

# A GREENPRINT FOR **BUILDING A CLEANER MORE RESILIENT ECONOMY**

Policy action today for a better  
world of energy tomorrow



For a better  
world of energy

Foreword by Alistair Phillips-Davies:

## BUILDING A CLEANER, MORE RESILIENT ECONOMY THROUGH A GREEN RECOVERY

While it is still too early to predict with confidence the full impact of the coronavirus tragedy, we can say with certainty that significant investment will be needed to rebuild the UK economy in its wake.

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We also know that – while tackling coronavirus continues to be our national priority – the climate emergency has not gone away. That's why delivering on the UK's net zero emissions target by 2050, and 2045 in Scotland, is as important as ever.

At a national level, in the wake of coronavirus – and as we look ahead to a post-Brexit world – there is also a growing imperative to build a

UK economy that is not just cleaner but more resilient, too.

*Ultimately, to do that we need to do three things: unlock investment in low-carbon infrastructure, create jobs and build supply chains.*

Low-carbon investment is a win-win: providing a vital economic boost, creating skilled, sustainable jobs in all UK regions to support a just transition, improving air quality and building our resilience while also driving progress towards our climate change targets.

Our 'greenprint' is simple conceptually. It starts by creating a net zero power

system by 2040. At the same time, electrification is rolled out across the economy, accelerating investment in networks and driving decarbonisation of transport, heat and industry – while working to unlock the benefits of hydrogen. In doing so, we can kickstart a green recovery.

With public finances stretched, attracting private sector investment and channelling it into the right areas will be vital. The right policy interventions can go a long way and we want to work with government towards achieving that.

SSE is a UK-listed company with a proud history of developing innovative, low-carbon infrastructure. We stand ready

to invest billions in the coming years and want to play a key role in the UK's recovery. We are unashamedly biased in promoting practical, deliverable solutions that could help unlock this investment from ourselves and others.

In this document, we set out a number of steps policymakers could now take to do just that and drive a green recovery from coronavirus that leaves as its legacy a cleaner, more resilient UK economy. Over the coming months, we look forward to working with all stakeholders to build on these proposals.



**Alistair Phillips-Davies**  
Chief Executive





# GREEN RECOVERY POLICY PROPOSALS

## Five priority areas for the UK to focus on

Building a cleaner, more resilient economy and driving progress to net zero.

### NET ZERO POWER SYSTEM BY 2040

- **GREEN FISCAL RULE**  
Commit to a net zero power sector by 2040, based on a robust carbon price trajectory that drives negative emissions
- **OFFSHORE WIND REVOLUTION**  
Deliver 40GW offshore wind by 2030 and target at least 75GW by 2050
- **BUILDING ON MARKET SUCCESSES**  
Build on the success of Contracts for Difference (CfDs) to attract more low-cost investment in new and repowered renewables, life extensions and storage

### STRATEGIC INVESTMENT IN NETWORKS

- **GREEN-LIGHT SHOVEL-READY TRANSMISSION INVESTMENTS**  
Ofgem to finalise T2 price controls to enable the net zero transition
- **ENABLE ELECTRIFICATION LOCALLY**  
Deploy Local Area Energy Plans to deliver cost-effective and integrated local energy systems, enabling strategic early investments to support rollout of electric vehicles, heat networks and local renewables
- **OPTIMISE CONNECTIONS**  
Ensure that Britain's interface with Europe is optimised to support the green recovery

### CLEAN INDUSTRIAL REVOLUTION

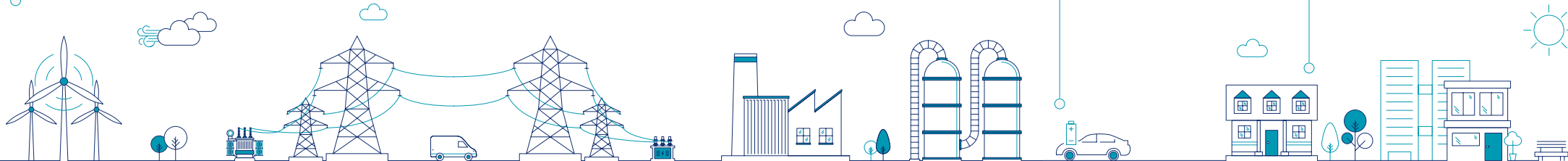
- **FLEXIBLE LOW-CARBON POWER GENERATION**  
Attract investment in CCS and hydrogen to provide firm, flexible low-carbon power generation by the mid-2020s
- **CCS AND HYDROGEN CLUSTERS**  
Deploy CCS and hydrogen infrastructure in at least five clusters by 2030
- **LOW-CARBON AND HOMEGROWN SUPPLY CHAINS**  
Incentivise UK supply chains through low-carbon content

### LEADING THE CHARGE ON EVS

- **TURBO-CHARGED INFRASTRUCTURE**  
Deploy the most extensive and efficient EV charging infrastructure in the world by 2025
- **ACCELERATE EVs**  
Accelerate decarbonisation of transport and increase EV takeup by ending sale of petrol and diesel cars and vans by 2030
- **CLEAN CORPORATE FLEETS**  
Work towards full decarbonisation of corporate fleets by 2030

