

Wood Panel Industries Federation

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National Assembly for Wales Sustainability Committee: Inquiry into Biomass in Wales

Terms of reference:

- To explore the extent to which the supply of biomass fuel in Wales will be able to meet additional demand as a result of incentives such as the Community Scale Renewable Energy Generation scheme and Renewables Obligation Certificates.
- To explore ways the Welsh Government can support and provide opportunities to stimulate the increased production of biomass within Wales.

Foreword

The UK Department of Energy and Climate Change (DECC) is reviewing an unprecedented number of applications for large-scale biomass plants across the UK, including for Wales. The Welsh forest industries are greatly concerned by the sudden growth in biomass demand as a result of support provided by the Renewables Obligation (RO). The increased demand for woody biomass from large-scale dedicated biomass energy plants, as well as from co-firing, is already affecting the UK wood market. Many wood consumers fear that they will soon be priced out by the subsidised competition as new capacity comes on stream.

The wood panel industry, represented by Kronospan Ltd in Wales, is not seeking protection; rather an end to market distortion that it believes would not result in environmental, economic or social benefits, should Kronospan be displaced by the biomass energy sector.

Since 2002, the RO has rewarded energy companies that burn wood for electricity generation, allowing them to outbid existing wood users. Once a critical mass of biomass plant is reached, the wood panel industry will no longer be able to compete with the subsidised energy sector. The UK Government must act by adjusting its subsidy regime so that valuable business sectors are not driven out of business in a dash for biomass. The Welsh Assembly Government should encourage this adjustment and base its own biomass and forestry policies on the best use of a limited wood supply.

Crucial to this debate is whether burning wood for electricity generation on a large scale is the best environmental or economic use of a valuable resource and whether it would provide Wales with a sustainable, lower-carbon future and a healthy green economy. The Committee should consider the following factors:

- the relative contributions to carbon abatement provided by different applications of wood;
- the likelihood of critical distortion to the UK wood market;
- employment and economic value provided by different processes.

Meeting demand for biomass

In April 2010 an **independent report was published on wood fibre supply and demand** in Great Britain for the next 15 years.¹ The report puts into context the additional demand for fibre from existing and proposed large-scale electricity-from-wood plants: “Total potential availability of wood fibre is forecast to exceed potential demand up to 2012 at which point demand will start exceeding potential availability as it is forecast to more than double to 50 million tonnes per annum in the following 5 years up to 2017. Most of the additional demand is forecast to be for wood energy.” The results clearly demonstrate that such plants can only proceed through either imports or displacement of existing wood-using businesses.

The report shows that **demand for wood could exceed supply as early as next year (2011)**, before the impact of most large-scale biomass plants is felt. It warns that even if a small proportion of the new proposed wood energy plants become operational, this would put huge pressure on domestic wood resources. Some projects have announced an intention to bring all their projected feedstock from overseas; however, many are looking at UK sources. Prenergy Power at Port Talbot has stated in its Environmental Statement: “The potential to source between 5% and 10% of the required wood fuel from large forest operations in the UK has been identified and this would necessitate road transport over distances of around 350 km.”² Others have been less specific; Anglesey Aluminium states that the proposed biomass plant would be “fuelled predominantly by imported biomass” comprising mainly wood.³

With global supplies uncertain, biomass plants that propose to import wood will have to turn to domestic supplies, creating greater pressures. The scale of imports identified – an estimated 27-30 million tonnes in the next few years – is almost equal to current world trade in biomass and would make the UK the biggest importer of fibre in the world.

The combined annual biomass demand of the Port Talbot and Holyhead plants would be in the region of 6.5m tonnes. The UK as a whole will likely be producing no more than 10.8m tonnes of coniferous roundwood by 2013. Existing forest industries are worried that one or both plants might source a sizeable fraction of their biomass from UK timber supplies, because they are around three times cheaper than imports and not subject to rigorous and costly plant health requirements.

