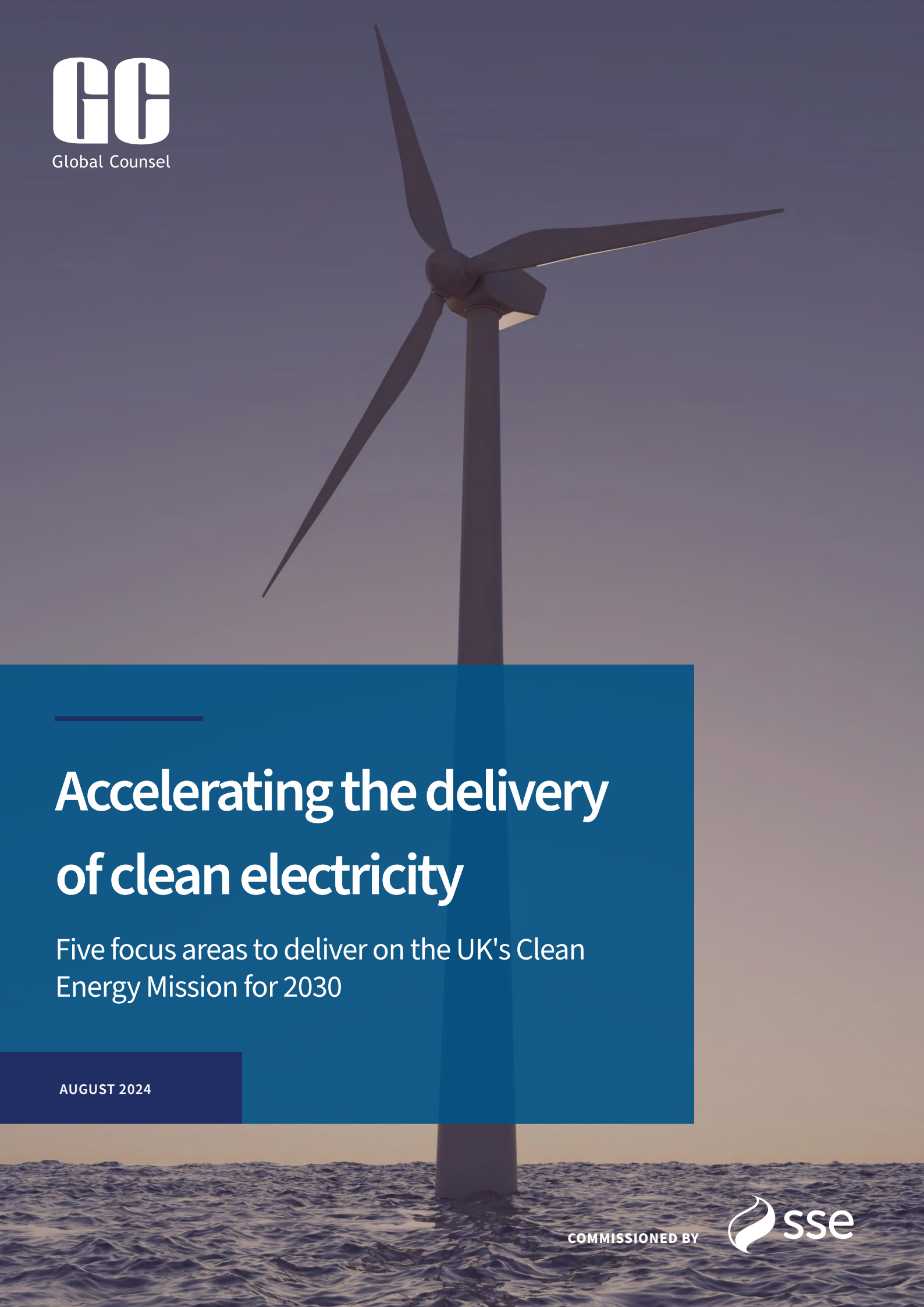

Global Counsel

Accelerating the delivery of clean electricity

Five focus areas to deliver on the UK's Clean Energy Mission for 2030

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COMMISSIONED BY sse

About this report

This paper was written by Lilah Howson-Smith, Global Counsel's UK Politics and Policy Practice Director, with input from SSE who commissioned the report. It draws on stakeholder workshops and bilateral discussions focused on the key actions required for a pathway to accelerated clean electricity for 2030. Thanks are due to the policymakers, those involved in the supply chain and a range of energy and net zero stakeholders who shared their views and comments.

Many of the recommendations align with the report on 'Rapid Decarbonisation of the GB Electricity System' by the National Engineering Policy Centre, led by the Royal Academy of Engineering[1]. This paper should be seen as complementary to the comprehensive work of the Royal Academy of Engineering team.

The Government's Clean Energy Mission sets an ambitious timeline for decarbonisation of the electricity system. Its progress will support the UK's path to net zero, reduce its dependence on imported fossil fuels and provide economic opportunities right across the country.

Delivery of the 2030 Mission will also be a demonstration by the UK of global leadership in energy decarbonisation and give substance to the new Government's proposed 'Global Power Alliance'. Delivery of the 2030 Mission would mean the UK has the most carbon free electricity in the G7[2]. Critically the 2030 Mission is an opportunity to boost supply chains in the UK and secure economic and industrial benefits. It can make the UK a world leader in floating offshore wind, an exporter of hydrogen and CCUS capabilities globally and a beneficiary of inward investment from new suppliers.

This paper is not intended to propose a specific energy mix pathway to 2030, but instead to highlight the decisions and steps needed to make that pathway to 2030 possible. To deliver the 2030 Mission, the paper proposes greater local and national system planning, along with speeding up planning approvals and clear business models and regulatory efficiencies that unlock investment.

The paper calls for the new Government to provide clear signals early on for a step change in green investment in the UK – including taking final investment decisions on Track-1 CCS projects and accelerating subsequent tracks, signing off a larger AR6 budget and ruling out zonal pricing to provide investor certainty and reduce capital costs.