### GREEN BUILDINGS FOR GREEN JOBS

- **HOME IMPROVEMENT STIMULUS**  
Create sustainable, skilled jobs by bringing forward funding commitments in 'no regrets' options such as heat networks and signalling the end of gas boilers
- **LOW-CARBON HEAT INCENTIVES**  
Interest-free home renovation loans for consumers and SMEs, combined with incentives and regulation
- **HEAT DECARBONISATION PATHWAY**  
Deploy full decarbonisation trials at scale



# A NET ZERO POWER SYSTEM BY 2040

## The challenge

Major progress has been made in decarbonising the power sector to date, with emissions falling from 173mtCO<sub>2</sub>e in 2008 to 65mtCO<sub>2</sub>e in 2018 – a staggering 62%<sup>1</sup>. The cost of doing so has also fallen radically, with offshore wind less than half the cost it was a decade ago. Onshore and offshore wind are now the lowest-cost forms of generation in UK conditions.

However, to put zero-carbon electricity at the centre of the net zero energy system the UK will potentially need to more than double the amount of low-carbon electricity on the system, complementing existing low-carbon energy. It will also will need flexible sources of generation and storage for times of low renewable output.



<sup>1</sup> BEIS (2020) – [2018 UK greenhouse gas emission: final figures](#). Provisional figure for UK power stations in 2019 was 57mtCO<sub>2</sub>e, a further 13% decrease on 2018.

# A NET ZERO POWER SYSTEM BY 2040

## Steps to build a cleaner more resilient economy through a green recovery

The starting point for a net zero economy in 2050 (and 2045 in Scotland), has to be a net zero electricity system by 2040. In turn, the electricity system is key to decarbonising other sectors (transport, heat and industry) and may need to double in size by 2050 to meet net zero. A new target for decarbonising the power sector by 2040 – and potentially even sooner in Scotland – can be the cornerstone of the green recovery and, ultimately, net zero.

### 1. GREEN FISCAL RULE

Commit to a net zero power sector by 2040, based on a robust carbon price trajectory that drives negative emissions by 2040

To transition from an average carbon intensity of electricity of 200g/kWh today to 50g/kWh in 2030 and on to net zero, a robust carbon price is critical. The carbon price has been central to driving the emissions reductions seen to date and even as coal generation closes in the UK, carbon pricing will continue to be required to provide a long-term clean electricity investment signal, to incentivise the move to low-carbon gases in power generation, and to ensure the lowest-carbon plants always run first.

#### THE PROPOSAL

Whether via the EU ETS, carbon price support or other mechanisms, a green recovery Budget should be built on a new green fiscal rule: a firm commitment to a net zero power sector by 2040, underpinned by a robust carbon price trajectory for the electricity system, rising to a level to drive negative emissions by 2040 (c£125/tonne, real 2020).



## A net zero power system by 2040

### 2. OFFSHORE WIND REVOLUTION

Deliver 40GW offshore wind by 2030 and target at least 75GW by 2050

Having reduced more than other technologies on cost, the case for renewable sources of electricity generation to be at the centre of a green recovery as an affordable road to net zero is compelling. And with the significant wind resources around its coast, the UK has an opportunity to exploit its comparative international advantage by prioritising offshore wind.

#### THE PROPOSAL

The UK Government's existing commitment to reaching 40GW of offshore wind by 2030 is a clear medium-term commitment, which requires a large number of barriers to be addressed as outlined in SSE Renewables' [recent report](#). In addition to tackling these barriers, government should set a deliverable longer-term target of at least 75GW of offshore wind by 2050. This would provide significant confidence to underpin investment in development of a thriving national supply chain, supporting industrial development, manufacturing jobs and economic growth. Barriers to renewable deployment such as the approach to charging for transmission investment and operational costs, and radar issues, should be addressed.





## A net zero power system by 2040

### 3. BUILDING ON MARKET SUCCESSIONS:

Build on the success of Contracts for Difference (CfDs) to attract more low-cost investment in new and repowered renewables, life extensions and storage

The UK has significantly increased its renewables capacity in recent years with renewables meeting more than 40% of electricity demand in the first three months of 2020. This has been built on the success of mechanisms like the Renewables Obligation (RO) and Contracts for Difference (CfDs) in providing an investable framework that has helped to drive down technology costs and make the UK a world leader in low-carbon generation.

