

**RURAL ECONOMY AND CONNECTIVITY COMMITTEE**  
**SUBMISSION FROM ENERFY UK**  
**THE DRAFT CLIMATE CHANGE PLAN (RPP3)**

**About Energy UK**

1. Energy UK is the trade association for the GB energy industry with a membership of over 90 suppliers, generators, and stakeholders with a business interest in the production and supply of electricity and gas for domestic and business consumers. Our membership encompasses the truly diverse nature of the UK's energy industry, from established FTSE 100 companies' right through to new, growing suppliers and generators, which now make up over half of our membership.
2. Our members turn renewable energy sources as well as nuclear, gas and coal into electricity for over 27 million homes and every business in Britain resulting in the following benefits for the British economy:
  - Provides jobs for 637,000 people in every corner of the country, providing lifelong employment as well as quality apprenticeships and training for those starting their careers.
  - Contributes £87bn to the British economy, equivalent to 5% of GDP.
  - Invested £17.8bn in the UK in 2015; which is 10% of all UK investment.
  - Pays over £6bn in tax annually to HMT.

**Introduction**

3. Energy UK welcomes the opportunity to respond to the Scottish Parliament Committees call for evidence to aid their scrutiny of the draft Climate Change Plan (RPP3). Scotland has been at the forefront of the UK's drive to set ambitious emission reductions targets and support investment in low carbon electricity generation. Energy UK welcomes the news that the Scottish Government are set to outline further ambitious emission reductions targets with the draft Climate Change Bill expected later in the year.
4. It is, however, important to note that energy is a commodity which is liquid and traded at a GB market level and that when looking to decarbonise our energy system it is important that we take a holistic GB wide approach. This approach must fulfill the potential for the UK and Scotland to become a world leaders in the development of low carbon technologies unlocking opportunities for jobs, growth and ensuring a sustainable supply of energy for future generations.
5. While we recognise that a number of the policy mechanisms for investment in electricity generation referred to in our evidence are reserved to the UK Government, we are conscious that the Scottish Parliament has powers to set its own policy on climate change reduction. Of particular note to the Scottish Parliament will be the section on energy efficiency which, following the Scotland Act 2016, the Scottish Government will have powers to shape the implementation of the Energy Company Obligation (ECO).

## Executive Summary

6. A low carbon society is a long term project requiring a vision to take us through the transition and transformation required, with buy-in from governments across the UK, all political parties, the public, business and industry. A whole system approach that considers the interactions between heat, power and transport must deliver an infrastructure that is fit for purpose to achieve high energy efficiency, low carbon heat, power and transport and a highly flexible and secure energy system. Long term predictable policy and planning will lay the foundations for the investment needed to create a modern, efficient and sustainable low carbon society.
7. The following paper sets out Energy UK's position on areas where its members have a strong interest and expertise in delivery: energy efficiency, heat and the power sector by providing high level recommendations on the direction of travel and highlighting the need for all sectors to work together and play their part.

## Whole system approach

8. Heat, power and transport sectors are becoming more interconnected as we move towards decarbonisation. Policy will need to focus on all of them together in order to create an efficient and effective strategy. The more predictability and less volatility there is in the policy sphere the better for the creation of a strong supply chain.
- Ensures **policies in power, heat and transport are coordinated** across the relevant government departments, to ensure the scenarios are internally consistent.
  - **Co-operation across all relevant sectors** will ensure that each industry is taking decisions that complement each other, ensuring strategies are aligned with the decarbonisation agenda central to the future of each sector. To achieve this, an **Energy taskforce** should be established comprising of representatives from the electricity, heat and transport sectors to map out the critical requirements for delivery of a low carbon economy.
  - The climate budgets to date have been met in large part by centralised decarbonisation, i.e. the power sector decarbonisation. The period of the 5<sup>th</sup> carbon budget and beyond requires **significant action in sectors where there are multiple actors, heat, building and transport** being among those;
  - The decarbonisation of heat and transport is anticipated to increase energy demand and we therefore require a **stable long-term policy framework to deliver increased investment** in the GB energy system;
  - Work towards developing a **successful smart, flexible energy system** to ensure a reliable supply of energy at low cost to the consumer, at the same time as encouraging investment in the UK's energy, manufacturing and technology industries.
  - **Review how the cost of moving to a lower carbon economy** (including through energy efficiency) **is funded** as it currently sits on customers' energy bills. These costs should be levied according to ability to pay and therefore moved to general taxation;
  - **Policies must focus on heat and transport** for the UK to meet its upcoming carbon budgets. While the power sector is clearly important the UK has policies in

place that will move towards it towards decarbonisation, this is currently not the case for heat and transport;

- The EU ETS plays a significant role in meeting the 5<sup>th</sup> carbon budget. Following Brexit, Energy UK supports staying in the EU ETS under the right governance framework. It is essential to **consider the implications for all sectors if the UK is no longer part of the EU ETS**.
- A **clear strategy towards the use of smart systems**, including clear definitions, product standards, interoperability, consumer experience, and safety and security standards across communication platforms is needed for long-lasting and effective adoption.