1. https://raeng.org.uk/news/rapid-decarbonisation-of-the-gb-electricity-system-report
2. https://www.sse.com/clean-power-g7/

To fully deliver the 2030 Mission, based on input from a range of stakeholders, this paper proposes five focus areas for action:

01 A strategic delivery plan

A central strategic Clean Energy Mission Delivery Plan that enables Ministerial oversight of Mission delivery and brings together strategic energy infrastructure plans with policy and regulation to address potential barriers and maximise the economic opportunities from the upcoming investments.

02 Accelerated consenting and planning

Reform and resourcing of the planning system across the UK that can ensure infrastructure delivery for the 2030 mission.

03 Delivering the renewables ambition

Ensuring upcoming Contracts for Difference (CfD) auctions deliver sufficient capacity to meet 2030 and maximise domestic supply chain benefits.

04 Securing dispatchable low-carbon power

Setting a clear pathway to deliver low-carbon flexible power stations, to transition away from unabated gas and support the urgent deployment of CCS and hydrogen infrastructure in the UK's industrial heartlands.

05 A focused market reform programme

An accelerated market reform programme that ensures a laser-like focus on investment and delivers consumer value ahead of 2030.

01

A strategic delivery plan

Building four times the infrastructure required in a quarter of the time[3]

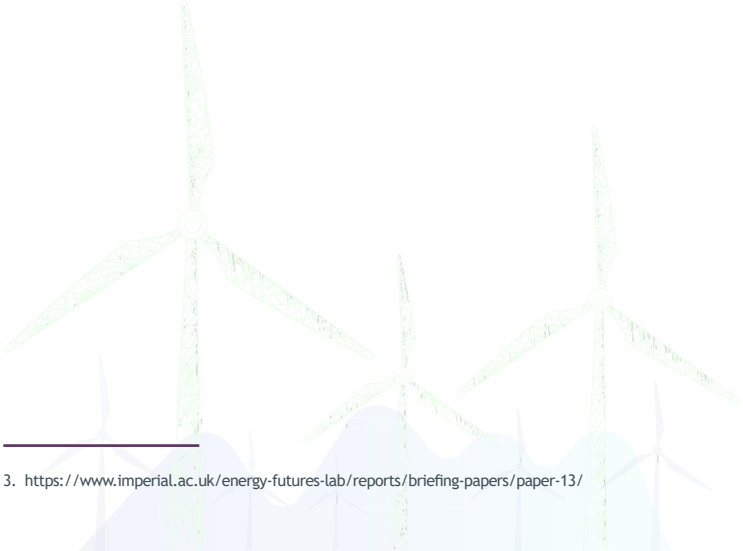
The UK has been successful in its deployment of renewable energy, notably offshore wind, but the electricity grid and low-carbon flexibility have not kept pace, and to deliver the 2030 Mission, all three now need to be delivered in tandem and at pace. The Government should address this by developing a single, consolidated Clean Energy Mission Delivery Plan, with a focus on 2030, but with a view on 2040 and beyond.

Useful steps are being taken to bring coherence through the introduction of strategic energy infrastructure planning, but there is a clear risk of incoherence between these plans and the wider energy policy and regulatory framework. The Mission Plan should bring all of the elements coherently together.

It should be informed by - and not cut across - an early steer from the incoming National Energy System Operator's (NESO) work developing the Strategic Spatial Energy Plan (SSEP) and any 2030 infrastructure outlook. The SSEP, when finalised, should set out in full the energy system needs and the wider low carbon infrastructure requirements for beyond 2030, but initially focus on large-scale electricity, CCS and hydrogen needs.

While the SSEP will be crucial for wider energy system planning purposes, a good deal of the electricity transmission upgrades required by 2030 have already been identified through the transitional Centralised Strategic Network Plans (tCSNPs) published in 2022 and 2024. Any remaining gaps in transmission needed for 2030 would need to be identified quickly, with action taken to ensure expedited planning approvals where necessary.

The intention of the Delivery Plan will therefore be to provide a final steer on the infrastructure needed in particular areas before 2030 and bring together technology targets, policy and regulation to support coherence and ensure all levers are pulling in the same direction.



3. https://www.imperial.ac.uk/energy-futures-lab/reports/briefing-papers/paper-13/