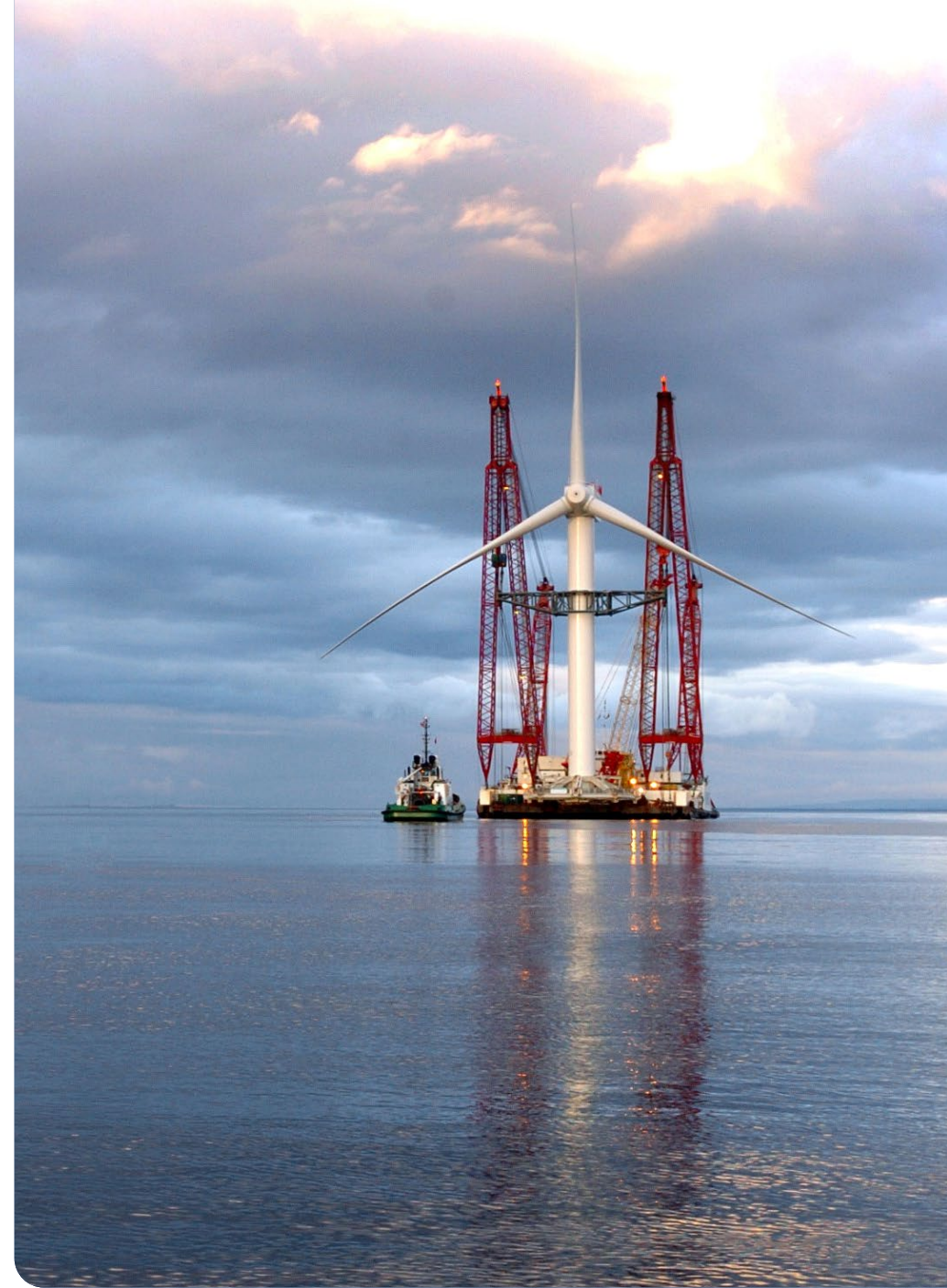
However, with renewables having very low short run marginal costs, as their volumes increase this is likely to lead to more periods of very low or negative pricing and an effective growing cannibalisation by renewables of the revenue they receive. The increased quantity of renewable energy output, combined with this effect, would also impact on the prices received by flexible and balancing plants too.

Over time, calculating returns after the CfD contract ends could become increasingly challenging – potentially stymying investment and/or increasing costs for consumers in the long term. If left unchecked, it is possible that this could also lead to older renewable plants retiring before the end of their natural life and a resultant loss in output. Furthermore, the lower returns would work against technologies providing flexibility.

There is therefore an opportunity to build on the current market design to ensure that the UK's framework continues to attract vital low-cost investment in new and repowered renewables on an enduring basis, ensuring that life extensions, as well as long-durational storage and firm, flexible low-carbon thermal generation, support delivery of net zero at lowest cost.

