Greg Clark
Secretary of State, BEIS
1 Victoria Street
SW1E 5ND

22 May 2019

Dear Greg,

# Standing ready to deliver Net Zero

I wanted to write to you following the release of the Climate Change Committee's report, 'Net Zero – The UK's contribution to stopping global warming' to offer some practical views from a company that is committed to reaching Net Zero emissions by 2050, having supported it since last year.

SSE invests over £3 million a day in developing, constructing and operating the UK's energy infrastructure and we know that for Net Zero to happen, companies like ours will need to lead the transition. That's why within SSE we recently set 2030 goals to: half again the carbon content of the power we generate, treble our renewable energy output, help accommodate 10 million electric vehicles, and lead on the critical societal issues of fair tax and pay.

In 2008, the UK Government's and Parliament's clear support of the Climate Change Act and renewable energy targets enabled SSE to orientate away from fossil fuels towards renewable energy. We became the largest owner of renewable energy capacity in the UK and Ireland, helping increase UK renewable energy five-fold. In electricity networks, focused regulation has encouraged over £100bn of industry investment whilst reducing costs by 17% since privatisation. The evidence is clear: if the ambition and framework is there, companies will invest in creating a Net Zero UK.

In addition to investment potential, as the UK Government's Industrial Strategy shows we also have huge technical capability here in the UK and I'm proud of the highly skilled SSE employees and our partners who work all round the country to produce and deliver clean energy. I am therefore optimistic that the UK is well placed to meet the challenge, if we focus on three key areas.

## 1: Making renewables the central plank for net zero

2050 is not a long time in energy: the first UK nuclear plant was built within the last 60 years and the first UK offshore wind farm within the last 20 years. With UK Government support, offshore wind has now blown nuclear away on cost with larger, more efficient turbines halving the costs in just the last few years. In offshore wind, the country now has a critical weapon in reaching Net Zero and I think the CCC's projection of 75GW of offshore wind by 2050, compared to 8GW today and the 30GW targeted by the Government's sector deal for 2030, is challenging – but necessary and deliverable.

Government has laid the foundations for this with the regular low carbon contract auctions planned and expected in the coming years. All that is needed is for the volumes that are put through the contract auctions to be increased, in line with the CCC's increased ambition, so that more cheap offshore wind can be built sooner to help provide the electricity to then decarbonise heat and transport. I think we need to raise the 2030 Government ambition so that we establish a higher near-term trajectory, potentially to 40 or even 50GW. At SSE we have a UK development portfolio of over 6GW, and we will also look to develop more sites to match increased ambition.

I have focused on offshore here, but onshore wind and solar are even cheaper and some of the earliest installations will need repowering soon. With cost reductions the UK Government has clearly not been keen to stabilise revenue streams for these technologies; and I do believe that some projects may be able to prosper on their own in the market. However, to deliver at a significant scale some sort of revenue certainty for onshore wind and solar – as well as a way of helping repowered projects – may be needed to increase their contribution.

Renewable energy will soon not need extra support, but some form of revenue stability allows projects to earn the returns required to attract sufficient funding for large upfront costs. Continuing to provide this certainty for offshore and potentially re-introducing it for other renewables would enable renewables to be the deliverable central plank for Net Zero.

## 2: Accelerating the electrification of heat and transport

We clearly cannot heat our homes or travel via natural gas or oil in a Net Zero context. The choice here is either to travel or heat our homes via electricity-based solutions or we decarbonise the gas mains and the petrol stations by replacing oil and natural gas with hydrogen. I think our primary focus should be on the technologies available today and to prioritise electric solutions such as heat pumps and next generation electric storage heaters, alongside a widespread rollout of electric vehicles.

Regarding heat, particularly for areas not connected to the gas grid, we see investment in these technologies as a 'no-regrets' ap-

proach. Similarly, we support the CCC recommendation to bring forward the phase-out of petrol and diesel cars from the current 2040 target, and as costs fall in the 2020s we are likely to see uptake surpass expectations. A specific target around decarbonising surface transport could help provide some clarity for the industry.

A renewable powered, electrified economy will clearly pose challenges for the electricity network. But with innovative network trials like our BEIS-backed LEO Project in Oxfordshire, and a regulatory regime that rewards innovation and efficient investment, I do not see our energy infrastructure as a barrier to increasing the pace of change in decarbonising heat and transport through electrification. In fact, it is a key enabler.

I have focused on electrification, but, of course, hydrogen has a critical role to play in the low carbon economy too, particularly for HGVs and industry. There are however issues to resolve regarding where the hydrogen will come from at scale and how houses and businesses will convert to using it. I agree with the need for continuing research with urgency, but this must not take any focus away from building more low carbon electricity and electrification infrastructure today.

## 3: Developing clean back-up technologies

We will clearly need flexible back up power for renewables in a Net Zero world. With coal off the system in the 2020s, nuclear not reducing in cost or risk profile and batteries not fully cost competitive or long-lasting, SSE's main focus has been on super-efficient gas plants as a transitionary flexible solution to keeping the lights on in a low carbon energy system.

The marked higher efficiency of these 'next generation' gas plants provides some carbon abatement through displacing higher emitting plant and there may be a case for building high efficiency requirements into any new build thermal plant receiving capacity mechanism contracts in order to minimise emissions during the transition to zero carbon technologies.

However, even the most efficient thermal plant cannot be on the system in the 2050s without carbon capture technologies storing the CO2, either pre- or post-combustion. SSE has had multiple disappointments in its efforts to work with previous Governments to get CCS off the ground, but we do want the technology to succeed. A clear, ambitious and long-term policy framework will be needed to boost confidence in this area. Clearly any retrofitting of technologies will need to take account of 'good faith' investments needed in the low carbon transition.

## Conclusions and next steps

In SSE you have a company ready to back the UK Government if it takes the bold step to support a Net Zero target by 2050. Of course, there is a lot of work to be done with aviation and other issues also needing to be tackled, but I firmly believe that a 'renewables-led' approach with widespread electrification is a pragmatic and deliverable route to delivering the bulk of Net Zero, with hydrogen hopefully also making a positive contribution too in the future.

I am sure that others in the industry also stand ready to build on successes in renewables and networks to deliver Net Zero – indeed, perhaps the greatest risk to achieving Net Zero would be if our ongoing energy transition is jeopardised by an unnecessary, costly and disruptive nationalisation programme which would clearly spill over into the renewables investor community.

I hope this is useful. I would like to provide further input to the White Paper process in due course and look forward to continuing to work together to make Net Zero a reality.

Yours,

Alistair