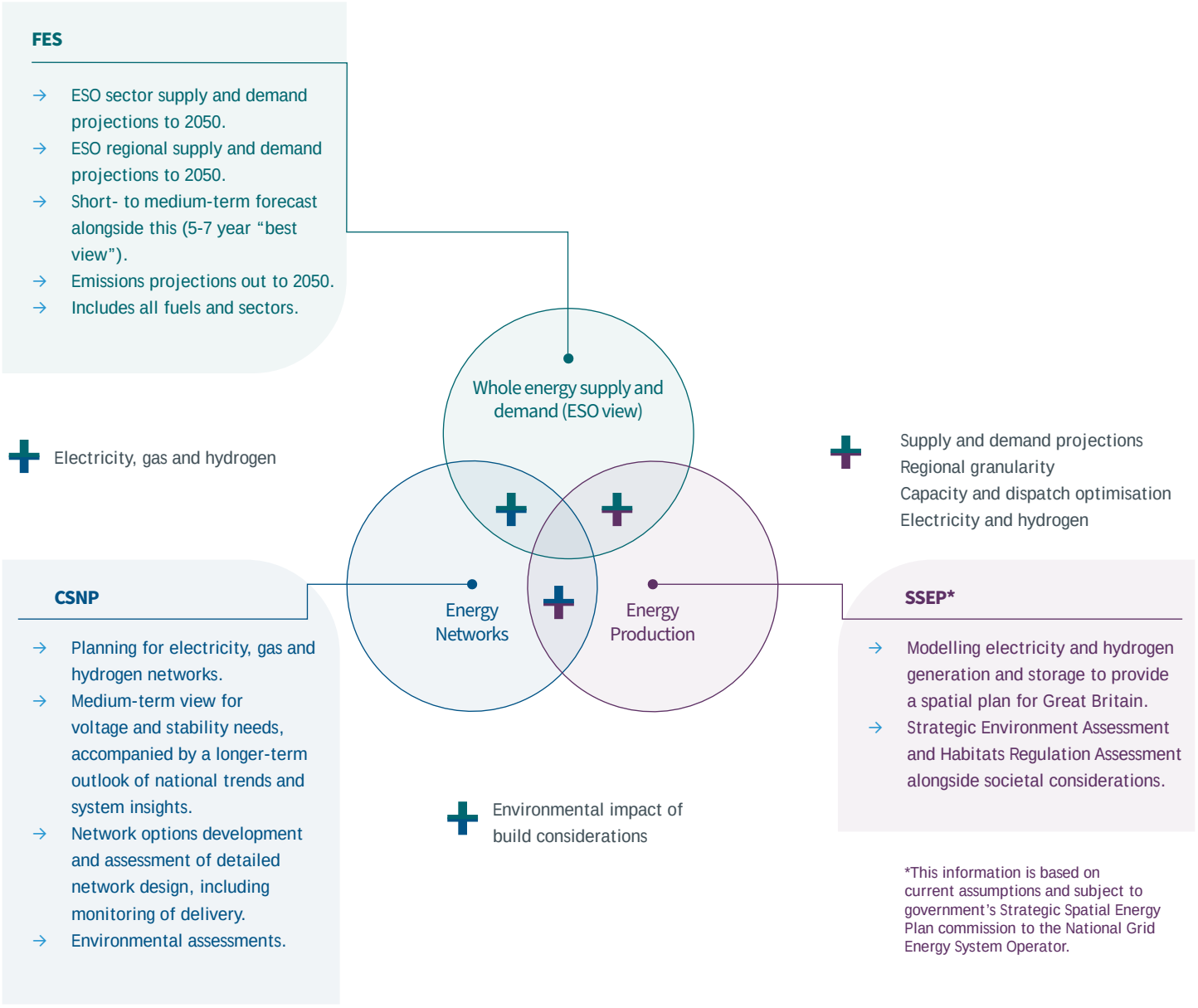


Fig. 1 Bringing coherence to strategic planning
The figure above shows the interactions between existing and developing ESO initiatives that will contribute towards a strategic energy infrastructure plan for the GB energy system[4].

It will also help to identify potential delivery barriers and support the capturing of wider economic opportunities by providing visibility of the Clean Energy Mission for investors in both projects and the associated supply chain.

This Delivery Plan would build on the success of the Accelerated Strategic Transmission Investment (ASTI) framework, put in place by Ofgem to deliver on the strategic plan for the electricity network in the first tCSNP in 2022. ASTI has been used to provide certainty to transmission network operators on upcoming projects to expedite procurement activities and secure investment in the UK supply chain, which demonstrates what can be achieved by having a clear, centralised plan and progressive regulatory framework.

4. https://www.nationalgrideso.com/document/322316/download

The economic benefits of strategic energy infrastructure planning: a cable factory in the Scottish Highlands

In May 2024, the Sumitomo Electric company broke ground on a £350m subsea transmission cable factory at the Port of Nigg in the Scottish Highlands.

The investment had its origins in the UK's Offshore Transmission Network Review (OTNR) which was launched in 2020. The outcomes of the OTNR led to the development of a strategic plan for the electricity transmission network from the Electricity System Operator (ESO) in 2022 in order to deliver on the UK's offshore wind target for 2030 – this strategic grid plan was the first transitional Centralised Strategic Network Plan (CSNP)[5].

Grid upgrades within this strategic grid plan were then approved by the energy regulator, Ofgem, under a new forward-looking Accelerated Strategic Transmission Investment (ASTI) framework. ASTI moved beyond individual project-by-project approvals which had fragmented procurement processes, and allowed the Electricity Transmission Owners (TOs) to have early and at scale engagement with the supply chain, in what was a tight market with European counterparts looking to make grid upgrades of similar scale[6].

Where procurement in a tight market may have led to inflated costs or delayed projects, the shift in mindset delivered under ASTI coupled with targeted public funding helped trigger the Sumitomo investment, which will help secure wider economic benefits from the UK's upcoming grid development.

The Strategic Spatial Energy Plan (SSEP) due in 2026 will embed this process for future development of the electricity transmission system, and extend strategic planning down to electricity distribution, as well as gas and hydrogen systems, and potentially other sectors.

Criticality of local planning for regional growth

The benefits of strategic system planning should also be harnessed at the electricity distribution level. This will help facilitate access to the grid for renewable energy and batteries, and new demands from EVs and heat pumps through to data centres and housing developments. If not resolved, the limits on capacity could act as a brake on regional growth and hinder the development of wider infrastructure requirements for a modern, vibrant and low-carbon – and dramatically electrified – economy.

The Regional Energy Strategic Planners (RESPs) and the Strategic Spatial Energy Plan (SSEP), held by the NESO, and the Delivery Plan held by DESNZ, have key roles to play in allowing early planning around investment, grid connectivity and community engagement.

To fully capitalise on the opportunity, clarity on the roles involved in the RESP will be important, and priority should be given to how the RESP will interact with RIIO-ED3 both in the interim and once fully functional so that no time is wasted.

Local Area Energy Plans (LAEPs) can provide a framework and process for devising what is required at the local level, in collaboration with - and with the endorsement of - local stakeholders, and linking it to regional and national energy system planning.

Making LAEPs mandatory across the UK, alongside appropriate resourcing for local authorities, could provide a basis for a longer-term view on network investments, by providing better information on where connections are going to be required and a reference point for wider local infrastructure decisions. The LAEPs should also consider where grid capacity is required for nationally significant infrastructure such as freight hubs around transport hubs or ports or creating IT hubs around international telecoms connections or financial centres.

This kind of local strategic planning should be reinforced through economic regulation. Under the current price control regime, Ofgem determines the level of expenditure by DNOs. This can be revised on a very limited basis through the 're-opener' mechanism and 'volume driver' payments (which support new connection requests). But overall, this is a demand-led process which limits the amount of anticipatory investment that can take place at the distribution level.

As we move towards this more planned approach, Ofgem should fully use its net zero remit, and through moving emphasis away from short-term focus on costs to longer-term delivery of net zero, enable networks to support the decarbonisation of homes, transport and businesses as well as support economic growth.