#### THE PROPOSAL

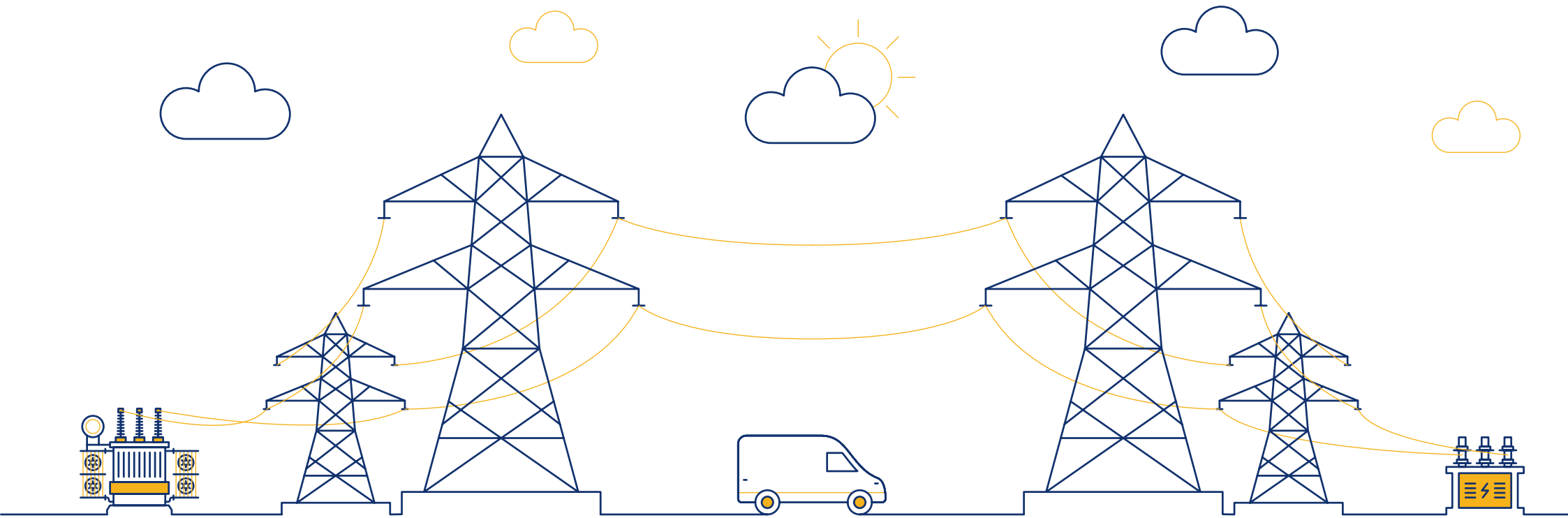
Opportunities to evolve electricity market design should be considered as part of the ongoing Energy White Paper discussions, to ensure it continues to underpin investment in the most cost-effective mix of new, repowered and existing low-carbon generation, as well as storage, over the long term by giving greater confidence to investors. Options for consideration alongside the robust carbon price include price floors or long-term energy contracting to give confidence over required revenue to underpin investment and long-term planning.



# STRATEGIC INVESTMENT IN NETWORKS

## The challenge

The electricity transmission and distribution networks are fundamental to a cleaner, more resilient economy and with the right policies and regulation can be the backbone of the green recovery. The GB electricity network is going through the greatest structural change since the origins of the National Grid, as it seeks to accommodate a five-fold increase in offshore wind and ultimately the electrification of heat and transport. With low-carbon technologies such as renewables, electric vehicles (EVs), batteries and heat pumps all presenting significant new patterns of supply and demand, the challenges for this part of the energy system are perhaps the biggest of all.





# STRATEGIC INVESTMENT IN NETWORKS

## Steps to build a cleaner more resilient economy through a green recovery

Networks companies, including SSEN, have made significant inroads already in enabling the net zero transition, delivering upgrades to network infrastructure, facilitating the connection of low-carbon technologies and renewable generation, and taking the first steps to implement innovative and flexible approaches to investment and network connections.

However, more needs to be done. With price controls for transmission being agreed over the course of this year and the business plans for electricity distribution currently being developed, there are huge opportunities to drive forward the green recovery. Pressing on with these business plans can unlock significant new, near-term investment in regional, near shovel-ready projects – with no government funding required and costs spread over years. At a distribution level, there is an opportunity for greater coordination to understand local and regional needs and ensure efficient network investment happens at scale and at pace to meet those needs.

### 4. GREEN-LIGHT SHOVEL-READY TRANSMISSION INVESTMENTS

Ofgem to finalise T2 price controls to enable the net zero transition

As part of RIIO-T2, which sets out the price control for electricity transmission networks from April 2021, the three electricity transmission owners have each set out detailed business plans. SSE's Transmission business has co-created with stakeholders an ambitious business plan: A Network for Net Zero with a minimum £2.4 billion programme of fully costed and evidenced investments. It would deliver an electricity network with the capacity and flexibility to accommodate at least 10 GW renewable generation in the north of Scotland by 2026, aiming for 100% network reliability, and already includes £100 million in efficiency savings from innovation – at a cost to customers of £7 a year.

These investment plans are near shovel-ready, subject to regulatory determination, and putting these business plans into action will enable large capital investments to kickstart employment opportunities in the green recovery.

#### THE PROPOSAL

Ofgem should approve the transmission business plans and ensure that they are fully financeable at fair returns for investors and customers. There are also options to go further to accelerate the net zero transition, for example SSEN has well-developed proposals for a further £1.3 billion investment to connect Scottish islands and unlock hundreds of MWs of new renewable generation.



## Strategic investment in networks

### 5. ENABLE ELECTRIFICATION LOCALLY

Deploy Local Area Energy Plans (LAEPs) to deliver cost-effective and integrated local energy systems, enabling strategic early investments to support rollout of EVs, heat networks and local renewables

As supported by recent comments by [The Committee on Climate Change \(CCC\)](#), the next price controls for the distribution companies should enable early, strategic investments in strengthening the energy networks in anticipation of new demand. This will provide an economic stimulus today that ensures infrastructure is ready to enable net zero, paid for over the lifetime of the asset, and does not require government funding.

