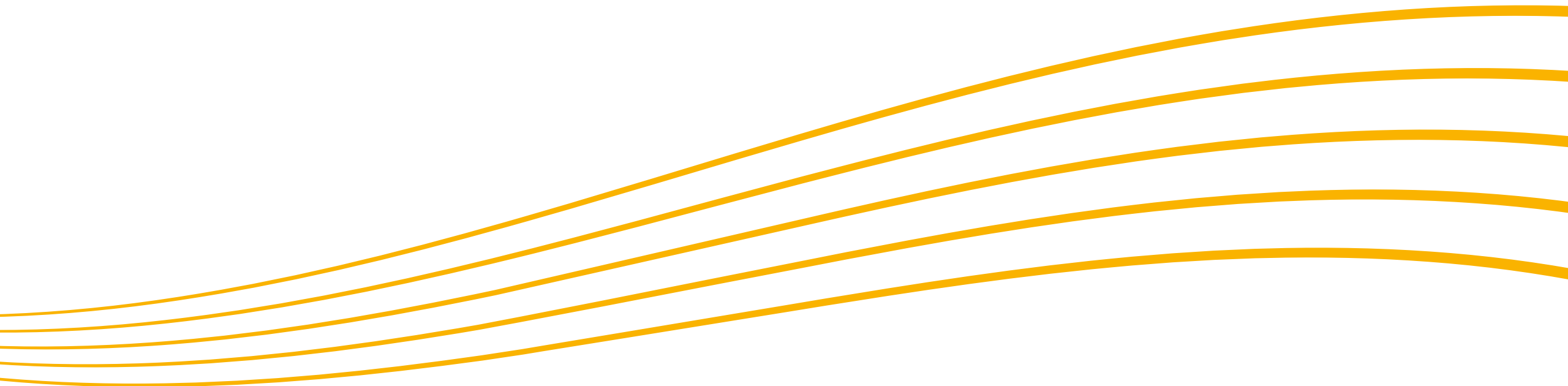


# Bridging the Gap – Flexibility Timeline Tracker

Dec 2022



Due date: Theme	2022		2023		2024		2025		
	Action	Notes	Action	Notes	Action	Notes	Action	Notes	
Investment	2	<p>Ensure funding is available to kick off projects (such as electrolysis, hydrogen storage and long duration storage).(BEIS)</p>	<p>1</p> <p><b>Develop strategic infrastructure plan, considering aspects such as colocation. (Gap: suggested: Ofgem)</b></p>	<p>Ofgem published decision on 17/11/2022 that the FSO should deliver a Centralised Strategic Network Plan, a new electricity transmission network planning output (see INV3a)</p>			<p>3b</p> <p>Deliver strategic planning methodology to Ofgem (ESO - early 2023) and then develop a strategic network plan by 2025 (FSO)</p>	<p>Ofgem published decision on 17/11/2022 that the FSO should deliver a Centralised Strategic Network Plan, a new electricity transmission network planning output.</p>	
	4	<p>Deliver Holistic Network Design recommending a coordinated onshore and offshore network for projects due to connect by 2030 (ESO, June 2022).</p>	<p>Completed and published July 22: <a href="https://www.nationalgrideso.com/future-energy/the-pathway-2030-holistic-network-design/hnd">https://www.nationalgrideso.com/future-energy/the-pathway-2030-holistic-network-design/hnd</a></p>	<p>3a</p> <p><b>Develop a new centralised Strategic Network Planning Regime for 2024 onwards, with high-level principle developed by mid 2023, and more detailed methodology in late 2024. (ESO)</b></p>	<p>Working on high level design principle for sharing mid-23</p>				
	5	<p>Assess longer term capacity and operational needs to ensure 2035 decarbonised energy system will be adequate and resilient. (ESO)</p>	<p>ESO published a resource adequacy report, looking at what will be needed for 2035 in Dec 22: <a href="https://www.nationalgrideso.com/future-energy/projects/resource-adequacy">https://www.nationalgrideso.com/future-energy/projects/resource-adequacy</a> This is complementary to the ESO's annual Operability Strategy Report: <a href="https://www.nationalgrideso.com/electricity-transmission/news/operability-strategy-report-2022">https://www.nationalgrideso.com/electricity-transmission/news/operability-strategy-report-2022</a></p>						
	6	<p><i>Plan to strengthen supply chains to ensure products and materials are available for investment to take place (BEAMA/DIT/BEIS/EIC)</i></p>	<p>An Electricity Supply Chain Council was established and has had three foundation meetings with more meetings planned for future. It's supported by industry associations as well as Government through BEIS and DIT. Initial actions are 1. Supply chain mapping for Govt and 2. A consolidated survey of supply chain issues and their impacts.</p>						