5. The 2022 strategic grid plan was for 40GW offshore wind, with the ESO's 'Beyond 2030' strategic plan from March 2024 putting in plans for the network infrastructure to deliver on 50GW of offshore wind and integrate ScotWind.
6. Around €30 billion: Europe's largest-ever contracting pack-age for security of supply, the energy transition and climate protection launched (tennet.eu)

A new net zero approach to investment is needed, which allows for the right decisions to intervene on distribution networks beyond the current regulatory parameters, at the right time, and with the right solutions, to enable a clear pathway to 2030 and subsequently 2050. This will allow networks to more effectively optimise across a range of solutions, including flexibility to avoid overbuild, in order to make the right investments at the right time for the benefit of consumers.

Actions

Develop a Clean Energy Mission Delivery Plan to provide a final steer on infrastructure required before 2030 and underpinning policy and regulation.

Mandate and fund Local Area Energy Plans that feed into national strategic planning and provide a guide to grid connections and infrastructure co-location.

Embed a new mission-led approach into the regulatory framework for electricity distribution networks, fully utilising the flexibility it has in RIIO-ED2 to enable long term investment for local and regional grid capacity needs.

02

Accelerated consenting and planning

Cutting the years of lost time to consenting

Expediting planning applications is critical for the 2030 Mission. Without reform to the planning system across the nations of the UK, along with additional resources, it will not be possible to deliver the ambition of the 2030 Mission and the common endeavour of electricity decarbonisation.

This paper proposes a few priority areas for planning reform to support the 2030 Mission – to reform the Nationally Significant Infrastructure Projects (NSIPs) process, to reduce the use of public inquiry in Scotland, to streamline the process for consenting offshore wind and to support these changes through resourcing. They reinforce the reforms already set out by the Government that are due to be developed further over the course of the next few months. Principally, they support this Government's early recognition that the question needs to be not "if" but "how" we deliver infrastructure projects.

In the first instance, the Government's outlined objective presents the opportunity to return the NSIP in England and Wales to its original purpose – expediting the delivery of critical infrastructure. The NSIP regime has over time become encumbered by excessive proceduralism – to the extent that many infrastructure developers are opting to go through the Town and Country Planning regime rather than the NSIP process where possible. A central part of this is that the pre-application and statutory consultation process has come to burden the Planning Inspectorate with a mountain of conflicting written submissions and fails to substantially narrow down the issues to be resolved.

To avoid this, building on the plans set out in the King's Speech, the Government should issue early guidance to the Planning Inspectorate (PINS) on how they can provide greater clarity to applicants on what they must demonstrate at the pre-application stage and how to limit the issues being examined to just those which might lead them to recommend refusal. Alongside this, the Government should issue clearer guidance to applicants on what is, and importantly what is not, required for consultation processes to be considered adequate.

Faced with the risk of legal challenges, developers naturally err on the side of caution and conduct necessarily lengthy processes with many rounds of consultation. This guidance, both to PINS and applicants, should address this uncertainty and enable applications to progress to assessment more quickly. The Government should also urge PINS – at the statutory consultation stage - to increase the use of barrister-led cross-examinations of both applicants' and objectors' written evidence on the most complex and contentious topics. This is possible under existing legislation and would give PINS greater confidence to make difficult judgement calls and more quickly flush out the issues.

The same decisive approach should be replicated in offshore wind, where the complexity and precaution built into the assessment processes for Environmental Impact Assessments (EIAs) and the Habitats Regulations Assessment (HRA) are slowing down projects without improving outcomes. Currently, project developers, regulators and environmental NGOs spend a disproportionate amount of time and money processing data. This delays the decision-making process and is a poor use of limited resources that in our view could be avoided without impacting the integrity of the process. The Government should examine whether site-by-site requirements for data under these assessments can be streamlined and shared across sites with similar features.

Ultimately, to more than triple our capacity of offshore wind whilst protecting and enhancing the marine environment, we collectively need to improve these processes at pace. This needs to be done by rapidly evaluating and incorporating new evidence, reducing precaution, and allowing greater flexibility in assessment, but should also be supported by the establishment of the Marine Delivery Fund and strategic compensation. This would act as a guarantee that new offshore wind is delivered with no net loss of biodiversity, and ideally net biodiversity gain and could form part of the new Government's commitment to use development to fund nature recovery.

This outcomes-orientated approach to consenting for energy infrastructure needs to be followed across all the nations of the UK.

In Scotland, there is a need to accelerate critical grid upgrades to support the delivery of the Clean Energy Mission. Currently, if a single consultee decides to object to an application, a public local inquiry (PLI) is automatically triggered regardless of the basis of the objection, which can lead to delays of up to two years. To align with the other nations in the UK and accelerate progress on decarbonising electricity, the new Government's proposed Energy Independent Act should remove the automatic trigger for a PLI but ensure that Scottish ministers can still hold a PLI after considering any objection from the local authority or appellants. These reforms should maintain the primacy of Scottish Government ministers in final planning decisions over energy infrastructure.

Resourcing the planning system

To support these reforms, we should continue to build planning capacity, noting the growing volume of projects that will need to come through the system to support 2030. This means increasing the number of planners, but also, as we heard from both developers and the unions, addressing the structural constraints around training and remuneration that lead to poor productivity, reduced capacity, and slower consenting decisions.

As part of the capacity building exercise announced, the UK Government should offer incentives to attract people into local authorities' planning teams and the Planning Inspectorate – recognising the competitive pressure from the private sector and the opportunity for closer collaboration through secondments and sharing resources. The Government should also seek to leverage their commitment to roll out Technical Excellence Colleges to enable them to deliver new high quality planning courses.

More widely, the Government should work collaboratively with the Devolved Administrations to ensure appropriate planning resource is in place across the UK.

Actions

Provide Secretary of State guidance to PINS to limit what is required in pre-application for infrastructure projects and limit examination to those issues that are likely grounds for refusal.

Increase resourcing for planners across the UK, noting the current lack of capacity and upcoming investment in low carbon infrastructure.

Streamline site-by-site data requirements under HRA and EIAs and establish a Marine Recovery Fund to enable the delivery of strategic compensation with an approved list of measures that accelerates planning consents and delivers marine restoration.