To ensure this strategic investment represents value for money for network customers and recognises local needs, it requires robust and data-driven evidence. This 'bottom-up' approach to local network development can be achieved by putting in place Local Area Energy Plans (LAEPs). These plans are being codeveloped by network companies and local bodies with input from key stakeholders, including transport groups, consumer bodies and network users to collect data and evidence of need. This process can help build a locally driven and endorsed energy plan that reflects local needs and informs the efficient and long-term development of the distribution system. It is also aligned with the principles outlined in the draft Environment Bill.

With the right regulatory and policy framework, this rigorous process will ensure that local ambition to decarbonise is matched by robust analysis and strategic action. LAEPs can help accelerate heat and transport decarbonisation through embedding heat zoning, EV charging infrastructure plans and local renewables within them, increasing efficiencies through a coordinated approach. Without strategic investment and local coordination, network companies may ultimately struggle to keep pace with increasing electrification, resulting in an infrastructure gap and increased costs for consumers.

#### THE PROPOSAL

Ofgem and BEIS should work with network companies and other key stakeholders to provide clear policy direction and timely and appropriate funding for strategic network investment, ensuring the upcoming RII0-ED2 price control fully recognises local plans and regional variations in need, scale and pace of change. There are also likely to be resourcing and capability issues within local bodies to progress LAEPs and local government funding models should be reviewed appropriately.





## Strategic investment in networks

### 6. OPTIMISE CONNECTIONS

Ensure Britain's energy interface with Europe is optimised to support the green recovery

While Britain will no longer be part of the European Union, it will need to ensure that its energy interfaces are optimised. Interactions with the European markets, particularly across the Irish Sea, must be efficient and seamless.

Robust and linked carbon pricing, appropriate interconnection and efficient coordination on offshore wind in the North Seas are all important areas that need to be optimised to support the UK's ability to deliver the green recovery.

Ofgem is currently examining how to optimise offshore wind connections and this process needs to consider how to balance the value that Transmission Operators can clearly bring to coordination with the need to maintain momentum on current and future offshore wind investments.

Interconnection has an important role to play too, but it must not be at the expense of the green economic recovery at home. Interconnectors have had a very favourable regulatory regime and there is not a level playing field between them and other generation; there also remains a lack of certainty over whether they will deliver power when the country really needs it.

#### THE PROPOSAL

As Britain adapts to its new place in the world, its interfaces with Europe need to be consistent with a green economic recovery for the UK. The interplay of carbon, interconnection and offshore grids needs to be thought through holistically and to work in favour of existing and future UK investments, whilst ensuring the efficient flow of power to and from Europe.





# A CLEAN INDUSTRIAL REVOLUTION

## The challenge

Heavy industry represented 21% of UK greenhouse gas emissions (104mtCO<sub>2</sub>e) in 2018, despite incremental reductions since 1990. To achieve net zero while retaining a thriving manufacturing economy, a step change is required to switch to electricity, low-carbon fuels and/or to capture and store emissions.

More broadly, in taking forward any of the steps proposed in this document, to build a more resilient economy it is important that we maximise the benefits to the UK supply chain as a whole, striking the right balance between the need to focus investment on low-carbon content and our local supply chain, and to keep costs down by leveraging lower-cost international providers.



# A CLEAN INDUSTRIAL REVOLUTION

## Steps to build a cleaner more resilient economy through a green recovery

Networks companies, including SSEN, have made significant inroads already in enabling the net zero transition, delivering upgrades to network infrastructure, facilitating the connection of low-carbon technologies and renewable generation, and taking the first steps to implement innovative and flexible approaches to investment and network connections.

However, more needs to be done. With price controls for transmission being agreed over the course of this year and the business plans for electricity distribution currently being developed, there are huge opportunities to drive forward the green recovery. Pressing on with these business plans can unlock significant new, near-term investment in regional, near shovel-ready projects – with no government funding required and costs spread over years. At a distribution level, there is an opportunity for greater coordination to understand local and regional needs and ensure efficient network investment happens at scale and at pace to meet those needs.

### 7. FLEXIBLE LOW-CARBON POWER GENERATION

Attract investment in CCS and hydrogen to provide firm, flexible low-carbon power generation by the mid-2020s

New high-efficiency gas-fired power stations can provide immediate benefits by incrementally reducing emissions through displacing older, less efficient stations; but, although many net zero scenarios feature some unabated gas capacity on the system in 2050 as backup capacity to meet the extreme peaks in demands, the focus must be on a making sure any new gas power station built today has a clear low-carbon pathway.

Both gas-fired power generation with carbon capture and storage (CCS) and hydrogen power generation have roles to play in meeting net zero cost-effectively while providing firm, flexible capacity – and need to be deployed at scale internationally.

#### THE PROPOSAL

The UK should develop world-leading commercial scale projects for both gas-fired generation with CCS and hydrogen power generation by the mid-2020s.





