

A sustainable renewable energy source

The new Government sustainability criteria ensure, from April 2013, that all biomass used for electricity generation (biomass ‘feedstock’) comes from demonstrably sustainable low carbon sources. From that date, Government financial support will only be available to those generators who demonstrate compliance with strict environmental requirements and a 60% reduction in **Green House Gas** emissions compared to using fossil fuels. Information provided by companies will have to be verified by independent auditors to ensure that these criteria are being met.

How the biomass industry can drive sustainability

- Unlike fossil fuels, biomass fuel can be drawn from renewable, sustainable sources.
- According to DECC¹ and as verified by the **International Energy Agency (IEA)**², sustainably managed forests “can both provide a stable rate of CO₂ removal from the atmosphere and supply renewable materials and woodfuel.” Ensuring that biomass feedstock is sustainable (in other words, what is used is simultaneously replanted and regrown), means that biomass can “substitute for fossil fuels” to deliver **Green House Gas (GHG)** savings.
- The new Government sustainability criteria, as well as European legislation³, is designed to help to drive up standards in the sustainability and conservation of forestry, helping to make biomass cleaner and more sustainable than it has ever been. The industry welcomes these measures, which will safeguard the long term expansion of the biomass sector and stimulate the development of the supply chain which underpins it.
- Approaches such as “short rotation forestry” and other sustainable methods of farming biomass can ensure that biomass sources are not depleted and remain viable into the future.
- Supporting the biomass industry will also help to enhance the value of biomass sources. This in turn will help to incentivise the development of the global and UK supply chain through better managed woodland and the integration of biomass crops into farming crop cycles.
- The biomass industry actively encourages improved management of forestry, which can enhance biodiversity within the woodland ecosystem. Carefully planned woodland management, carried out by experienced professional foresters creates healthier, better structured woodlands with greater growth and increased biodiversity. Woodland in England is

¹ Evidence base including the READ Report, IEA Task 38 Work, DECC & EU Research.

² International Energy Agency (IEA): Bioenergy Project Development and Biomass Supply
<http://www.iea.org/textbase/nppdf/free/2007/biomass.pdf>

³ DECC: Consultation on the Renewables Obligation Order 2011
<http://www.decc.gov.uk/en/content/cms/consultations/rego/rego.aspx>

often 'unmanaged' because no attractive markets exist for the wood products of a managed forest. By supporting the biomass industry, the real market value of sustainable biomass sources will be realised and the sustainability and biodiversity of the UK's forests can be enhanced.

- More sustainable feedstock supplies in the UK and abroad will, in turn, help to support natural carbon processes within a balanced environment.
- The helpful **CEI Bois European forestry video**, (linked in the footnotes) expands on the climate change benefits of using wood products, including for wood fuel.⁴

"We are very clear that wood biomass has a key role to play, particularly in local energy economies, which we want to see developed to encourage a greater link between local communities and the energy that they consume - coppicing, for example, has great biodiversity as well as low-carbon advantages." - Minister of State, Department of Energy and Climate Change, Gregory Barker, July 2010⁵

"Sustainable [woodland] management would [...] bring more UK timber and wood supplies to the market, and generate new business, jobs and opportunities. Alongside the development of UK woodlands, developing the biomass import market and securing a healthy share of that for the UK will be essential." Greg Barker, Wood Panel Industry – Westminster Hall Debate, 16 March 2011

"A viable and successful woodfuel sector could see major gains for the wildlife associated with ancient and native woodland...these woods can and should play a role in the transition to low-carbon energy production...many established woods and forests are particularly well suited to make an immediate contribution through the provision of woodfuel." - Wildlife and Countryside Link Position Statement, July 2009

The capacity for biomass

- The world has a significant amount of uncultivated land suitable for growing biomass, particularly in some of the poorest countries.
- Research by Rabobank⁶ (which specialises in Food and Agribusinesses) has highlighted the capacity for the uptake of biomass to generate income for developing nations through a product that developed nations are willing to pay for.

⁴CEI-Bois: Tackle Climate Change

<http://www.cei-bois.org/files/CEI-Bois%20-%20Tackle%20Climate%20Change%20-%20Short%20version.wmv>

⁵ Hansard, 1 July 2010

<http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm100701/debtext/100701-0004.htm>

⁶Rabobank: Biomass food & Sustainability: Is there a dilemma?

http://www.rabobank.com/content/images/Biomass_food_and_sustainability_tcm43-38549.pdf

- In large part, the biomass industry obtains fuel sources from land not used in the production of food products and therefore does not compete heavily with food production.
- Given that biomass plants have a life span of around 25 years, the biomass industry has an inherent long-term interest in the sustainability of the global biomass feedstock.
- Cultivation techniques such as “short rotation forestry” combined with integrating biomass into the farming crop cycles will maximise yields and can minimise the amount of land required for cultivation.

Key Terms:

Green House Gases (GHG): Green House Gases are gases within the atmosphere that absorb and emit radiation, contributing directly to the “Green House Effect” where thermal radiation from the earth’s surface is reabsorbed through the atmosphere (rather than being lost) leading to rising temperature.

International Energy Agency (IEA): The IEA is a globally recognised independent intergovernmental organisation that seeks to promote the use of reliable, affordable and clean energy. The Agency has 28 members, including the UK and the United States and also works extensively with non-members such as China and India.