

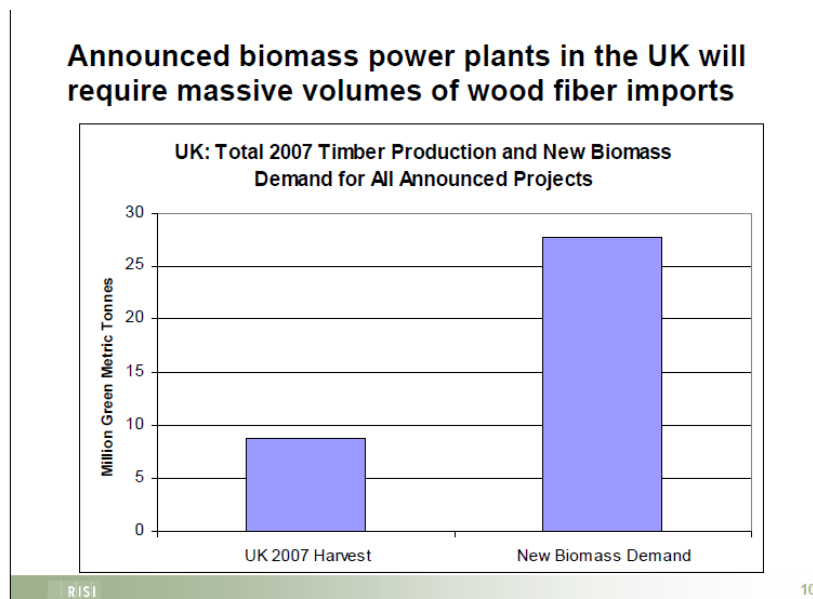
## Re: Consultation on the grandfathering policy of support for Dedicated Biomass, Anaerobic Digestion and Energy from Waste under the Renewables Obligation

### Response by Biofuelwatch

*Q1: What information can you provide on current biomass fuel contracts, feedstock sources and prices for dedicated biomass? How do you expect the market to develop longer term?*

Rapid expansion particularly in biomass power station constructions and plans has resulted from current eligibility for ROCs, even without grandfathering.

According to an analysis by McKinsey/Poyry, UK, plans for biomass burning announced in the UK will require 35 million tonnes of green biomass per year, which is 3.5 as much as all wood produced in the UK at present (see: [www.fridayoffcuts.com/dsp\\_newsletter.cfm?id=366](http://www.fridayoffcuts.com/dsp_newsletter.cfm?id=366)). Here is a graph produced by the Director of International Timber, RISI, Bob Flynn ([www.scforestry.org/FlynnSCFA.pdf](http://www.scforestry.org/FlynnSCFA.pdf)).



The Forestry Commission's Woodfuel Strategy aims to procure an additional 2 million tonnes of biomass per year, though we have serious concerns over the impacts of greater deadwood, whole tree and even stump removal on biodiversity, forest carbon storage, forest soils and their ability to support trees in future. 2 million tonnes, however, does not even meet one third of biomass capacity planned by one company, Drax, alone. According to the Confederation of Forest Industries, maximum UK wood production is expected to stay well below biomass plans which have already been announced by industry, let alone any additional ones in future ([www.confor.org.uk/NewsAndEvents/News.aspx?pid=23&id=643](http://www.confor.org.uk/NewsAndEvents/News.aspx?pid=23&id=643))

We have seen photos which show that at least two existing biomass power stations (Margam in Port Talbot and Steven's Croft near Lockerbie) burn woodchips made

from whole logs, from trees cut down for this purpose. The majority of biomass capacity in planning or under construction is expected to rely on imports, and a growing number of large power stations are planned at ports (including Port of Leith, Port of Dundee, Grangemouth, Rosyth, Avonmouth, Tilbury, Portbury, Holyhead and Newport amongst others). For a map of larger existing and proposed biomass power stations in the UK please see [www.biofuelwatch.org.uk/biomass\\_map/](http://www.biofuelwatch.org.uk/biomass_map/).

We have seen no evidence to suggest that, with ongoing ROCs for biomass but without grandfathering the rapid market development, which we consider to be a major new threat to forests and grasslands and thus climate and biodiversity and to forest-dependent peoples particularly in the South, will be stopped or slowed.

Developers refer to the US (including Alaska), Canada, South America, South Africa, Eastern Europe and Russia as biomass producer countries although imports from other regions, including South-east Asia and Africa seem likely, too. In the medium to longer term, we expect UK subsidies for biomass to accelerate the development of a new global trade in woodchips and wood pellets, leading to more destructive logging in many parts of the world and to more conversion of forests, grasslands and farmlands to monoculture tree plantations.