## A clean industrial revolution

### 8. CCS AND HYDROGEN CLUSTERS

Deploy CCS and hydrogen infrastructure in at least five clusters by 2030

Electrification alone will not be enough for all industry and for industrial players to reduce their emissions. Some will need to switch to an alternative low-carbon fuel or feedstock, such as hydrogen, or they need access to a CCS network to transport and store captured emissions – and CCS will be needed to support cost-effective hydrogen production.

Clustering this CCS infrastructure makes sense to reduce the costs of deployment and pool use of CCS infrastructure or low-carbon hydrogen. The UK's approach to industrial clusters is world-leading and with the right support each of the UK's industrial hubs will have access to this necessary infrastructure for low-carbon opportunities. The £800m funding commitment to develop CCS at at least two sites by 2030 is a welcome and important step, but decarbonisation of all industrial clusters will be needed and this will require increased ambition.

#### THE PROPOSAL

Low-carbon thermal power stations should be used to catalyse investment in shared decarbonisation infrastructure for industrial clusters, underpinned by new support mechanisms and robust carbon pricing to reduce the need for HMT funding. Low-carbon thermal is ready to go earlier than industry and would provide a regular stream of CO<sub>2</sub>, either from combustion or from hydrogen production. This supply will provide confidence for investment in CO<sub>2</sub> transport and storage infrastructure and low-carbon hydrogen production facilities, and enable other industries to plug in at a later point.





### 9. LOW-CARBON AND HOMEGROWN SUPPLY CHAINS

Incentivise UK supply chains through low-carbon content

UK energy policy has, in recent years, been built around competitive auctions that, by definition, prioritise low prices above all else. While this has been enormously effective in driving down price, there is a legitimate concern that insufficient supply chain opportunities have been exploited from within the UK. While SSE has led the industry by supporting local low-carbon supply chains, this cannot be done in isolation and there remain parts of the supply chain that cannot yet deliver competitively.

Current policy mechanisms focus only on the price of electricity generated – and do not explicitly support the social and economic benefits that arise from a vibrant and extensive UK-based supply chain. The development of the industry in the early 2020's should therefore be based on more sophisticated public policy tools to support both low prices and the growth of an indigenous renewable energy supply chain.

The UK can rapidly improve its supply chain capability and competitiveness if the right strategic investment and support is made by government, particularly into key enabling infrastructure, such as ports and manufacturing facilities. This, along with the development of low-carbon clusters, will ensure the UK can maximise global supply of next generation foundations and turbines; as well as the most efficient HVDC transmission technology.

#### THE PROPOSAL

Government should explore ways to channel strategic investment into key enabling infrastructure needed to unlock local supply chain opportunities, and explore incentives (eg tax breaks) to bolster manufacturing capability. A dedicated task force should be set up to oversee action in this area. At the same time, Ofgem and BEIS should work with industry to begin to develop carbon footprint methodologies to better understand where supply chain carbon content can be reduced. Ultimately this would enable them to create a level playing field by prescribing specific requirements on what levels of low-carbon content are needed before a price control or auction. As a UK-listed company, we would support this approach, but it needs to be mandated or there will be competitive disadvantage to the companies seeking to procure locally – and ultimately this will work against broader efforts to build a cleaner, more resilient economy.



# LEADING THE CHARGE ON ELECTRIC VEHICLES

## The challenge

Surface transport represents 23% of UK greenhouse gas emissions (115mtCO<sub>2</sub>e in 2018) and is now the UK's largest source of carbon emissions. For the main source of transport emissions – small road vehicles – we have a ready-made solution in the form of electric vehicles (EVs). However, developing an extensive charging network is a classic 'chicken and egg' dilemma: without the necessary charging infrastructure, EV demand will be constrained; and without sufficient EV demand, extensive charging infrastructure will be uneconomic. At the same time, alternative options will be needed for heavier road transport and other forms of transport where electrification may not be suitable due to weight.





# LEADING THE CHARGE ON ELECTRIC VEHICLES

## Steps to build a cleaner more resilient economy through a green recovery

Transport is the sector most readily able to accelerate its decarbonisation, leverage the decarbonisation of power and replicate its success. It also brings other benefits for car drivers because EVs are lower maintenance, have lower running costs and, in time, can reduce costs further with Vehicle-to-Grid (V2G) opportunities. Importantly, for the communities in which we live and work, a switch to EVs will improve air quality, reduce engine noise and provide flexibility to the electricity system which can help integrate more renewable energy and maintain system stability. It will also create skilled, sustainable jobs and boost UK manufacturing.

### 10. TURBO-CHARGED INFRASTRUCTURE

Deploy the most extensive and efficient EV charging infrastructure in the world by 2025

A significant barrier to EV uptake is range anxiety and lack of comfort that drivers will have access to EV charging infrastructure<sup>2</sup>. To make the upfront financial commitment to shift to an EV, car drivers need confidence that they will have adequate charging facilities at home, in transit and at their destination, and at appropriate speeds. We cannot make the same mistakes that were made with rural broadband and must provide equitable access to EV charging infrastructure for all, ensuring communities are not left behind.