It is important to note that the UK wood market is well integrated – Welsh wood and wood products travels across the English border and vice versa. Therefore, wood supply and demand in Wales must be viewed in the context of both a UK-wide market and UK Government incentive schemes. Biomass plants in England, such as the Helius facility at Avonmouth, near Bristol, may well look to source material from Welsh forests, putting much greater pressure on a very limited resource.

¹ John Clegg Consulting, *Wood fibre availability and demand in Britain, 2007 to 2025* (2010)

² *Port Talbot Renewable Energy Plant Environmental Statement, Vol 1: Non-Technical Summary* (prepared by SKM, Oct 06), p.7.

³ *Renewable Energy Plant Environmental Statement: Non-Technical Summary*, Anglesey Aluminium (prepared by PB Power, Aug 09).

Resource and energy efficiency

There is also an important efficiency problem with support for **large-scale electricity generation from wood, the efficiency of which is typically between 20-40%**. Similar renewable energy support schemes elsewhere in Europe, such as in Germany and Austria, require minimum heat use efficiency standards for plant as a prerequisite for qualification for government support, to ensure that the best use is made of a valuable and limited resource. Incentivising the consumption of vast quantities of valuable wood for such an ineffective process as electricity generation (without CHP) is a disastrous waste of a strategic and multi-dimensional resource.

Processing wood locks carbon away for the lifetime of the product, adds value to the wood and provides much-needed employment, often in rural, economically disadvantaged areas. Preliminary findings of a CarbonRiver report comparing the respective carbon footprints of biomass and wood panel manufacture show biomass emits approximately 1900kg of CO₂ per tonne of timber compared to wood panel emissions of only 350kg CO₂ per tonne of timber consumed.⁴

It is instructive to compare the advantages of these two wood uses – panel production and energy generation – against the *Woodlands for Wales* vision:

- “provide real social and community benefits both locally and nationally
- support thriving woodland-based industries and
- contribute to a better quality environment throughout Wales.”⁵

In a study commissioned by the European Panel Federation, Jaakko Pöyry consultants compared the **employment provided by wood use** in the pulp & paper industry, the wood products industry and the energy industry. For every tonne of dry wood, pulp & paper provided 124 man-hours, wood products provided 54 man-hours, while energy generation provided only 2 man-hours. This demonstrates that the social value chain of timber needs to be taken into consideration.

In terms of **economic value**, the study showed that, for every tonne of dry wood, bioenergy generates €118, compared to €993 in pulp & paper and €1044 in wood-based panels manufacture. Not only are jobs at stake – so are tax revenues. The consumer is indirectly subsidising an inefficient energy-generation process *and* potentially losing the fiscal and economic contribution of existing wood industries.

The *Woodlands for Wales* strategy calculated the forest sector’s contribution to the economy and jobs in Wales. In 2007, 1600 were employed in “primary processing” (sawmilling, panels and pulp) and 6000 in “secondary processing”.⁶ If the energy sector’s demand for Welsh timber is unchecked, 7,600 jobs directly resulting from forest industries are at risk. This outcome also jeopardises the stated aim of supporting “thriving woodland-based industries” and a “competitive and integrated forest sector”.⁷

⁴ Draft Paper, CarbonRiver™, to be published in early May 2010.

⁵ *Woodlands for Wales*, Welsh Assembly Government (2009), p. 8.

⁶ *Ibid.* p. 35.

⁷ *Ibid.* p. 8.

The **industry's environmental contribution** should not be under-estimated. It is well established that wood products make an excellent and straightforward contribution to carbon abatement, as noted by the European Commission: "Carbon storage in harvested wood products can extend the carbon sequestration benefits provided by forests; their role in mitigating climate change should thus be developed."⁸

This carbon storage role is also recognised in *Woodlands for Wales*: "If timber is harvested and used for construction or manufacturing, most of the carbon in the timber remains locked up for the life of the product".⁹ However, the strategy makes no distinction between the merits of wood processing and energy generation from wood (or the type of energy or technology used). **There simply is not enough Welsh wood to support large-scale energy generation without undermining Wales' (and the UK's) sustainable wood processing industries, which do not rely on, or benefit from, subsidy regimes.**

The *Woodlands for Wales* strategy also rightly stresses the importance of promoting "the best use of the finite resource of Welsh-grown wood".¹⁰ We categorically reject the argument that burning large quantities of Welsh timber purely for electricity generation is either the best use of the resource or as environmentally beneficial as sustainable harvesting for the manufacture of wood products.