### Power sector

9. As the role of the power sector is set to increase through the electrification of transport and heat, a stable and predictable policy environment is needed to ensure sufficient investment to support the transition to a low carbon power sector that is fit for purpose.

- The **Electricity Market Reform (EMR)** provides the right tools for the transition to a low carbon power system. It is essential to ensure that the framework evolves as needed and that policy evolution does not undermine past, current and future **investment. Policy stability and predictability** are paramount;
- Ensure the right framework is in place to bring forward the best solutions: **be specific as to what is needed: low carbon, affordable and flexible** and the market will deliver at the lowest cost;
- **A route to market for mature low carbon technologies** such as onshore wind should be implemented in locations where they have the support of the local community. CfDs should acknowledge the need for all technologies including the most cost-effective methods of decarbonising the power sector.
- **Provide visibility for the long term** either through a revised, more accurate and transparent Levy Control Framework (LCF) or by setting out an indicative timeline for future Contract for Difference (CfD) allocation rounds and ensure all technologies can compete and provide a transparent process by which this will be managed;
- **Ensure the networks are fit for purpose** to avoid increasing inefficiency and high costs due to saturated, ageing networks;
- Support the development of a **flexible power system** that promotes overall efficiency and facilitates the effective use of intermittent and inflexible low carbon generation;
- **Review the charging regime** to ensure that it is reflective of the costs and benefits decentralised energy brings to the system, ensuring that all parties (including low carbon) providing flexibility are able to enter the market and compete on a level playing field with established players;
- **Ancillary services should be reformed appropriately** to promote transparency and address the complexity of the current arrangements and to support a level playing field which will allow the best solutions to be brought to market, irrespective of whether they are on the demand or supply side;
- **Electrification has a key role to play in decarbonising heat and transport**. A **clear signal** of the intent and the speed of travel to 2030 and beyond is needed to ensure there is sufficient lead time to meet our **future power and network development requirements**;

- Further research is needed to **understand the real impact demand management can play** on emission reductions, mainly through shifting demand away from peak periods;
  - Remove barriers and **unlock the benefits of Demand Side Response (DSR)** in the Industrial and Commercial sector and deliver the critical infrastructure required as soon as possible for smart meter roll-out to enable domestic and SME DSR participation in the next few years and beyond;
  - More research is needed to understand and **define the role and cost of CCS** in power and heat. While CCS is more likely to play a bigger role in decarbonising heat (should hydrogen be produced through electrolysis) than power, more needs to be done to understand how CCS could complement CCGTs and be used in industrial clusters;
10. Delivering on these recommendations will help avoiding higher costs of capital for investors and therefore higher costs for consumers due to political uncertainty, an inefficient system as flexibility services fail to make an impact and networks become more constrained and intermittent generation that is not effectively integrated into the energy system leading to a potential increase in costs for consumers.

### **Energy efficiency**

11. A long term vision to deliver energy efficiency is required to address the deficiencies of the current building stock supported by strong building regulations for all new buildings. As announced at the 2015 Budget, we know that the energy bill-funded Energy Companies Obligation (ECO) is set to continue until 2022. Additional investment and support is, however, needed alongside ECO to help drive demand for energy efficiency in the able-to-pay and non-domestic markets and to help fund high cost measures and hard to treat homes which will not attract ECO funding.
12. Improved energy efficiency will lead to financial, health and environmental benefits for households and society at large. Energy efficiency has a crucial role to play in reducing our carbon emissions at lowest cost and can also help limit the impact of increasing policy costs on energy bills.
- Energy UK supports the Scottish Government's position of **recognising energy efficiency as national infrastructure priority**. We believe that where subsidies are required to help support the delivery of energy efficiency programmes these are **best funded via general taxation**.
  - Ensure that the focus of consumer funded energy efficiency programmes is **targeted at the fuel poor** following the devolution of powers for ECO implementation and ensure parity for bill payers across the UK.
  - **Develop the Able to Pay Market (ATPM)** (home owners and landlords) with **simple and affordable incentive schemes and policies**, such as attractive loans, grants, tax incentives, stamp duty rebates and backstop regulations. Linking the schemes and policies to trigger points in people's lives (moving home, having a baby, changing jobs, etc.) will also help promote the uptake;
  - A predictable and coherent long term strategy for the promotion of energy efficiency could result in a **strong supply chain**, aligning with industrial strategy objectives;

