

## EVIDENCE PAPER

### National Assembly for Wales's Sustainability Committee: Inquiry into biomass supply in Wales - Evidence from Forestry Commission Wales

#### Purpose

1. This paper presents evidence to the National Assembly for Wales's Sustainability Committee on the following two issues that the Committee intends to consider further at its meeting on 5<sup>th</sup> May 2010:
  - 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.

#### Evidence

##### Issue 1

*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.*

2. Forestry Commission Wales (FC Wales) proposes that the Welsh Assembly Government's (WAG) [Consultation on a Bioenergy Action Plan for Wales](#) (2009) is a useful point of reference in order to explore this question.
3. The consultation document provided a detailed scenario for the level of biomass required in Wales to meet an aspiration for renewable energy generation from biomass of 5 TWh (electricity)/yr and 2.5 TWh (heat)/yr by 2020. This aspiration supports the [Welsh Assembly Government Energy Policy Statement](#) (2010) which, amongst other aims, seeks to help the UK to deliver 15% of energy from renewable energy sources by 2020. Energy is largely a reserved matter in Great Britain, ie it is largely the responsibility of the UK Government in consultation, where appropriate, with the devolved administrations.
4. The key Government incentives relating to biomass for the period to 2020 are set at a UK level and will be:

- The Renewables Obligation (ROC trading system) for electricity generating projects >5 MW
  - The Feed in Tariff (FIT) for electricity generating projects <5 MW (effective from April 2010)
  - The Renewable Heat Incentive (RHI) for heating schemes of all sizes (effective from April 2011).
5. If it is assumed that the above incentives are effective then it can also be assumed that market forces will seek to deliver the targets. The limiting factor could be the availability of fuel.
6. The Consultation on a Bioenergy Action Plan for Wales identifies the following mix of biomass fuels that would need to be deployed annually to deliver its 2020 aspiration.

**Anticipated biomass requirements from UK sources (oven dried tonnes)**

<b>Forestry woodfuel and clean waste wood</b>	<b>692,000</b>
Contaminated (treated) waste wood	345,000
Energy crops	267,000
Municipal-type waste	846,000

**Organic matter for anaerobic digestion (tonnes - not oven dry)**

Bio-waste (gardens, parks, kitchen waste etc)	340,000
Agricultural slurries and food waste	250,000
Sewage sludge	93,000

**Imported biomass (oven dried tonnes)**

Clean wood and other biomass (agricultural residues)	1,630,000
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7. FC Wales is aware of policy activity that considers all these supply streams. However FC Wales will restrict its evidence to the Committee on the "forestry woodfuel and clean waste wood" element of this mix of fuels. This tends to be the preferred fuel for most combustion technologies due to the combustion characteristics of wood as a fuel and the fact it is clean and exempt from the Waste Incineration Directive.
8. The Committee should note that woodfuel material moves freely across UK country borders, but energy policy at a UK level is driving up demand for biomass, including woodfuel across the UK. As a result, it is unlikely that Wales to be able to import surpluses from either England or Scotland in the long term.
9. An estimate of the available woody material for energy from local sources in Wales was made in 2003 (*Woodfuel Resource In Britain: Forest*

Research Agency December 2003). This estimate was reduced slightly in 2007, to take account of a declining long term timber production forecast in Wales. The two forecasts in combination suggest a current available volume of woody biomass, in the absence of existing timber processing markets of between 400,000 and 450,000 oven dried tonnes per annum. However, if we take existing timber processing markets into account - primarily the panelboard, animal bedding and paper markets - a figure of about 180,000 oven dried tonnes per annum is more realistic.

10. This represents a shortfall of approximately 510,000 oven dried tonnes against the potential demand identified within the Bioenergy Action Plan Consultation. Large heat and power generating plants in Wales are already burning at least 150,000 oven dried tonnes of biomass annually - although much of this material may currently be coming from outside Wales at the present time. FC Wales concludes that the future demand for woodfuel in Wales will outstrip supply, and is probably already doing so.
11. The picture presented above represents a pan-Wales perspective. However, individual heating projects - such as community-scale heating schemes - may find that there is adequate biomass available locally, depending on local resources.