*Q2: Do you agree that grandfathering at current levels for dedicated biomass could result in unfair competition if bands were changed for new entrants in a future banding review? Please provide your argument.*

We believe that grandfathering of ROCs for biomass, and indeed current ROCs for bioenergy, create ‘unfair competition’ with genuinely renewable and climate-friendly energy such as sustainable wind and solar power. Burning biomass may well be cheaper than other types of renewable energy (although we would question whether large-scale biomass is renewable), however there is strong evidence that large-scale bioenergy will increase, not reduce the UK’s true carbon intensity and overall climate impacts (see below for more information).

*Q3: Could grandfathering AD and EFW cause similar market distortion? Do you agree that the risk is less for these technologies? Please provide your argument.*

Yes, as far as competition with genuinely renewable energy is concerned. Although imports are less likely with anaerobic digestion than with biomass, we believe that current policies and proposals could have serious negative impacts on biodiversity and climate. As far as Energy from Waste is concerned, Biofuelwatch has less expertise than several other groups, however we are very aware that incineration discourages waste reduction, including recycling and also composting and that it is associated with a range of air emissions harmful to human health.

Anaerobic digestion has been very much associated with biogas from waste. However, in Germany, where bioenergy subsidies were increased in 2004, a report commissioned by the government showed that in 2008 there were 4,100 biogas digesters producing the equivalent of 1,435 MW of electricity. 78% of biogas was produced from maize grown on dedicated monocultures, 11% from grass silage (leading to more frequent cutting of grass with serious consequences for biodiversity) and only up to 580,000 hectares of farmland in Germany were under dedicated

monocultures for biogas production

([www.bmu.de/files/pdfs/allgemein/application/pdf/zwischenber\\_mon\\_bio.pdf](http://www.bmu.de/files/pdfs/allgemein/application/pdf/zwischenber_mon_bio.pdf)).

Conservation organisation Nabu (German member of BirdLife International) has warned about the rapid conversion of biodiverse areas, including extensive grasslands in particular for maize for biogas. In some German district, more than half of all farmland is used this way and even moorlands and peatlands have been converted for biogas, resulting in significant greenhouse gas emissions.

We are deeply concerned that subsidies for anaerobic digestion, though intended to support the use of waste products, could easily result in similar land conversion at the expense of biodiversity and possibly even peat soils. Already, UK companies are speaking about energy crops for biogas, among Crops 4 Energy and Agri-Gen are promoting this.

*Q4: What are current AD and EfW feedstock prices or subsidies for disposal and what do you estimate these prices to be in the future? Are these arrangements driven by landfill gate fees? Do you agree that these feedstocks are less subject to price uncertainty than dedicated biomass plant?*

As discussed above, we believe that there is a high chance of subsidies for anaerobic digestion resulting in the expansion of maize monocultures. This could very well push up the price of maize and of farmland in the UK.

*Q5: What evidence is there that without grandfathering there would be a hiatus in investment for AD, EfW and dedicated biomass?*

None. We know that Drax has said publicly that they would not invest in biomass power stations without grandfathering of subsidies, however, they have not in any way delayed pursuance of their planning applications in Yorkshire. Many other companies are proceeding with planning and constructing very large new biomass capacity, in the absence of any decision on grandfathering subsidies.

*Q12: Do you agree that a lack of grandfathering will impact deployment levels for dedicated biomass, AD and EfW, and if so, to what extent?*

As discussed above, there is no evidence of this being the case. Even larger plans, should grandfathering be agreed, can of course not be ruled out, ones which will require even more than 3.5 times the total UK wood production to be burned every year. We are deeply concerned about the focus to drive up the demand for biomass as quickly and high as possible without any consideration of limits and impacts.

*Q15: Do you agree that bioliquids should not be grandfathered, and why?*

We strongly agree that ROCs for bioliquids should not be grandfathered. Instead, we believe that they must be suspended/withdrawn immediately. Studies published by the European Commission clearly show that the current 2020 target for the transport sector cannot be sustainably met – clearly an additional large market for biofuels on top of the fast expanding one in the transport sector cannot be sustainable. Many peer-reviewed studies have shown that, once CO<sub>2</sub> emissions from indirect land use change as well as indirect nitrous oxide emissions are taken into account, virtually all

biofuels significantly worsen climate change. Palm oil is by far the cheapest vegetable oil. One proposed biofuel power station, by W4B in Avonmouth, is expected to use as much palm oil as all the palm oil used in transport biofuels at present. The large-scale, often violent, displacement of indigenous peoples, other forest-dependent communities and small farmers will not be considered or addressed under EU 'sustainability criteria' at all. If palm oil from existing plantations is diverted to power stations, the gap in the market will inevitably be met by more rainforest destruction elsewhere. The Roundtable on Sustainable Palm Oil meantime, considers neither greenhouse gas emissions nor indirect deforestation. The second cheapest type of vegetable oil, soybean oil, is associated with greenhouse gas emissions four times greater than those from burning mineral oil, according to a study recently published by the European Commission. Furthermore, biofuels link the price of food more closely to the price of oil, thus rendering food prices more volatile and, overall, significantly pushing them up.