#### THE PROPOSAL

The UK should seek to deploy the most extensive and efficient charging network in the world by 2025, with local bodies empowered to tender for charge point assets. Further work will be required to determine the optimal funding model, but deploying this infrastructure early would not only unlock EV demand but provide a wealth of green jobs across the UK and can be delivered both at speed and at scale.





## Leading the charge on electric vehicles

### 11. ACCELERATE EVs

Accelerate decarbonisation of transport and increase EV take-up by ending the sale of petrol and diesel cars and vans by 2030

Even with the most extensive EV charging infrastructure in the world and with auto manufacturers scaling up EV production globally, there will also be a need to stimulate consumer demand – there is a role for incentives but bolder regulation will also be needed. The existing 2035 target is helpful, but there is scope to accelerate this transition by signalling greater ambition.

#### THE PROPOSAL

The UK should accelerate decarbonisation of transport by ending the sales of petrol and diesel cars and vans by the earlier date of 2030 and supporting efforts to bring this forward further if possible.



## Leading the charge on electric vehicles

### 12. CLEAN CORPORATE FLEETS

Work towards full decarbonisation of corporate fleets by 2030

While a headline target on new sales of cars and vans is central to decarbonising transport, there is a clear need to accelerate decarbonisation in other forms of transport. There is an opportunity for companies to show leadership here, with significant moves already being undertaken by companies to reduce their own emissions through initiatives like [the EV100](#).

#### THE PROPOSAL

To complement the headline target on cars and vans, the UK should target the full decarbonisation of taxis by 2030, and buses and rail by 2035, as well as working with businesses to support the full decarbonisation of corporate fleets by 2030.



# GREEN BUILDINGS FOR GREEN JOBS

## The challenge

Heat in our buildings represents 18% of UK greenhouse gas emissions (88mtCO<sub>2</sub>e in 2018) and is one of the most challenging sectors to decarbonise. Firstly, with around 85% of our domestic heating in the UK coming from gas boilers<sup>3</sup>, shifting to low-carbon alternatives will require costly and intrusive changes in people's homes. Secondly, with such an ageing building stock, domestic and non-domestic retrofits are needed which are inherently challenging, disruptive and costly. All of this means that it is vital to engage consumers and business alike and it will not be cheap nor simple.





# GREEN BUILDINGS FOR GREEN JOBS

## Steps to build a cleaner more resilient economy through a green recovery

The right route to take here is not yet obvious and decarbonising heat is likely to come later than other areas addressed in this document. However, we need to get moving and the proposals set out here represent early ideas about ways in which this unique challenge can be tackled in the short to medium term.

First off, the UK Government's Heat and Buildings Roadmap due after the summer should set a pathway for the UK to take over the coming decade, to enable the complete decarbonisation of heat by 2050. We don't yet have all the answers, but we do know that electrification of heat has a key role to play, complemented by hydrogen within industrial clusters and heat networks in densely populated areas and where there is available waste heat. We also know there needs to be an urgent focus on improving the energy efficiency of the UK's building stock, which can help reduce energy bills and create green jobs with strong economic multiplier effects within local communities.