Remove the automatic trigger for PLI in Scotland within UK legislation ensuring that Scottish Ministers can still decide to hold a PLI after considering objections, but projects are not automatically blocked by a single objection.

03

Delivering the renewables ambition

Bringing 55GW of offshore wind online by 2030

The 2030 Clean Energy Mission will require over the next five years a quantum leap in generating capacity, with the Government committing to delivering 55GW of offshore wind by 2030 from today's c.15GW.[7] On the draft budget parameters set in March, only 3-5GW of fixed offshore wind would be procured in CfD Allocation Round 6 (AR6) and only 27-28GW of total offshore capacity is projected to be operational by 2028.[8]

The timing of the election means that the new Government has been able to raise the AR6 budget, which could double the expected capacity delivered from the auction. This can then be followed by a more ambitious AR7 in 2025. The scale of the upcoming allocation rounds is an opportunity to not only secure renewables capacity but also realise the industrial benefits of the 2030 mission. However, there are tradeoffs that need to be considered to avoid inflating costs.

Setting the right parameters

To support delivering this scale of new renewable generation at the lowest cost, for AR7, the Government needs to:

01 **Speed up consenting to increase project pipeline.** The Government should not lose sight of the fact that consenting milestones in the CfD can present a significant barrier to otherwise viable bids. Planning reforms and resourcing potentially have a catalysing role, presenting an opportunity to increase the pipeline of projects and reduce the development time, thus lowering cost for project developers. In the context of AR7, it will ensure more projects are available to enter a potential 'Mega Auction', with the timing of any enlarged auction needing to consider the progress made on project consenting.

02 **Policy and regulatory measures to reduce headline CfD prices.** Without further cost reductions to technology or installation costs, the future offshore wind pipeline could be more expensive than previous projects due to deeper water depth, seabed leasing costs, and network charges. To ensure the costs of CfDs can be reduced, Government can make changes to the CfD regime, including extending the length of CfD contracts beyond the existing 15 years and/or reforming transmission network charges which currently disadvantage Scottish projects as they are further away from demand centres in the South. Similarly, addressing overhanging market uncertainties such as radical electricity market reforms or carbon pricing instability, will support lower CfD prices.

03 **Delivery flexibility to support supply chain.** While a large CfD round has the potential to create a "big bang" effect in the supply chain, with rigid delivery periods there is also a risk that the supply chain is stretched and projects end up inflating costs, or use of existing overseas supply chains to deliver the number of projects – the inverse of what the Government intends and a loss of the potential wider economic opportunities with the scale of the investment.

To help mitigate this, the Government could extend the delivery years for offshore wind projects within the CfD auction framework - moving from two to at least three years for AR7. This would spread out investment and ease supply chain constraints, supporting the potential triggering of domestic supply chain investment by enabling the stacking of contracted orders.

7. https://www.energy-uk.org.uk/wp-content/uploads/2024/03/Energy-UK-explains_How-much-renewable-energy-can-we-expect-from-Allocation-Round-6.pdfIn
8. Ibid

By implementing this set of measures for AR7, the Government can expand the pipeline, reduce the headline costs and capture the industrial benefits of a much bigger auction round. These interventions will also bring into sharp relief the opportunity in the medium term to bring together a compelling package for the UK supply chain for offshore wind.

An offshore wind industrial strategy ahead of AR8 should set out clearly the changes that the government has made to the CfD – both through the above measures and the introduction of the British Jobs Bonus and non-price factors (e.g. currently known as the Sustainable Industry Rewards [SIR] scheme) – and how they will support British industry and support the development of a floating offshore wind supply chain. This will signal to the supply chain in good time the opportunities of operating in the UK.

Actions

Take measures to reduce the headline costs of CfDs ahead of AR7, including introducing longer contracts, removing overhanging uncertainties and addressing TNUoS charges.

Extend delivery years for AR7 to manage supply chain capacity and help trigger accelerated domestic supply chain investment.

Publish an offshore wind industry strategy ahead of AR8 to set out how the government plans to capture the industrial benefits of the greater number of new projects coming online.

04

Securing dispatchable low-carbon power

Addressing the last emissions in the system

Alongside storage at a range of scales and demand-side flexibility, a decarbonised power system needs dispatchable low-carbon power to ensure security of supply. However, to date, progress has been slow on deploying the CCUS and hydrogen infrastructure needed for power CCS and hydrogen power generation to come forward. As a result, unabated gas will play a continuing role into the 2030s irrespective of how much renewable energy capacity is deployed.

To ensure the electricity system can be fully decarbonised as quickly as possible, there needs to be an expedited rollout of power CCS and hydrogen power generation, as well as clarity on the continuing, yet increasingly residual, role of unabated gas. A priority for the new Government must be to set out a roadmap for the buildup of low carbon thermal generation and a managed exit from the use of unabated gas.

Defining a pathway that sends the right investment signals

Timely signals that facilitate an orderly transition away from unabated gas are required to create a shift in momentum.

In practice, these signals look like:

- The Strategic Spatial Energy Plan (SSEP) and any 2030 infrastructure outlook designating when and where infrastructure will be deployed within at least four CCUS clusters to support the development of new low carbon thermal or decarbonisation-ready power stations, as well as clear end of life decisions for existing unabated gas power stations.

- The publication of deployment trajectories for future power CCS and hydrogen power generation, and full implementation of supportive policy and regulatory frameworks, with business models implemented across the respective value chains, regular allocation rounds for contracts aligned with the rollout of supporting infrastructure, and foresight of funding allocation.

- A strategy for ensuring security of supply during the transition, procuring low-carbon or decarbonisation-ready capacity through the Dispatchable Power Agreements (DPAs) or the Capacity Market rather than locking in high-carbon capacity which either cannot retrofit CCS or convert to hydrogen, or is costly to do so.

  As part of this strategy, policy clarity is required on the role of any remaining unabated gas on the system after 2030 to support a managed exit.

Delivery of low carbon thermal power stations will play an important role in underpinning the wider CCUS and hydrogen infrastructure needed for industrial and heavy transport decarbonisation in the UK industrial clusters. By progressively reducing our reliance on unabated gas in the electricity system it is possible to ensure system stability and support a just transition for the workforce at power station sites and the communities that host them.

