

REA Back Biomass Campaign

Upstream supply chain briefing

March 2014

The UK Biomass sector draws from mature, well-regulated and sustainable markets in North America. However, to maintain these world-leading standards in all markets around the world, DECC's Sustainability Criteria make responsible forestry core to the business model of biomass electricity generators.

1) The USA and Canada are world leaders in responsible forest management, regulated by very strong legislation and monitoring at Federal/National, State, Provincial and local levels.

- **Because of the scale and additional capacity available in global forestry markets, UK biomass affects neither price nor forestry practices.**

The USA has 751million square miles of forest land, producing a quarter of the world's usable output. There is estimated to be another 150m tonnes per annum extra capacity in just three regions of North America. UK demand for biomass pales in comparison, with the highest estimates for demand being around 30m tonnes per annum.

In British Columbia, a region of Canada, there are 55million hectares of forest. 22million of these are considered for harvesting. Just 200,000 hectares are harvested in an average year, producing around 31 million dry tonnes of timber per year. That's 31m tonnes produced from harvesting less than 1% of the available forests, constituting less than half the total forestland in British Columbia alone. By comparison, the whole UK biomass sector's demand is estimated to constitute around 30million tonnes – less than British Columbia's annual harvest.

- **In many instances, contravening forestry regulation brings prison sentences.**

In the USA at federal level, forestry is regulated by the Clean Water Act, Clean Air Act, Endangered Species Act, Migratory Bird Treaty Act, Coastal Zone Management Act and the Lacey Act. At State level, it is regulated by a range of water quality management regimes, established industry best practices, wetlands protections and zoning and landscaping ordinances. In Canada's British Columbia, policies and laws cover land use planning, forest management practices, public consultation, aboriginal involvement, protected areas, biodiversity and protected species.

- **Partly as a result of their forest ownership models, net volume of trees per acre in the southeast USA has increased by 96% since 1953.**

53% of US forest land is owned by private landowners – 86% in the southeast USA, where a great deal of UK biomass for energy originates. These private landowners have often held the land in their family for generations and have been incentivised to manage it well in order to grow the forest's stock, which they have done successfully for many decades.

It is important to recognise that in Britain we often regard forests as a type of parkland for human enjoyment. We often don't realise that forests are a legitimate crop which, if properly managed, produce significant economic resources in the same way as agricultural land. This has been the case for centuries in forests around the world.

- **In Canada, 95% of provincial forest land is publicly owned.**
This involves comprehensive regulation and land resource planning, including operational forest planning and conservation work.
- **'Clearcutting' is a well-respected and time-tested method for managing sustainable growth across a forest without damaging biodiversity.**
Despite this, it is often criticised by some. Though one forest stand of a few acres may be 'clearcut' (that is, all remaining trees are removed), the rest of the forest compensates for the loss of this carbon storage through its wider growth. This cycle ensures a stable or increasing level of carbon storage in the forest. Equally, it ensures stable biodiversity in the forest by only clearing certain planned sections at a time, allowing natural replenishing of that stand's ecosystem via the surrounding forest.
- **The biomass sector provides additional income for low-quality and unwanted wood, helping to support landowners and their forests.**
The forest sector is supported by the biomass sector. The economic downturn led to the closure of 25% of the USA's sawmills, indicative of a wider decline in sustainable forest management.

2) **Managing the forest in a sustainable and eco-friendly way goes hand in hand with the economics of forestry.**

- **It does not pay to damage a forest's productivity.**
Landowners must manage their forests over time to ensure steady growth and development of the forest's stock. This means harvesting small sections ('stands') at a time while the rest of the forest grows at an equal or faster rate. If they clearcut an entire forest at once, this would destroy the stable cashflow on which landowners rely.

- **It does not pay to send all forest products (misleadingly referred to by some as “whole trees”) to biomass for energy.**

A landowner will license a forester to harvest a stand and sell the wood they harvest. The forester then harvests the stand and sorts wood according to quality and likely selling price. High quality wood such as large, straight sawlogs will go to construction and furniture industries, who pay more. The forester earns more if he or she can sell as much to these higher paying customers as possible. Only the lowest quality and least wanted wood materials will go to the biomass energy generators, who pay the forester the lowest rate. Without them buying this low-level wood, it may go to be incinerated or even remain on the forest floor, encouraging infestations or wild fires.

3) In those areas of the world where markets and good forest management is still developing, the UK Government’s Sustainability Criteria ensure robust regulation of the biomass supply chain’s support for biodiversity and carbon sequestration.

- **The Sustainability Criteria will have to be followed in order to qualify for government support.** Biomass generators in the UK have been reporting under the Sustainability Criteria since 2011, but in 2015 DECC is expected to move from this trial phase into a system linked to government support. This will make it very difficult for biomass generators to conduct viable business without adhering to the Sustainability Criteria.
- **The Sustainability Criteria require a minimum 60% reduction in lifecycle greenhouse gas emissions.** ‘Lifecycle’ means across the whole supply chain, including transport, processing and storage. This measurement is as compared to the EU’s fossil fuel grid average.
- **As well as managing GHG emissions, the Sustainability Criteria include forest management measures that prevent damage to sensitive ecosystems and monitor the levels of harvesting in a forest compared to the level of growth.**

This prevents the degradation of the carbon stored in the forest and negates the ‘carbon debt’ argument. ‘Carbon debt’ is an argument used by some critics, claiming that we cannot afford to wait for decades for trees to regrow in order to reabsorb the carbon released when they are burned for energy. However, because of the continuing and increasing growth within the forest, any carbon released is immediately absorbed by the extra tree materials growing in the forest. By monitoring this growth, good forest management negates the carbon debt argument and increases the carbon stored in the forest.