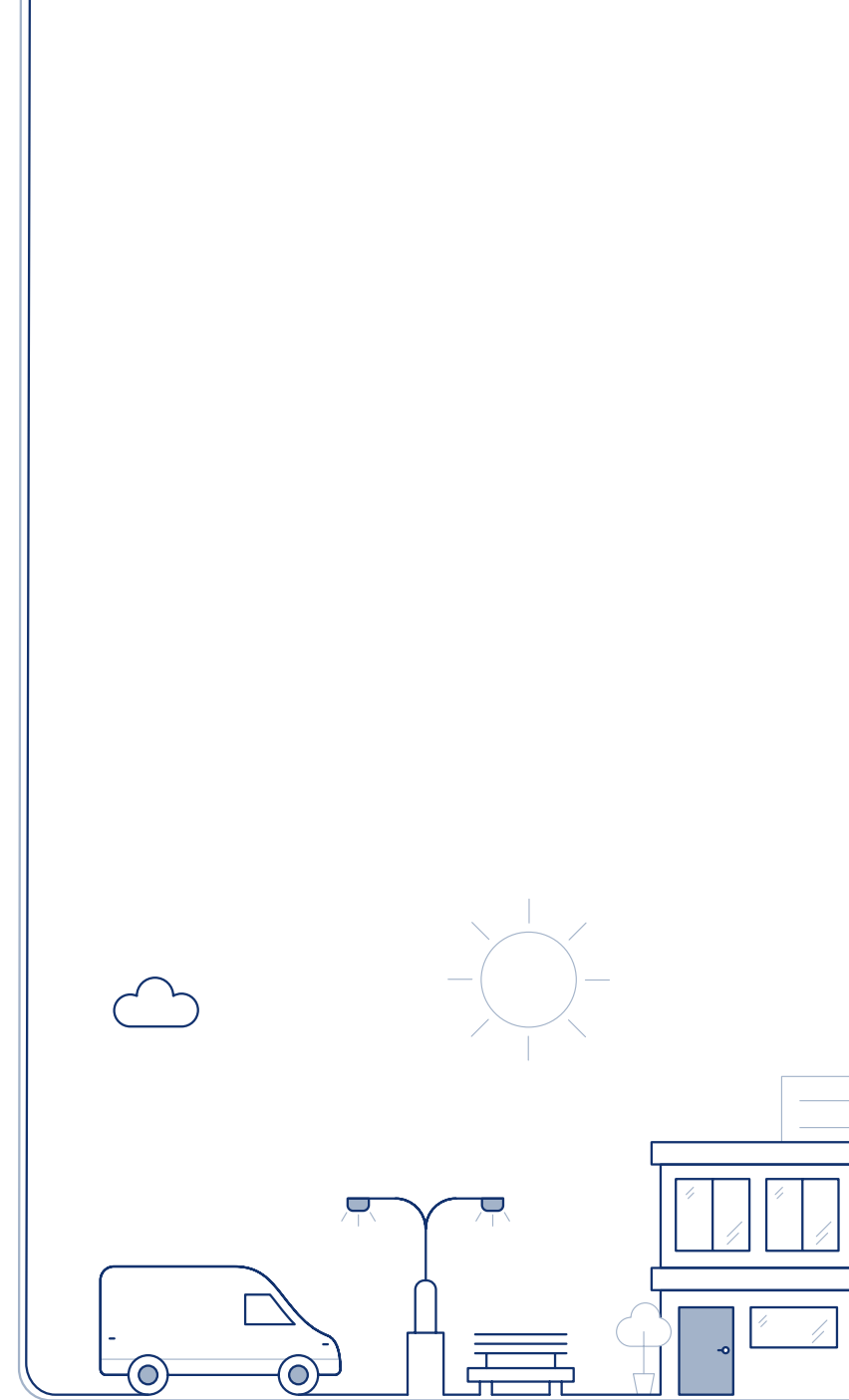
### 13. HOME IMPROVEMENT STIMULUS

Create sustainable, skilled jobs by bringing forward funding commitments in 'no regrets' options such as heat networks and signalling the end of gas boilers

The long-term decarbonisation of the UK's buildings' heat demand will take time, with a need to deploy trials at scale, develop supply chains and signal to consumers that change is coming. However, there are 'no regrets' options that can and should be progressed now, where possible in line with prevailing guidance on social distancing. Investments in energy efficiency, off-gas grid properties and heat networks will all be required in any scenario, and action must be taken early. This early action will support the creation of sustainable, skilled jobs in all regions of the UK, supporting a just transition. Alongside electrification, progress is being made on understanding the potential for hydrogen as part of the low-carbon heating mix.

#### THE PROPOSAL

As an economic stimulus to boost SMEs across the country, the UK should look to frontload the funding it has committed into these areas, through the £9.2bn of energy efficiency improvement funding for homes, schools and hospitals committed in the Government's manifesto, the £270m Green Heat Network Fund and Clean Heat Grants. To focus these early efforts, the UK should consider confirming an end date for new gas boiler installations on existing properties and a phase out of all oil heating by 2030. This will require further progress on both electrification of heat and hydrogen.



### 14. LOW-CARBON HEAT INCENTIVES:

Interest-free home renovation loans for consumers and SMEs, combined with incentives and regulatory drivers to encourage uptake

To ensure that UK funding for low-carbon heat can stretch to as many low-carbon heat installations as possible, private investment needs to be channelled into low-carbon improvements to homes and businesses in a way that targets property owners at a point that works for them. One of the most cost-effective interventions government could make in this area is provision of low-cost financing for the 'able to pay', while continuing to provide additional support for vulnerable customers through industry schemes.

#### THE PROPOSAL

To deploy low-carbon heat at scale and get the most value from taxpayer funding for clean heat, there should be a move from a system of grants to provision of 'interest free' loans for home and business owners making their properties 'net zero ready', with further support available to those less able to pay. To encourage take-up, finance support should also be coupled with other incentives such as council tax or stamp duty reforms and regulatory measures to drive demand. Where efficient to do so, connections to heat networks should be encouraged.





### 15. HEAT DECARBONISATION PATHWAY

Deploy full decarbonisation trials at scale

While near-term actions will be important in driving demand and creating jobs, a long-term pathway is also needed. Within the Government's upcoming Heat and Buildings Roadmap, steps will be required to ensure that supply chains can develop; that the appropriate skills training is in place; that the public is better informed and engaged on the steps ahead; and that deployment can happen at scale through undertaking of real-world trials.

#### THE PROPOSAL

Government should include heat zoning within LAEPs; develop a low-carbon heat sector deal; and undertake full decarbonisation trials in at least three net zero towns by 2030. Measures could include targeted gas network conversions to hydrogen within an industrial cluster, deployment of integrated multi-vector smart energy systems, low-carbon city-wide district heating and public EV charging infrastructure deployment amongst others.



These proposals are intended to help inform policymaking as we seek to drive a green economic recovery. We want to work with government and other stakeholders to deliver on that objective and welcome comments.

**To discuss these ideas further, please get in touch with us on:**

Email: [media@sse.com](mailto:media@sse.com)

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