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Due date:		2022	
Theme	Action		Notes
Consumer	2	Deliver a four-year smart meter policy framework with fixed minimum annual smart meter installation targets for energy suppliers (beginning 1st Jan 2022) - (BEIS)	A four-year policy framework with fixed, annual, smart meter installation targets for energy suppliers commenced on 1st January 2022 to further drive rollout momentum. As of the end of September 2022, over half (54%) of electricity and gas meters are now smart meters. Energy suppliers to continue to drive smart meter installations in homes and small businesses.
	4	<i>Expand the energy ombudsman role to cover consumer data protection, equity, empowerment and privacy (Gap: BEIS/ Ofgem).</i>	<i>Recommendation only</i>
	7	<b>Accelerate the development of supply chains to achieve economies of scale and pass on cost reductions to consumers ( including electric vehicles, heat pumps, micro generation and batteries). (BEIS)</b>	As part of the government's heat pump ready programme, £15m was awarded by government across 24 innovation projects to make low carbon heating like heat pumps cheaper and easier to install. <a href="https://www.gov.uk/government/news/boost-for-innovative-heat-pump-projects-to-drive-cleaner-heating">https://www.gov.uk/government/news/boost-for-innovative-heat-pump-projects-to-drive-cleaner-heating</a> Govt provided £20m for funding more EV chargepoints around the country for people without driveways: <a href="https://www.gov.uk/government/news/drivers-to-benefit-from-20-million-ev-chargepoint-boost">https://www.gov.uk/government/news/drivers-to-benefit-from-20-million-ev-chargepoint-boost</a> No updates received on other techs.
	8	Work with industry to support the update of specifications and standards for energy smart appliances, to mandate interoperability of DSR-capable devices and to establish a technical framework for small-scale DSR (BEIS)	BEIS published a consultation on 'Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control' in July 2022. This consultation ran until 28 September 2022 and feedback is being assessed by BEIS. A response to the consultation is planned for publication in Q1 2023.
	9	Regulate energy smart appliances to set requirements underpinned by the principles of interoperability, data privacy, grid stability and cyber security (BEIS)	BEIS published a consultation on 'Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control' in July 2022. This consultation ran until 28 September 2022 and feedback is being assessed by BEIS. A response to the consultation is planned for publication in Q1 2023.
	11	<i>Set up an agency to provide trusted guidance and advice to households in England and Wales about net zero (GAP: suggested owner: BEIS)</i>	In July 2022 government launched a new website providing homeowners with a home energy MOT, offering impartial recommendations that could help save them hundreds of pounds a year on bills. The government is also launching a phonenumber service that will help provide consumers with tailored and impartial information about how to improve the energy performance of their homes. This forms part of a 3-part energy performance advice service that consists of a retrofit advice provision, phonenumber and local advice. The phonenumber will provide trusted advice to consumers on their home energy retrofit journeys and cover the digital assist service for the newly launched energy advice website on GOV.UK. (ref CON6)