Importantly, the deployment of hydrogen infrastructure and renewables deployment will help support a rollout of green hydrogen production through available renewable energy and low cost shared infrastructure. This will support potential export opportunities further down the line, in terms of the technology, the low carbon fuel and the industrial goods produced with competitive low carbon energy.

Deploying long term energy storage: Aldbrough Hydrogen Pathfinder

Hydrogen will be a key part of decarbonising the economy, and no more so than in the Humber, the UK's most carbon-intensive region. At Aldbrough on the coast of East Yorkshire, SSE is seeking to deliver Aldbrough Hydrogen Pathfinder, a project that could demonstrate the end-to-end hydrogen value chain—including production, storage and 100% hydrogen-fired power generation—from 2028.

This project would prove the whole value chain behind hydrogen-fired power generation, a key piece of the clean power puzzle. This means proving key technical components which can be rolled out for larger sites but also demonstrating the interactions across the future actors in the hydrogen economy.

The Pathfinder would be a strategic first step at Aldbrough towards building out large-scale salt cavern hydrogen storage to serve the Humber region. SSE are developing a large-scale new build hydrogen storage capacity in partnership with Equinor, which will be key to unlocking the full potential for flexible operation of large-scale hydrogen-fired power generation.

Actions

Use the SSEP and any 2030 infrastructure outlook to designate the power station sites where CCUS and hydrogen infrastructure will be deployed.

Implement the remaining business models for CCS and hydrogen aligning future funding allocations with the roll out of supporting infrastructure.

Commit to funding four CCS clusters by 2030 and progress Track-2 and Track-1 Expansion projects to FID by the end of 2025 to support delivery of the Clean Energy Mission and clean growth opportunities across the country.

Publish a wider strategy on ensuring security of supply during the transition to clean power, including on how power CCS and hydrogen power generation will be deployed, setting out the role of DPAs, and a clear articulation of the role of unabated gas.

05

A focused market reform programme

Taking a laser-like focus on delivery and consumer benefit by 2030

The electricity market will inevitably need to evolve as we transition to a system centred around renewable energy. We are already seeing unprecedented investment in new energy infrastructure and a fundamental shift to strategic coordination. The corresponding structure of the GB energy policy and regulatory framework will need to reflect this move to strategic coordination and support the investment required to deliver the capital-intensive energy transition needed in and beyond the next six years.

The Government's Review of Electricity Market Arrangements (REMA) programme[9] has proposed several potential policy options to help ensure the electricity market is fit for the future. Some of these serve to smooth the path to 2030, but others will involve more fundamental changes to the electricity market to address locational challenges.

The second REMA consultation in Spring 2024 removed some of the more radical reforms such as splitting the GB electricity market into hundreds or thousands of price nodes, but the proposal to split GB into regional price zones remained. The current REMA timeline does not expect to resolve this cornerstone issue until at least Summer 2025 – a full 3 years after it was first raised as an option.

Whilst there may be potential benefits to introducing locational pricing in the wholesale market, these must be weighed against the impact of the increased cost and risk such a change would have on upcoming investment – at this crucial point in the transition. An analysis for the Government suggested an increase to the cost of capital for upcoming investments in low carbon generation of just 0.3-0.9 percentage points would be sufficient to turn the purported benefits into a net cost[10] – and that is before considering the impact of any such transition period which, would take at least 5+ years before it could be implemented.

The continued focus on this more complex, radical reform option risks a missed opportunity and distracts from apportioning effort to more incremental reforms that can deliver real consumer value ahead of 2030. To deliver the Clean Energy Mission, Government needs to be laser-focused on the private capital it needs to crowd into the UK's low carbon infrastructure. It would therefore make sense for the Government to focus on incremental reforms to market arrangements that can support the move to a more strategic coordinated energy system and deliver consumer benefits from clean energy more quickly, and bring low-carbon capacity online faster, reinforcing many of the choices set out elsewhere in the paper.

9. The second consultation of this programme concluded on 7 May 2024.
10. https://assets.publishing.service.gov.uk/media/65e3a3dc3f69450263035fc3/9-system-benefits-from-efficient-locational-signals.pdf

This narrower programme for market reform – a Reformed National Market (RNM) programme – should focus on incremental reforms to market arrangements[11], such as:

- Improved system balancing, which the ESO have suggested there are at least £18bn of deliverable benefits from incremental measures by 2030[12].
- Reform Transmission Network Use of System ('TNUoS') charges, to support appropriate locational investment decisions for generation and flexible demand. This reflects that as infrastructure expands, costs under the current system are likely to become more volatile and punitive, especially for projects located in Scotland.
- Transitioning to a 'deemed CfD', decoupling support payments from output, and thus incentivising more efficient dispatch behaviour that reduces overall systems costs and removes risks for renewable developers.

Setting out a Reformed National Market programme at the Autumn Budget could be part of a package of measures to signal the UK's commitment to the Clean Energy Mission to global investors in the run up to the planned Global Investment Summit. This could include a commitment on CfD AR7, a signal of intent on linking the UK and EU Emission Trading Systems and a final investment decision on track-1 of CCUS amongst others.

Actions

Rule out zonal pricing in the near term so that uncertainty over its role does not cut across investment decisions required for 2030.

Set out a targeted market reform programme at the Autumn Budget to deliver consumer benefits ahead of 2030 including reform of TNUoS, improvements to system balancing and CfD reform.

11. Further information on what a RNM programme could contain, can be found in Regen's paper on Progressive Market Reforms - https://www.regen.co.uk/wp-content/uploads/2024-07-11-Progressive-Market-Reform-for-a-Clean-Power-System-v2-Regen.pdf
12. Balancing Costs: Annual Report and Future Projections | NGESO

Delivering on the plan: Recommendations

Delivering a decarbonised electricity system is a key milestone on the UK's route to net zero. Tackling the constraints on achieving this goal has been made harder by indecision on the UK's long term infrastructure needs. Business models have not been finalised, delays in planning have been baked in and the engagement with the supply chain has been fragmented. This cost taxpayers and consumers during the energy crisis in recent years, slowed emissions reductions and missed wider economic opportunities for UK plc.