New developments – the Renewable Heat Incentive

The Government's official statistics (DUKES) failed to count the generation of renewable heat by the wood panel industry in 2009, an omission that we understand will be rectified in next year's edition. It is beyond doubt that the **industry is the largest single-sector generator of renewable heat** at present – around 2.4TWh in 2008, falling to 1.6TWh in 2009, on account of reduced manufacturing output during the economic downturn. Currently, around 55% of the industry's heat demand is satisfied by its own renewable process-derived fuel. Under favourable conditions, this could be increased to 90% or more, a significant increase in its contribution to the UK's renewable heat targets.

The industry is already finding its **competitiveness blunted by RO-subsidised electricity generators**, which can comfortably outbid existing consumers of UK-sourced wood. The recently published Clegg report on wood fibre availability and demand confirmed that British wood demand will exceed potential supply from as early as 2011. **This was calculated before potential increases in demand as a result of the RHI.**

At present, DECC is proposing to exclude all renewable heat generation plant that was installed before July 2009 – this would exclude the entire wood panel industry. By providing RHI support to new installations and excluding the existing contribution by the wood panel industry, the Government would in effect be denying this industry the opportunity to compete for its basic feedstock. **In short, it is highly unlikely that the wood panel industry could survive in the UK under these circumstances.** Not only is this an egregious economic and social outcome; it would also be a significant loss to carbon abatement and renewable heat generation.

⁸ Communication from the Commission to the Council and the European Parliament on innovative and sustainable forest-based industries in the EU: A contribution to the EU's Growth and Jobs Strategy {SEC(2008) 262}

⁹ *Woodlands for Wales*, Welsh Assembly Government (2009), p. 25.

¹⁰ *Ibid.* p. 40.

Increasing supply of biomass

The WPIF strongly supports efforts by the Welsh Assembly Government and Forestry Commission Wales to increase biomass supply in Wales. Although alternative materials, including short-rotation coppice and other energy crops, could contribute to biomass supply, **wood will remain the dominant source of biomass in Wales and across the UK**. In terms of satisfying increasing demand in the short and medium term (next 15 years), there is only limited scope for increasing supply from Wales or the rest of the UK.

New softwood planting will not be ready for harvest for at least 30 years. The fact remains that compared to mainland Europe, native wood cover levels in Wales, and indeed the UK as a whole, are low. There is certainly more that could be done to increase the size of the UK's annual wood harvest. However, this is a long-term project given the growth cycle of wood.

Waste wood

The WPIF would also be supportive of any efforts that the Welsh Assembly Government might make under newly acquired powers conferred by The National Assembly for Wales (Legislative Competence)(Environment) Order 2010. There exists a great opportunity for the Assembly Government to take the lead when it comes to maximising available waste streams. It could do so by **banning waste wood from landfill** as soon as is feasible. Wood is simply too valuable a resource to landfill; that which can be recycled should be. The remainder – contaminated materials – makes an ideal feedstock for energy generation.

Conclusion

The wood panel industry is not opposed to renewable energy; indeed, renewable heat generation is a vital part of its business model. However, large-scale biomass energy generation, particularly electricity-only stations, are simply not sustainable nor the best environmental use of a valuable and **limited resource** – Welsh wood. It threatens the survival of the wood panel industry in North Wales and across the UK.

Even though consent for large-scale power plants lies with the Secretary of State, the National Assembly and the Welsh Assembly Government are key stakeholders. We would urge the Sustainability Committee not to support the development of such inefficient and unsustainable projects, such as that proposed by Anglesey Aluminium, and to voice its concern with the Secretaries of State for Wales and for Energy & Climate Change.