Summary of the REA Response to the Biomass Strategy Call for Evidence

THE ASSOCIATION FOR RENEWABLE ENERGY & CLEAN TECHNOLOGY

Bioenergy, which uses sustainable biomass and biofuels produced from wood, crops and food wastes, is one of the UK's leading sources of renewable energy. Use of such feedstocks has an essential role to play in the decarbonisation of our power, heat and transport systems.

The REA's 2019 Bioenergy Strategy[i] set out how biomass feedstocks can sustainably provide up to 16% of the UK's energy needs across power, heat, and transport by 2030. As has been identified by the Climate Change Committee (CCC), such growth will play an essential role in helping to affordably decarbonise the UK in line with our net zero targets.[ii]

The Government are in the process of developing a new Biomass Strategy for the UK, to be published in 2022. This briefing summarises the REA's response to the recent Call for Evidence, highlighting key messages that Government should consider in developing the new strategy.

UK bioenergy growth can be sustainably realised within existing governance arrangements.

Bioenergy supply chains, being done in accordance with global sustainability governance arrangements, mean that biomass production can remain ahead of national and global bioenergy demand, as demonstrated by the International Energy Agency.[iii] Such arrangements ensure biomass is being used correctly, with the market directing where different feedstocks are best used within the bioenergy industry.

The UK needs to increase domestic biomass feedstock availability, this can be done by rewarding the environmental services of tree planting and energy crop cultivation.

Domestic UK growth of sustainable feedstocks can come from increased tree planting, woodland management, and energy crop cultivation, including perennials like willow and miscanthus or short rotation coppice. The CCC have called for 30,000 hectares of trees and 23,000 hectares of energy crops to be planted each year to realise a net zero UK.[iv]

Grown on economically marginal land, such crops also deliver environmental services such as carbon sequestration, soil improvement, flood mitigation, pollination services and biodiversity.

However, forest and energy crop developers, along with their investors, lack access to long-term stable offtake markets. Government can resolve this by ensuring biomass demand from a strong bioenergy sector and by designing the Environmental Land Management Scheme to reward developers for the environmental services they provide in cultivating biomass feedstocks.

Imports of biomass feedstocks will also remain important

Biomass imports will also continue to be needed for renewable power generation. Feedstocks are imported from areas with large certified managed forests, driven by sectors such as construction and furniture production. This activity also drives availability of low-value residues, or by products, ideal for bioenergy use. In the South-eastern USA, where 63% of imported wood pellets to the UK came from in 2019, managed forest activity has been accompanied by a steady increase in forested areas since the mid-1950s, with carbon stocks having nearly doubled.[v]

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Bioenergy delivers a UK Bioeconomy that supports jobs and green growth.

Bioenergy supply chains drive UK job creation. For example, the operation of biomass boilers involves professionals in sustainable forest management, transportation, pellet production, boiler installation and system maintenance. Given the predominantly rural application of bioenergy and feedstock cultivation, jobs are dispersed, especially benefitting rural employment.

REA REview 2021 estimated that the bioenergy sector in 2018/19 contributed £9.2bn to the UK economy and provided over 54,000 jobs, including those in biomass feedstock production.[vi] This is projected to grow to between 100,000 to 120,000 jobs by 2032 across the bioenergy sector.[vii]

Stringent governance arrangements are already in place and ensure a sustainable sector.

The UK's bioenergy sustainability governance arrangements are regarded as one of the most comprehensive frameworks in the world. All government support schemes have associated bioenergy regulations and reporting requirements that must be fulfilled. This includes IPCC approved carbon accounting methodologies, which provide robust life cycle analysis of supply chain emissions and consider impacts on land use change and other social issues.

Much of the industry use independent voluntary certification schemes, such as the Sustainable Biomass Program[viii], to audit and assess supply chain practices. Certification requirements go beyond national legislation and create a gold standard for global sustainability practices.

Innovation in Bioenergy Carbon Capture and Storage (BECCS) and Bio-hydrogen production will be delivered by building on existing bioenergy sectors.

Today's bioenergy industry provides a pathway to the delivery of negative emissions through BECCS, while biohydrogen, and other renewable fuels, can also be produced through innovation in advanced conversion technologies. The CCC sees both as critical to the delivery of the UK's net zero ambitions by 2050.[ix]
It is important to recognise that the commercialisation of these innovations will be delivered by building on the existing supply chains, knowledge, and investments of current bioenergy sectors. Government should take a principle-based policy approach to build on these sectors across power, heat and transport, encouraging innovation, and prioritising desirable environmental, social and economic outcomes. This will avoid today's sectors contracting and undermining the delivery of this innovation potential.

The REA call on government to use the new Biomass Strategy to fully support the continued growth and innovation of the UK's bioenergy sector – regulated by the UK's sustainability governance arrangements – to ensure that bioenergy can fully realise its role in contributing to the UK net zero target.

July 2021

[i] REA (2019) REA Bioenergy Strategy, https://www.r-e-a.net/resources/bioenergy-strategy-phase-3/
[ii] CCC (2018) Biomass in a Low Carbon Economy https://www.theccc.org.uk/publication/biomass-in-a-low-carbon-economy/
[iii] IEA (2021) Net Zero by 2021, https://www.iea.org/reports/net-zero-by-2050
[iv] CCC (2020) Land use: Polices for a Net Zero UK, https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/
[v] US Forest Service (2020) Forestry Inventory and Analysis, https://www.fia.fs.fed.us/
[vi] REA (2021) *REview 2021, The Authoritative Annual Report on the Renewable Energy Sector*, https://www.r-e-a.net/wp-content/uploads/2021/07/REview-2021-.pdf
[vii] REA (2019) REA Bioenergy Strategy, https://www.r-e-a.net/resources/bioenergy-strategy-phase-3/
[viii] SBP (2021) About Us https://sbp-cert.org/about-us/
[ix] CCC (2019) Net Zero – The UK's contribution to stopping global warming, https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/