The 2030 deadline is challenging, but the Mission-based approach is a welcome spur to action and an opportunity to now make progress at pace. This spur and challenge need to be matched by action relentlessly driven forward by the new Government, whilst being pragmatic when managing potential tradeoffs. Delivery on the mission critical areas will see far greater progress in the next five years than the previous fifteen and could secure significant energy, decarbonisation and industrial benefits for the UK.

The information below sets how the actions discussed in the paper can be implemented by the relevant stakeholders, highlighting the route to implementation to support 2030, and effective sequencing.

Putting in place a strategic delivery plan

01

ACTION

Develop a Clean Energy Mission Delivery Plan to provide a final steer on infrastructure required before 2030 and underpinning policy and regulation.

ROUTE TO IMPLEMENTATION

DESNZ SoS to publish a Delivery Plan covering how the GB energy policy and regulatory framework by mid-2025 to align with a 2030 infrastructure plan from the NESO to help ensure all delivery levers can support Mission delivery.

02

ACTION

Mandate and fund Local Area Energy Plans that feed into national strategic planning and provide a guide to grid connections and infrastructure co-location.

ROUTE TO IMPLEMENTATION

DESNZ and MHCLG to provide guidance and support to local authorities in GB, in line with approach already taken in Wales – this process should be supported by DNOs, NESO, Ofgem and as needed, the TSOs.

03

ACTION

Embed a mission-led approach into the regulatory framework for electricity distribution networks, fully utilising the Uncertainty Mechanisms RIIO-ED2, and enabling long term investment for local and regional grid capacity needs.

ROUTE TO IMPLEMENTATION

Ofgem to fully utilise the flexibility that is available in the RIIO-ED2 current price control through Uncertainty Mechanisms and evolve future frameworks to support strategic net zero investments.

Accelerated consenting and planning to remove delivery barriers ahead of 2030

01

ACTION

Provide guidance to PINS to limit what is required in pre application and restrict examination to those issues that are likely grounds for refusal.

ROUTE TO IMPLEMENTATION

MHCLG SoS to issue guidance to PINS, setting out:(1) how they should adjudicate on which issues are "grounds for a refusal"; and (2) their tools in relation to witness submission, barristers and cross-examination.

02

ACTION

Streamline site-by-site data requirements under HRA and EIAs and establish a Marine Recovery Fund to enable the delivery of strategic compensation with an approved list of measures that accelerates planning consents and delivers marine restoration.

ROUTE TO IMPLEMENTATION

DESNZ to work with SNCBs and developers to make accessible data from previous assessments and issue guidance on how this can be used to speed up future assessments.

DESNZ to use existing powers within the Energy Act to deliver and establish the Marine Recovery Fund and strategic compensation.

03

ACTION

Remove the automatic trigger for PLI in Scotland within UK legislation ensuring that Scottish Ministers can still decide to hold a PLI after considering objections but projects are not automatically blocked by a single objection.

ROUTE TO IMPLEMENTATION

DESNZ to use the Planning and Infrastructure Bill to amend the 1998 Electricity Act so that the decision on PLI sits with Scottish Ministers as proposed in the Winser Review.

04

ACTION

Increase resourcing for local planners across the UK noting the current lack of capacity and upcoming investment in low carbon infrastructure.

ROUTE TO IMPLEMENTATION

DfE to work with DESNZ regarding accredited courses offer as part of Technical Excellence College conversion.

In collaboration with the Devolved Administrations, HMT and MHCLG to consider how existing spend allocated to new planners could be used to better compete with private sector over remuneration incentives for existing planners.

Delivering the renewables capacity to meet 2030 targets and maximise domestic economic opportunities

01

ACTION

Take measures to reduce the headline costs of CfDs ahead of AR7, including introducing longer contracts, remove overhanging uncertainties and addressing TNUoS charges.

ROUTE TO IMPLEMENTATION

HMT and DESNZ to address overhanging uncertainties at the Autumn Budget.

DESNZ to consult on an extension to CfD contract length ahead of AR7 in 2025.

02

ACTION

Extend delivery years for AR7 to manage supply chain capacity and help trigger accelerated domestic supply chain investment.

ROUTE TO IMPLEMENTATION

DESNZ to consult on extended delivery years ahead of AR7 in 2025.

03

ACTION

Publish an offshore wind industry strategy ahead of AR8 to set out how the Government plans to capture the industrial benefits of the greater number of new projects coming online.

ROUTE TO IMPLEMENTATION

DESNZ to initiate the strategy development imminently in collaboration with industry to publish the strategy ahead of AR8.

A clear pathway to transition unabated gas power stations to CCS or hydrogen power within the UK's industrial heartlands

01

ACTION

Use the SSEP and any 2030 infrastructure outlook to designate the power station sites where and where CCUS and hydrogen infrastructure will be deployed.

ROUTE TO IMPLEMENTATION

DESNZ to work with NESO to ensure this happens as part of the publication of any new infrastructure outlook in view of 2030.

02

ACTION

Commit to funding four CCUS clusters by 2030 and progress Track-2 and Track-1 Expansion projects to FID by the end of 2025 to support delivery of the Clean Energy Mission, and clean growth opportunities across the country.

ROUTE TO IMPLEMENTATION

HMT to confirm progression of all CCUS clusters to the next stages at the Autumn Budget, - including FIDs on Track-1 and funding for Track-2 and Track-1 Expansion.

03

ACTION

Implement the remaining business models for CCS and hydrogen aligning future funding allocations with rollout supporting infrastructure.

ROUTE TO IMPLEMENTATION

DESNZ to progress and finalise business model design for hydrogen storage, transport, and power generation, and to set clear timelines for allocation rounds for business model contracts aligned to the availability of infrastructure.

04

ACTION

Publish a wider strategy on ensuring security of supply during the transition to clean power, including on how power CCS and hydrogen power generation will be deployed setting out the role of DPAs, and a clear articulation of the role for unabated gas.