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Due date:		2023		2024		2025		
Theme	Action	Notes		Action	Notes	Action	Notes	
Consumer	1	Consult on appropriate technical and regulatory framework for devices and flexibility service providers, which supports interoperability, data privacy, cyber security and grid stability. Implement the desired solution (consultation will take place in 2022) (BEIS).	BEIS published a consultation on 'Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control' in July 2022. This consultation ran until 28 September 2022 and feedback is being assessed by BEIS. A response to the consultation is planned for publication in Q1 2023.	5	Design energy products to meet consumers' needs as well as to facilitate low carbon energy in response to improved market signals. (Energy suppliers)	3	Implement market-wide half hourly settlement (by October 2025)	
	12	Increase skills and training for installation of low-carbon home heating systems (BEIS)	BEIS launched a £9.2m Skills Training Competition in September 2022, the competition has awarded funding to a range of suppliers to deliver accredited training at scale to the building retrofit, energy efficiency and heat pump sectors in England. The scheme is expected to deliver an estimated 9,000 courses across three work packages. BEIS intends to continue to work with the industry to support training in key skills shortage areas and new routes of entry to increase capacity.  <a href="https://www.gov.uk/government/publications/home-decarbonisation-skills-training-competition">https://www.gov.uk/government/publications/home-decarbonisation-skills-training-competition</a>	10a	Deliver existing funding schemes for those in need whilst continuing to upgrade existing homes.	6	Devise a strategic awareness campaign for consumers about net zero and consumer actions for net zero (GAP: suggested owner: BEIS, with support from industry/consumer groups).	
							10b	Improve standards for new builds through the Future Homes Standard (FHS) and Future Buildings Standard (FBS), both to be introduced in full in 2025 (Dept. for Levelling up, Homes and Communities - DLUHC)
								For Future Building Standards, DLUHC are considering whether a phased implementation is needed for the FBS, which means implementation will start in 2025 but not in full.

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Due date:		2022		2023		2024		2025	
Theme		Action	Notes	Action	Notes	Action	Notes	Action	Notes
Roles and Responsibilities	1	<b>Outline roles and responsibilities in a net zero, whole energy system for existing and future participants, including where responsibility for net zero coordination lies (GAP, suggested: BEIS/Ofgem)</b>	BEIS has published their response to the FSO consultation, which sets out the role of FSO in enabling net zero (alongside BEIS and Ofgem).						
	2	<b>To avoid delaying action, ensure adequate legislative time is assigned to create the legal basis for net zero roles, rules and responsibilities, including whole system remit for FSO and Ofgem (Gap, suggested BEIS)</b>	The Energy Bill draft ( <a href="https://bills.parliament.uk/bills/3311">https://bills.parliament.uk/bills/3311</a> ) is currently going through the legislative process.						
	3	<b>All reviews of codes and regulations should include a check to see that they are fully net zero compliant and there is a clear timeline for new net zero standards/codes (Ofgem).</b>	The energy code reforms set out in the Energy Security Bill aim to ensure that the energy codes can deliver the changes necessary for net zero.						

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Due date:		2022		2023		2024		2025								
Theme	Action	Notes	Action	Notes	Action	Notes	Action	Notes								
Markets	1	<b>Examine holistically the changes required to current GB electricity market design to achieve net zero, including effective market signals for flexibility (ESO)</b>		The ESO Market strategy team are currently undertaking Phase 4 of the Net Zero Market Reform programme, developing holistic market design and policy packages to deliver the Review of Electricity Market Arrangements objectives, including effective market signals for flexibility. We will publish a report in Spring 2023 setting out the finalised Phase 4 detailed assessment and conclusions, having considered stakeholder feedback.	3	Assess and coordinate longer-term operability requirements (out to 2035) between NOA, ETYS and Operability Strategy Report (ESO)			7	<b>Align UK ETS cap to a net zero consistent trajectory by January 2023, or January 2024 at the latest to ensure an effective, robust carbon market to complement flexibility markets (UK ETS Authority)</b>			5	Simplify access to the Balancing Mechanism for all technology providers. (ESO)	Our Balancing Programme work to enable wider access to the BM is ongoing. We have recently published a document outlining operational metering requirements for small (less than 100MW) BM and Non-BM participants. October 2022 we published a second document with the registration guide. Further detail can be found in our Markets Roadmap: <a href="https://www.nationalgrideso.com/research-publications/markets-roadmap">https://www.nationalgrideso.com/research-publications/markets-roadmap</a>	
	2	<b>Investigate optimal market design for both stability and reactive power and develop enduring framework of long- and short-term markets for ancillary services (ESO)</b>		We are currently in a second phase of a Network Innovation Allowance project working to answer some fundamental market design questions for short- and long-term stability markets, such as eligibility criteria, format/granularity of contracts. This current phase is on track to conclude in Q4 2022/23. More information can be found: <a href="https://www.nationalgrideso.com/future-energy/projects/stability-market-design">https://www.nationalgrideso.com/future-energy/projects/stability-market-design</a> . Reactive power market design is ongoing and working with NZMR to consider enduring format.	4	Deliver an efficient frequency market (ESO)										
				6	Implement Single Market Platform for all of ESO's markets (ESO)		This is unlikely to be met as we have taken an approach to engage with users and prioritise functionality that adds value immediately, rather than pushing for this target. More information can be found here: <a href="https://www.nationalgrideso.com/industry-information/balancing-services/single-markets-platform">https://www.nationalgrideso.com/industry-information/balancing-services/single-markets-platform</a>									