*Q17: Do you agree that separate solutions are needed for AD and EfW and dedicated biomass? Please provide your argument*

No, for the reasons detailed above, ROCs should not be grandfathered for either, instead they should be withdrawn for bioenergy. We do, however, support grandfathering of ROCs for sustainable types of renewable energy such as solar power.

Q20: How should support for advanced thermal technologies, such as advanced gasification and advanced pyrolysis, be treated? Should we grandfather the non fuel costs, or grandfather at current levels? Please provide your argument.

*Very little research exists about the efficiency and air emissions connected with advanced thermal technologies. For this reason, as well as for the same reasons as biomass, we believe that there must be no grandfathering of ROCs for those.*

*Q21: Do you agree that the energy crop uplift should not be grandfathered?*

The energy crop uplift results in a bizarre situation where, for example, wood from monoculture plantation received more support than any residues, and where palm oil from new plantations receives more funding than used cooking oil. This uplift makes a worrying situation (bioenergy impacts) even worse.

*Further comments on the climate and biodiversity impacts of biomass:*

Smokestack CO<sub>2</sub> emissions per MW from biomass power stations are up to 50% greater than those from coal power stations, due to the lower efficiency of such power stations (<http://massenvironmentalenergy.org/docs/MEEA%20biomass%20briefing%20October%20update.pdf>). Where trees are cut down for bioenergy in temperate zones, it will take around 30 years for new ones to sequester the carbon again which had been emitted through biomass burning. It will take even longer in boreal regions to which many UK companies are looking for supplies. Brash, stump and high levels of deadwood removal for bioenergy not only greatly reduces biodiversity and carbon storage (<http://assets.panda.org/downloads/deadwoodwithnotes.pdf>), but it also depletes, erodes and compacts soils, thus making healthy regrowth impossible.

In central Europe, 1,350 beetle species and 1,500 types of mushrooms depend on deadwood and in turn support birds and mammals ([www.wald.de/was-ist-totholz-wie-viel-braucht-der-wald-davon/](http://www.wald.de/was-ist-totholz-wie-viel-braucht-der-wald-davon/)).

The expansion of wood-based bioenergy is already leading to an expansion of monoculture tree plantations, for example in West Papua, where Medco holds a concession for converting a large area of rainforest to dedicated tree plantations for woodchips and wood pellets for export, and in Brazil, where eucalyptus plantations are being expanded rapidly, for example at the expense of highly biodiverse and carbon-rich wooded savannah. Tree plantations for biomass exports to Europe are being established in the Republic of Congo, too. And as Europe and the UK use an ever greater proportion of their own wood for bioenergy, wood imports for other markets increase. The direct and indirect impacts on land-use change, biodiversity and climate are likely to be similarly disastrous as those of agrofuels, with the additional likelihood of greater forest degradation.

We would also like to point out a study by Marshall Wise et al which shows that carbon reduction policies which only account for fossil carbon will result in all natural forests and virtually all natural grasslands being destroyed by 2065 ([www.sciencemag.org/cgi/content/abstract/324/5931/1183](http://www.sciencemag.org/cgi/content/abstract/324/5931/1183)). Another recent study by Robert McDonald et al shows that burning energy crops for electricity requires 2,844 – 4,294 km<sup>2</sup>/GW, more than any other type of electricity generation. By comparison, onshore wind requires 199-243 km<sup>2</sup>/GW, solar thermal 26-52 km<sup>2</sup>/GW and solar PV 52-130 km<sup>2</sup>/GW ([www.plosone.org/article/info:doi/10.1371/journal.pone.0006802](http://www.plosone.org/article/info:doi/10.1371/journal.pone.0006802)). Subsidies for bioenergy thus support maximum land conversion and thus ecosystem destruction.

*Further comments on the public health impacts of biomass:*

Grandfathering of bioenergy subsidies will commit the UK to rising air pollution (including fine particulates, NO<sub>x</sub>, VOCs, formaldehyde and other toxins) and increased illness and mortality caused by it. It is difficult to see how such a policy can allow for compliance with EU regulations. In November 2009, Jim Fitzpatrick, Defra minister at the time, reported that according to a study commissioned by the government, up to 1.75 million life years will be lost in the UK due to emissions caused by bioenergy expansion.