## Issue 2

*To explore ways the Welsh Government can support and provide opportunities to stimulate the increased production of biomass within Wales.*

12. FC Wales wishes to inform the Committee of the following policy instruments and other actions to address this question:
  - Bring existing unmanaged privately owned woodlands into management. FC Wales estimates that realistically, an additional 90,000 oven dried tonnes of suitable woodfuel could be made available for biomass from currently unmanaged private woodlands.
  - Recover more biomass material from the Assembly Government Woodland Estate (AGWE). Approximately 14,000 fresh tonnes of brash is being harvested annually for biomass markets along with low value material which previously had no markets. The growing woodfuel market also provides scope to increase the harvest of small thinnings which have historically not been commercially viable.
  - Create new woodlands. [The Land Use Climate Change Report to the Welsh Assembly Government](#) (2010) makes a proposal for 100,000 additional ha of woodlands for Wales to be planted by 2030.

Depending on the species and management approach, this could reasonably be expected to yield an additional 400,000 oven dried tonnes per annum for biomass. This is a longer-term response, extending beyond 2020, unless the crops are grown on short rotations.

- Recognition that the bioenergy market may compete with existing timber processing markets for supply. This occurs through normal market activity. Increased competition for wood benefits growers at the end of the supply chain as it pushes up timber prices and stimulates better woodland management. However, there is a risk that renewable energy incentives aimed at supporting the development of the woodfuel market could indirectly result in the displacement of existing timber processing capacity. This would be a perverse policy outcome where the existing processors of solid wood products are actually delivering very good carbon abatement outcomes in their own right. FC Wales is aware that several timber processors in Wales are responding to this challenge, by investing in wood energy schemes at their mills to add value and reduce their energy costs.
- Import more wood. The UK DECC position on international trade in biomass is that at a European level, European member states can produce enough biomass material to meet overall European targets. The Welsh Assembly Government and Forestry Commission are engaged with the UK DECC to develop appropriate standards and regulations governing the import of biomass to ensure that it can be shown to be from sustainably managed forests, and delivers genuine carbon abatement.

## **Conclusions**

13. There is almost certainly, going to be an overall shortfall of biomass produced in Wales to meet the growth in demand by 2020. In the short term, current policy and market drivers are likely to result in:
  - timber price increases as the bioenergy market competes with existing timber processors;
  - more private woodland owners harvesting material from their woodlands;
  - Investment to access additional biomass available on the AGWE; and
  - large coastal power plants importing wood.
14. Biomass will be a scarce resource. Locally grown biomass being burned efficiently in heating schemes close to where the biomass is sourced will enable best use of this limited resource. To encourage this outcome, FC Wales will continue to deliver the Wood Energy Business Scheme (£7.5 million of EU funding for small and medium enterprises between 2009 and 2013), and work with Public, Private and Third Sector organisations to

develop local heat supply chains. FC Wales has ring fenced up to 30,000 tonnes of raw material annually from Assembly owned woodlands to support good quality local heat supply chains of this kind.

15. The Welsh Assembly Government and FC Wales are able to bring unmanaged woodlands into management and create new woodlands through grant aid schemes such as Glastir and Better Woodlands for Wales. New woodlands and managed woodlands also produce ecosystem services such as carbon sequestration, biodiversity, soil and water conservation, access and landscape benefits.
16. The Forestry Commission has recently completed a consultation exercise in respect of developing a Code of Good Practice for Forest Carbon Projects. This will provide the reassurance to investors that the carbon accounting for the woodland is correctly undertaken and registered. This should help to give greater assurance to the market and help to unlock additional Corporate Social Responsibility funding for woodland creation projects, some of which will hopefully be located in Wales.
17. Initiatives such as the EU funded Community Scale Renewable Energy Generation scheme, enable the Third sector to find local solutions to their energy needs. Community groups have the potential to unlock the biomass resource in existing woodlands in their own area and make land available for planting.

**Forestry Commission Wales**  
**April 2010**