

## REA Bioenergy Strategy Phase 2: A Vision to 2032 and Beyond

Bioenergy, which uses sustainable biomass and biofuels produced from wood, crops and food wastes, is already the UK's leading source of renewable energy, meeting 7.4% of our total energy needs.

The REA has brought together civil servants, industry experts and academics to produce a new industry-led Bioenergy Strategy for the UK. Making clear what the sector delivers now, what it could achieve in the future and how we can get there.

In March, the REA released the project's first report of three, analysing the current role of the sector, finding it to be the '[little known leader](#)' in British renewables. Phase two now sets out a vision for bioenergy, stating what it can deliver out to 2032 and beyond.

- **Bioenergy is required to meet the UK's legally binding carbon budgets and realise 'Net-Zero' by 2050.**

The strategy finds that bioenergy can be increased by a factor of 2.5 in the UK by 2032.

Deployment across power, heat and transport could address two-thirds of the projected shortfall in carbon reductions required to meet the legally binding 5<sup>th</sup> Carbon Budget.

Assuming the Government follows the CCC's recommendation that the UK should set a **net zero emissions** target by 2050, this vision demonstrates that bioenergy will be necessary for its attainment.

Total reductions in GHG emissions, due to fossil fuel replacement, could amount to some 41 MTCO<sub>2e</sub> in 2026 and to 65 MTCO<sub>2e</sub> in 2032. A further 23 MTCO<sub>2e</sub>, could be saved by 2032, due to Carbon Capture Use and Storage (CCUS).

- *Bioenergy provides energy security, mitigating future strain on the electricity system and addressing the gap left by shelved nuclear power projects.*

In a low carbon economy, bioenergy can deliver a larger contribution to heating needs for buildings and industry, as well as provide immediate GHG savings in road transport utilising existing vehicles and infrastructure. This reduces both electricity generation and distribution needs, without impeding the deployment of either electric vehicles or electric heating options.

At the same time, bioenergy for power generation provides an alternative to nuclear as a low carbon, dispatchable source of electricity, with lower costs of power generation.

Such deployment would contribute an additional 215 PJ (60 TWh) to the supply of heat in the UK without calling on the electricity supply and distribution system. The additional bioelectricity generated would amount to some 57 TWh. Taken together this would reduce the generation needed to supply the growing demands for heat, transport and other uses by 117 TWh – enough to close the predicted "nuclear gap" of 72 TWh caused by shelved nuclear projects.

- *Bioenergy delivers the most immediate and affordable route to carbon reductions in heat and transport sectors*

Looking out to 2032, the vision recognises that commercialisation of innovative technologies like thermal gasification of biomass to produce Biomethane and the production of biofuels for aviation are of high strategic importance.

Rather than do nothing until these solutions are available, the vision calls for the increased deployment of technologies which are the cheapest and most technologically available route to immediate carbon reductions in the heat and transport sectors today. This includes biomass boilers and anaerobic digestion.

Their deployment is a no regrets option, providing immediate GHG savings while evolving the supply chain and markets required for a pathway to the commercialisation of future technologies.

- ***Growing the Bioeconomy for the UK***

Today the Bioenergy sector makes a significant contribution to the UK economy with an annual turnover of £6.5bn to the UK economy – sustaining up to 46,000 jobs. The delivery of this vision is estimated to increase the number of jobs associated with the sector in the UK to over 80,000 by 2026 and over 100,000 by 2032.

Furthermore, bioenergy provides a market pull that stimulates GHG savings in non-energy sectors through improved waste management practices including the move away from landfill, better agricultural waste management and the stimulation of improved forestry practices.

- ***A Sustainable Vision for Bioenergy***

The approach takes account of the volume of biomass resources available while respecting sustainability criteria and the rate at which markets could realistically be developed. This includes the full sustainable use of potential available domestic feedstocks from residues and wastes, as well as additional imported resource utilising the highest standards of sustainability governance.

Overall, the role of bioenergy could be increased by more than 60% between 2020 and 2026 and by a factor of over 2.5 by 2032. The overall share of bioenergy in final energy demand could rise from 5.5% in 2020 to 9.5% in 2026 and nearly 15% in 2032. This will mean:

- More renewable heat for homes businesses and industry energy, with the share rising from 6.6% in 2020 to nearly 10% by 2026 and 16.3% in 2032
- Low carbon transport, with bioenergy growing from below 2% in 2020 to over 7% in 2026 and nearly 12% in 2032.
- More low carbon electricity, rising from 11% in 2020 to 13.5% in 2026 and over 17% by 2032.

- **The sector is being allowed to drift and policy gaps are growing.**

A lack of a supportive policy framework is currently constraining the delivery of future bioenergy projects across power, heat and transport. A hiatus in new bioenergy projects entering the pipeline risks the loss of the expertise and supply chains needed to meet the Governments carbon budgets.

The final report, to be published shortly, will examine what policy and regulatory requirements will be needed to see renewed growth in the sector and recognise this vision.

### Find Out More

The first and second phase reports of the Bioenergy Strategy can be read here:  
<https://www.bioenergy-strategy.com/>

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The full report is expected to be published in Summer 2019.

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