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Due date: Theme	2022		2023		2024/2025			
	Action	Notes	Action	Notes	Action	Notes		
Digitalisation	1	Develop a digital spine for energy interoperability and data sharing, working with key industry stakeholders to develop standards and tools needed (BEIS/Ofgem)	In response to the Energy Digitalisation Taskforce report , BEIS committed to developing an open procurement approach for a feasibility study to examine the opportunities, risks, and potential architectures of a 'digital spine' and how it could interact with the data sharing fabric recommendation. BEIS launched the Invitation To Tender for the feasibility study in October 2022. The competition is now closed, with the successful project expected to be announced in early 2023.	4	Implement a Data and Digitalisation Strategic Change programme that will facilitate the digital transformation of the industry and regulator (Ofgem )	Work is underway, however certain aspects of the programme are currently delayed due to internal prioritisation. This will be addressed in the next Ofgem Forward Work Programme.		
	2	Work with communications industry and Ofcom to design national digital infrastructure to support energy system (Tech Advisory council/ESO/DNO/Ofgem/Ofcom).	Technology Advisory Council discusses these kind of issues regularly and this requirement specifically was mentioned at the June meeting. More details can be found: <a href="https://www.nationalgrideso.com/electricity-transmission/who-we-are/stakeholder-groups/technology-advisory-council">https://www.nationalgrideso.com/electricity-transmission/who-we-are/stakeholder-groups/technology-advisory-council</a>	7	Develop and use detailed statistical and machine learning to improve forecasting and to understand demand profile better (ESO)	This is an incremental, ongoing piece of work for the ESO platform for energy forecasting. On track for delivery in 2023.		
	3	Develop and use Virtual Energy System to assess potential impacts of actions in real-time (ESO) (wrt interoperability and resilience)	New use cases are being developed as next steps from the recommendations of the Advanced Dispatch Optimisation project with Google X, looking at how we can help the ENCC operators make more optimised decisions with access to more disparate data from digital twins across the system.	8b	Continue to develop the Virtual Energy System so that interconnected digital twin models across GB can be used to improve forecasts, provide more automated operation of the system and better visibility of other networks (DNO areas) and flexibility available from connected DERs (ESO lead with industry ) (wrt forecasting supply/demand)	The second phase of the Common Framework NIA project is currently in progress, as well as the SIF Alpha phase of the Crowdflex project. Other use cases are being developed with partners across industry to demonstrate the benefits of a Virtual Energy System.		
	5	Ensure auto-registration of energy ready/smart appliances, which is accessed via the digital spine (BEIS)	In April 2022, BEIS launched the Automatic Asset Registration innovation competition as part of the Net Zero Innovation Portfolio (NZIP). This offered up to £2 million to support the development of solutions to automatically register small scale assets and to demonstrate the technical feasibility of a central asset register to hold this data. Three successful projects were announced in September 2022, with Phase One: Feasibility Studies due to finish in Q1 2023.					
	6	Implement open data portal to share all relevant ESO data, improving the transparency of ESO actions (2022/23) (ESO)	Complete <a href="https://data.nationalgrideso.com/">https://data.nationalgrideso.com/</a>					
	8a	Start to develop the Virtual Energy System so that interconnected digital twin models across GB can be used to improve forecasts, provide more automated operation of the system and better visibility of other networks (DNO areas) and flexibility available from connected DERs (ESO lead with industry ) (wrt forecasting supply/demand)	The second phase of the Common Framework NIA project is currently in progress, as well as the Strategic Innovation Fund Alpha phase of the Crowdflex project. Other use cases are being developed with partners across industry to demonstrate the benefits of a Virtual Energy System.					
	9	Use Regional Development Programmes to develop commercial capabilities for deployment of DERs (ESO/DNOs)	The commercial contract discussions have now closed and we're moving to the final stage for delivery.					