

WE are at a pivotal moment in the fight against climate change. Just two years ago, world leaders from across the globe gathered in Paris and committed to an ambitious plan to tackle global warming. Yet now we face the withdrawal of the world's largest economy from the agreement, while Brexit threatens to weaken action on climate change in the UK and across Europe.

The impacts are not only increasing, they will soon reach a tipping point beyond which global warming will become irreversible.

This is why so many of the ideas in this ground-breaking report are so desperately needed. The report takes a comprehensive look at each sector and shows that becoming carbon-free by 2050 is both possible and necessary in order to meet the Paris Agreement's ambitious target of limiting temperature rise to 1.5 degrees. Furthermore, it sets out how this ambition can be delivered. The report also demonstrates the clear economic advantages to investing in the green economy, as well as the environmental benefits. Such investment will create jobs in every region of the UK and develop expertise and skills that can be exported to the world. Restoring investor confidence, which has been so deeply undermined by recent legislative changes, is also imperative.

Above all, the fight against climate change needs political will.

If climate change is to be taken seriously, Britain needs the Liberal Democrats – a party that understands what bold measures must be taken and has the will to press ahead to a clean, green and carbon-free future.

We hope you enjoy reading the report.

**Sir Vince Cable MP**  
**Baroness Featherstone**

### Key policy implications

- Support CCS programmes
- Invest heavily in Research & Development – especially in carbon removal / negative emissions
- Ensure current action on transport aligns with long term goals
- Further Nuclear may not be the best option
- Energy efficiency is the 'first fuel'
- Look at more regionalised approaches to energy generation
- Don't assume complete electrification of surface transport is the silver bullet
- Set UK bio-economy strategy alongside CAP reform, agriculture and land use
- Focus on early action, remain nimble and be open to new thinking
- Grasp the significant wider opportunities that come from decarbonisation
- Consider innovative, private-sector as well as fiscal and monetary policy to
- finance the low carbon transition



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# A Vision for Britain: Clean, Green and Carbon Free

**Produced for Baroness Featherstone**

Energy and Climate Change Spokesperson The Liberal Democrats

By Culmer Raphael and Iken Associates

September 2017

A Vision for Britain; Clean Green and Carbon Free Identifies the:

Urgent need for negative emissions

Difficult decisions for the 2020's

Current de-carbonisation pathways in the UK

Aligning UK targets with the Paris Agreement

Response to the 1.5 degree ambition

Key policy implications

To read the full report go to [www.libdems.org.uk/climatereport](http://www.libdems.org.uk/climatereport)

In December 2015, the UK joined 195 countries in signing an historic global deal to tackle climate change.

Climate change presents challenges and opportunities to all aspects of our society, and we must act on these if we are to achieve our ambitions of creating a stronger, more resilient economy and a natural environment that benefits people and can provide the vital resources and services we need.

## **A Vision for Britain: Clean. Green and Carbon Free**

This report finds that it is possible for the UK to become carbon-free by 2050, if the right steps are taken now. It describes scenarios and pathways that potentially align with zero carbon ambitions and associated challenges and opportunities. The report reviews the way ahead, the challenge and the potential solutions for:

**The Power sector** – ‘A smarter and more flexible system offers significant benefits for consumers and the economy. If we do this in the right way, such a system will ensure the UK has a secure, affordable and clean energy system now and in the future’.

- The roll-out of ‘Smart Power’
- Speeding up deployment of renewable power
- A reformed regulator - ‘an Ofgem for the 21st century’
- A new governance structure for electricity, with explicit provisions for decentralised energy services.
- Support for the rapid roll-out of storage technologies
- Low carbon centralised generation still exists in the energy mix.

**Heat in buildings** – ‘a programme to make British buildings more energy efficient could generate £8.7 billion of net benefits’

- Making energy efficiency a UK infrastructure priority
- Cost effective options for heat decarbonisation, including Hydrogen.
- Reducing demand using Incentives, taxation and regulation
- Prioritising low carbon heat, smart homes and energy efficiency



**Transport** – ‘Demand for mobility, irrespective of mode of transport, continues to climb rapidly meaning that to keep pace with demand, innovation in Aviation, Shipping and Surface Transport must also move quickly’

**Industry** - Scenarios are underpinned by a series of business-specific roadmaps to 2050, relating to the major CO2 contributors focusing on energy efficiency, bioenergy as fuel, electricity for process heat and industrial CCS.

- Circular Economy and emissions reductions in industry
- Boosting ‘Innovation clusters’
- Decarbonisation Pathways for energy-intensive industries
- Collaboration between businesses across sectors
- Better use of public procurement and public sector supply chains
- The Encouragement of more carbon emissions disclosure
- Skills development for low carbon industry
- Recognising the low carbon business opportunities for the UK

**Sustainable Bioenergy, Agriculture and Land-use change** – ‘In order to meet its emissions reduction targets for the land-use and agriculture sector, the UK needs to find significant reductions.

- Increasing the emissions absorption of soils
- Considering UK self-sufficiency
- Reducing emissions from UK farms and livestock
- Increasing afforestation and restoring peatland
- Encouraging Wood in Construction
- Sustainable Bioenergy with CCS (Beccs)

**Financing the transition** – The needs, barriers, risks and potential solutions to build a comprehensive green financial strategy for the transition to a clean, green and Carbon free future.

**Impacts of Brexit** – The decision to leave the European Union throws up several questions around future decarbonisation policy – despite the UK’s Climate Change Act and carbon budgets currently committing the UK to more ambitious decarbonations plans than EU policy. The decision will in many areas increase uncertainty around decarbonisation investment and research.