- Build on the Bonfield proposals so that the **insulation industry drives up quality and performance** leading to higher customer satisfaction;
- **Regulations setting ambitious standards for new buildings** will be essential if government is to meet its longer term decarbonisation goals and eliminate the need for future (and avoidable expensive) retrofit;
- **Amend the Private Rented Sector Energy Efficiency Regulations** to encourage high uptake of energy efficiency measures in the private rented sector as tenants have limited incentives and/or ability to undertake energy efficiency measures. The current requirement to meet an EPC Band E by 2020 is a step in the right direction, but this needs to be progressively tightened to meet our carbon reduction commitments;
- Ensure **energy efficiency** in industrial and commercial buildings is an **integral part of the building or site management and environmental policy**;
- **Join up energy efficiency and low carbon heat policies** in one programme, both for domestic and non-domestic buildings, recognising that energy efficiency and no regrets are needed in all scenarios. Low carbon heating technologies such as heat pumps operate most effectively in highly efficient buildings.
- Develop standards and policies for **smart appliances now** to ensure they are readily available for customers to buy (as smart meters are rolled out);
- Create a **positive narrative on energy efficiency** based around comfort and quality to promote the benefits above the perceived burden of costs and disruption;
- **Empower those local authorities** that are keen to have energy efficient buildings to reduce energy costs;

13. Failure to deliver on these recommendations could lead to upward pressure on energy bills with potential higher retrofit costs to bear in the future, missed opportunities households and society more generally on increased comfort and health benefits of properly insulated homes and buildings.

### Heat

14. Heat has not yet been tackled effectively and must be addressed urgently. The housing stock is very heterogeneous and is likely to require the deployment of a range of different solutions. The scale of change required means that government needs to ensure strong building, energy efficiency and appliance standards are in place to ensure a smooth transition and engage all parties, from households to local authorities, supply chain and industrial and commercial sites.

- **Fund pilot schemes and research now** to identify least regrets routes now to decarbonising heat. Understand the **costs, opportunities and viability of various low carbon heat solutions**. There are various options to decarbonise heat: hydrogen or low carbon gases, district heating, heat pumps and hybrid technologies that all may contribute to some extent to a successful programme;
- Develop a **complete view and understanding of each technology's pros and cons** (including costs, feasibility and funding) for the different types of buildings (building age, type, size, use, location, on-off grid, etc.);
- Develop a **strong energy efficiency programme** to ensure all low carbon heating technologies can be used efficiently and to make achieving the targets more viable;

- **Low carbon heat must be deployed in the industrial sector**, optimising the use of by-products from industrial activities where cost effective and practical;
- Encourage the update of low carbon heat technologies in **commercial buildings** through attractive financial and **tax incentives** to help manage upfront capital costs;
- The decarbonisation of heat is likely to require **carbon capture storage (CCS)** if **hydrogen** emerges as a viable option (so as to capture the CO<sub>2</sub> by-product at the production stages). A clear indication of government's views on CCS is needed. Alternative approaches of producing hydrogen should also be fully explored;
- **Set standards** for a smooth transition by understanding what transitional technologies are available (e.g. hybrid boilers, heat pumps);
- Develop the **narrative on the economics of new low carbon heating products** to ensure household investment decisions are made in a reflective manner rather than in a reactive way when the boiler breaks down for instance;
- To support the investment decision in district heating, government should reduce district heating business rate to **equalise business rates** with gas networks;
- **Engage with local authorities now** on the challenge of decarbonising heat as they will have a vital role to play. They may have to go beyond national regulations to promote the development of low carbon buildings.

15. Failure to deliver on these recommendations could lead to carbon emission reduction targets not being reached and higher decarbonisation costs in other sectors as heat is not sufficiently decarbonised, the wrong technology choices being made due to a lack of investment in trialing alternative options and extra costs and disengagement from both the public and local authorities due to a lack of innovative and ambitious legislation impeding progress.

## Transport

16. More consideration must be given to the importance of electrification of transport and what this could mean for the power sector both in terms of the potential for storage and the need to consider the impacts of increased electrification on demand and networks.

- Coordinate further work to **understand and manage the impact of electric vehicles** charging and clustering **on local networks** to minimise negative impacts and help quickly identify areas needing reinforcement;
- Recognise the impact electrification of transport will have on demand for low carbon electricity and the need for investment to upgrade our energy system;
- Ensure an active collaboration between a broad range of bodies and actors to **create a strong infrastructural integration** in order to encourage greater uptake of low carbon vehicles;
- Continue to **support the uptake of low carbon vehicles** as this will help bring the costs down and bring low emissions vehicles on par with traditional fuel vehicles;
- Ensure **funding for research and development in low emissions vehicles** continues to make best use of latest development as soon as practicably possible. This includes hydrogen technologies;

- **Promote the use of electric vehicles** and support the roll out of smart charging to help support a more flexible energy system which will help to reduce the impact on local distribution networks;
- Ensure the **regulatory framework allows for the implementation of price signals** to be used to guide electric vehicle owners towards charging their vehicles at off peak time to avoid stress on the system.

17. Delivering on these recommendations will help avoid delays to a full scale deployment of low emissions vehicles and potential mismatch between infrastructure and usage. A poor understanding of the impacts of low emissions vehicles on the energy networks would risk putting stress on the systems at local levels, especially if customers fail to respond adequately to price signals.

Energy UK  
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