ROUTE TO IMPLEMENTATION

DESNZ to initiate development imminently in collaboration with industry to publish a strategy setting out clear staged milestones for deployment of low carbon thermal stations, with the role and requirements for any new unabated gas specifically defined.

A focused market reform programme that ensures laser-like focus on consumer value ahead of 2030 and delivery of the Clean Energy Mission

01

ACTION

Rule out zonal pricing in the near term so that uncertainty over its role does not cut across investment decisions required for 2030.

ROUTE TO IMPLEMENTATION

HMT and DESNZ to use Autumn Budget or to make a statement on clean energy investment by ruling out zonal pricing.

02

ACTION

Set out a targeted market reform programme to deliver consumer benefits ahead of 2030 including reform of TNUoS, improvements to system balancing and CfD reform.

ROUTE TO IMPLEMENTATION

DESNZ to announce that it is proceeding with targeted market reform programme of incremental reforms following a decision on zonal pricing.

Glossary

AR - Auction round

ASTI - Accelerated Strategic Transmission Investment

CCS - Carbon capture and storage

CfD - Contracts for Difference

DESNZ - Department for Energy Security and Net Zero

DNO - Distribution Network Operator

DPA - Dispatchable Power Agreements

FES - Future energy scenarios

FID - Final Investment Decision

HRA - Habitats Regulations Assessment

EIA - Environmental Impact Assessment

PLI - Public Local Inquiry

LAEP - Local Area Energy Plan

MHCLG - Ministry of Housing, Communities and Local Government

NESO - National Energy System Operator

NSIPs – Nationally Significant Infrastructure Projects

OTNR - Offshore Transmission Network Review

PINS - The Planning Inspectorate

REMA - Review of electricity market arrangements

RESPs - Regional Energy System Planners

RIIO-ED2 – Electricity distribution price control 2023-2028

RNM - Reformed National Market

SIR - Sustainable Industry Rewards

SNCBs - Statutory Nature Conservation Bodies

SoS - Secretary of State

SSEP - Strategic Spatial Energy Plan

tCSNPs - Transitional Centralised Strategic Network Plans

TNUoS - Transmission Network Use of System

TOs - Electricity Transmission Owners

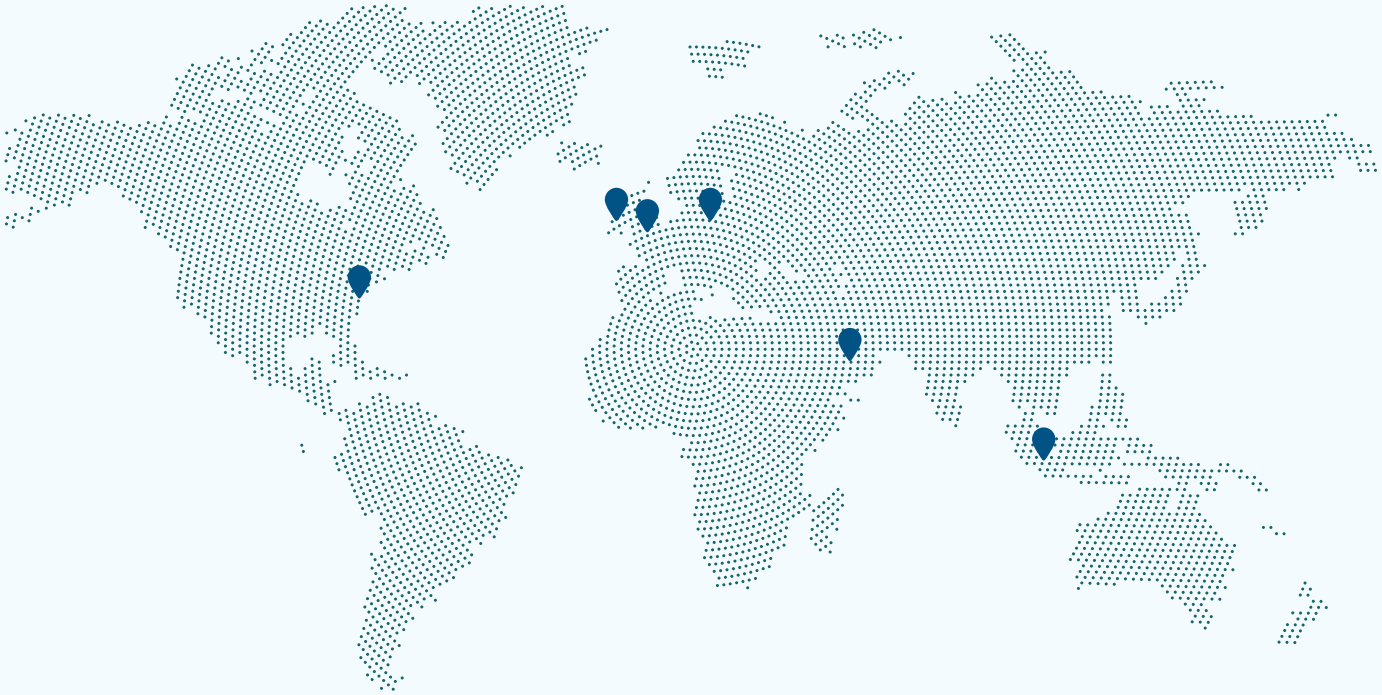
UM - Uncertainty Mechanisms

About Global Counsel

Global Counsel is a strategic advisory business.

We help companies and investors across a wide range of sectors anticipate the ways in which politics, regulation and public policymaking create both risk and opportunity — and to develop and implement strategies to meet these challenges. Our team has experience in politics and policymaking in national governments and international institutions backed with deep regional and local knowledge.

Our offices in Berlin, Brussels, London, Singapore, Washington DC and Doha are supported by a global network of policymakers, businesses and analysts.



About SSE

SSE is a UK-listed low carbon infrastructure company headquartered in Scotland, with interests in renewable energy, electricity networks and low carbon flexibility. SSE has one of the largest capital investment programmes across the economy, investing over £20bn across the five years to 2027 in clean energy infrastructure to deliver a decarbonised electricity system, creating tens of thousands of new jobs, from Shetland to the Isle of Wight.

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