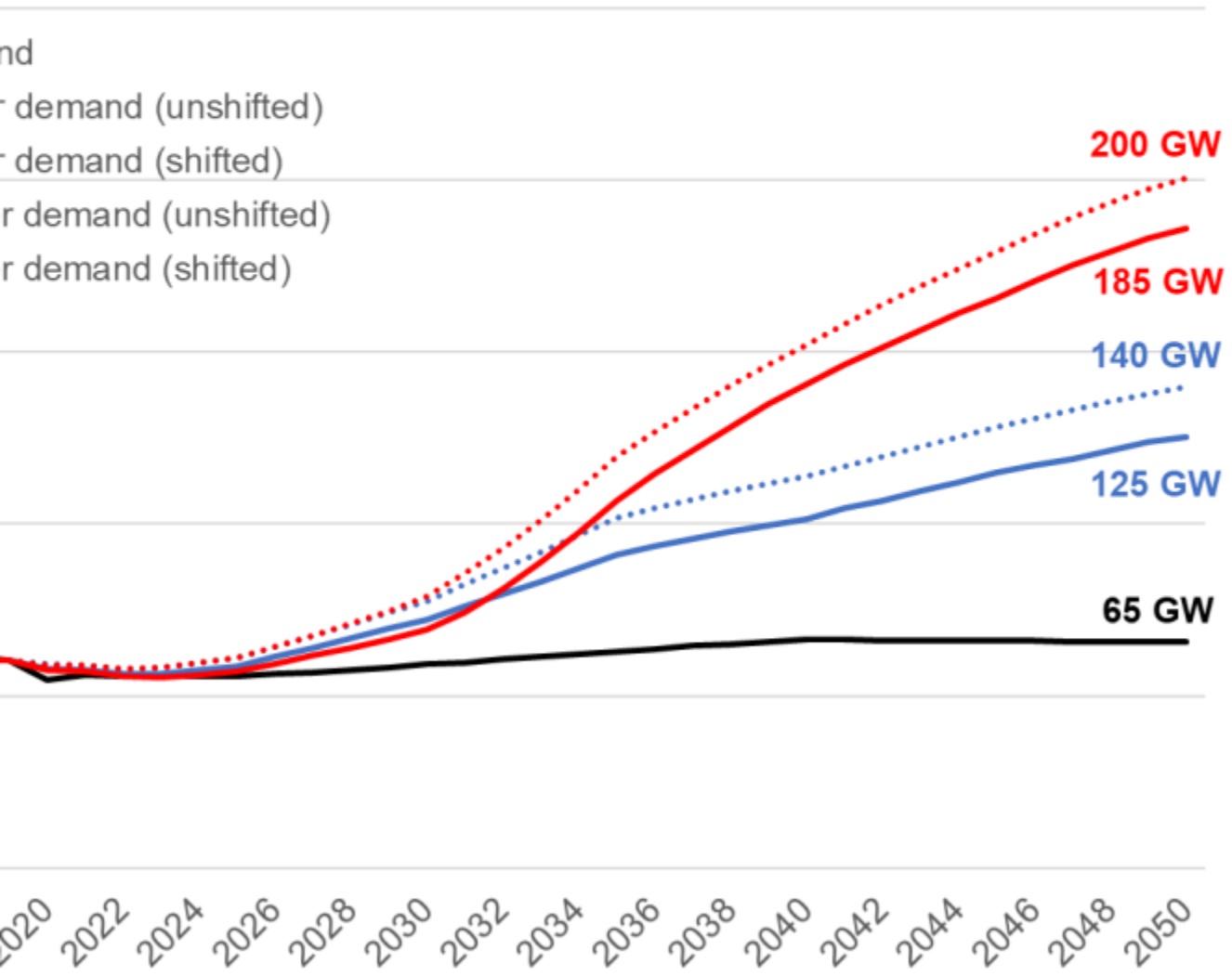

**Figure 2: Distribution network overhead wires and
across Great Britain by 2050 (kilometres)**