

## **Biofuelwatch submission to the Environmental Audit Committee.**

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### **What key policies are needed over the course of this Parliament to adequately protect the environment, promote growth in the low carbon sector and improve wellbeing?**

1. Stop subsidising biomass electricity and energy from waste.
2. Promote (subsidise) demand reduction, energy efficiency and household insulation which will save carbon, reduce dependency on energy generation (increasing energy security), save bill-payers money (boosting the economy), improve health and well-being (reducing social costs).
3. Promote (subsidise) small scale, decentralised (and community owned) genuinely low carbon energy especially community energy. The recent consultation<sup>1</sup> on solar FIT have effectively killed the industry especially community energy.
4. Promote (subsidise) smart grid management and storage to enable more use of intermittent renewable sources. [see kombikraftwerk<sup>2</sup>]

### **Does the government's current fiscal and legislative agenda accord with the action required and, if not, why not and where might it be improved?**

**NO**

Bio-energy now accounts for the majority of renewable energy in the UK and of renewable energy policy and subsidy through to 2027<sup>3</sup>. Biomass for electricity will account for 60% of our RED targets of 15% primary energy by 2020. It receives high levels of subsidy – CfDs of £105 and £125 p MWh<sup>4</sup>.

Subsidy for bio-energy, particularly biomass electricity, is causing increased GHG emissions, environmental impacts such as deforestation, biodiversity and habitat loss, land-grabbing and human-rights issues and serious pollution in supplier communities and at home<sup>5</sup>.

Subsidy for bio-energy, particularly biomass electricity, fails to produce structural change in our energy system for the future or any reduction in energy dependency. It perpetuates our dependence on old, inefficient, centralised, thermal generation technology and imported increasingly expensive, carbon intensive, environmentally harmful feedstocks – so it doesn't improve energy security.

### **Bio-energy, especially the UK policy of subsidising biomass electricity, should be a MAJOR FOCUS for the Environmental Audit Committee**

Details:

- Bio-energy is falsely accounted as carbon neutral. There is a large and growing number of scientific studies<sup>6</sup> that show that when when bio-genic carbon, lost sequestration and land-use change are properly accounted for bio-energy is worse than fossil fuels, at a time when we must be drastically reducing emissions to avoid runaway climate change
  - DECC's BEaC study<sup>7</sup> showed that there are "bioenergy scenarios that could lead to high GHG intensities (eg greater than electricity from coal, when analysed over 40 or 100 years) but would be found to have GHG intensities less than 200kg CO<sub>2</sub>e/MWh by the Renewable Energy Directive LCA methodology" (p125)
  - Under this methodology Drax can claim 86% emissions reductions for biomass compared with coal<sup>8</sup>. Using DECC's BEaC methodology to calculate emissions from observed

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1 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456630/FIT\\_Review\\_Con\\_Doc.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/456630/FIT_Review_Con_Doc.pdf)

2 <http://www.kombikraftwerk.de/kombikraftwerk-1/english.html> successful town scale grid balanced from renewables

3

[http://www.irena.org/DocumentDownloads/events/2015/Bioenergy%20Statistics%20Presentations/Household%20energy%20surveys/UK\\_Bioenergy%20Statistics%20Overview.pdf](http://www.irena.org/DocumentDownloads/events/2015/Bioenergy%20Statistics%20Presentations/Household%20energy%20surveys/UK_Bioenergy%20Statistics%20Overview.pdf)

4 <http://www.biofuelwatch.org.uk/2013/biomass-faq-2/#C18>

5 <http://www.biofuelwatch.org.uk/2013/biomass-faq-2/>

6 <http://www.biofuelwatch.org.uk/biomass-resources/resources-on-biomass/> for example Schulze

7 <https://www.gov.uk/government/publications/life-cycle-impacts-of-biomass-electricity-in-2020>

8 <http://www.drax.com/media/41983/the-biomass-story.pdf>

sourcing<sup>9</sup> by Drax's biggest supplier Enviva of whole hardwood trees from clear-felling of highly biodiverse native wetland forest in the southern US (scenario 13) shows GHG emissions to be three times those of coal<sup>10</sup>. **Drax is allowed to underestimate emissions by a factor of 15. Its claimed 20m tonne saving by June 2015 could actually represent hugely increased emissions.**

- The Government has failed to apply the latest science to policy and carbon accounting. It has commissioned an industry consultant Ricardo AEA to do follow up work on the BEaC study using flawed methodology.
  - Sustainability standards were introduced in August 2013. They are full of loopholes<sup>11</sup>, subsidy is not conditional on compliance and the industry self-certifies. They are unenforced and unenforceable. They provably do not work. They were promised to become mandatory in July 2014 when the BEaC report was published. This still has not happened and would make no difference especially since the carbon accounting methodology has not been updated.
  - OFGEM's sourcing guidelines are full of loopholes. Drax can deny 'clear-felling' (which *would incur land-use change emissions under current methodology*) and classify the vast majority of its biomass including massive whole trees as 'forest residues' or 'thinnings' which are accounted as 'zero-carbon'.<sup>12</sup> BEaC is clear that any roundwood above 10cm diameter is worse than current generation and often than coal.
  - Biomass electricity subsidy is enabling continued coal burning at Drax (and potentially other stations) until at least 2027. No evidence of accounting for this extra carbon has been provided by GIB or DECC.
- It is wrongly accounted (by Drax) as the cheapest way to decarbonise the power sector<sup>13</sup>. A. it *increases* carbon emissions from electricity generation compared with fossil fuels B. it is not cheap.
  - Drax stands to get about £1.8m a day (£662m a year) in subsidy from 2016-2027 at least<sup>14</sup>. It is lobbying for CfD for a fourth unit conversion to biomass.
  - If this subsidy were spent on demand reduction, according to IEA energy efficiency cost figures, **it could remove the need for Drax's entire 7-8% of UK capacity well before 2027** effecting significant long-term structural change. It would also save emissions, reduce bills (freeing money for the economy), improve energy security, health and well-being (and associated social costs).
  - It is not 'decarbonisation at least cost' (Rudd)<sup>15</sup>
- Carbon Capture and Storage (CCS) with Biomass is hyped as potentially 'negative emissions.' Drax has already received £50m for feasibility studies for their White Rose project and another £900 capital grant is promised. This would be a waste of money.

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9 Dogwood Alliance on Enviva's clear-felling: <http://www.dogwoodalliance.org/2015/06/uncovering-the-truth-investigating-the-destruction-of-precious-wetland-forests/>

Wall St Journal: <http://www.wsj.com/news/articles/SB10001424127887324082604578485491298208114>

Washington Post: [http://www.washingtonpost.com/national/health-science/how-europes-climate-policies-have-led-to-more-trees-cut-down-in-the-us/2015/06/01/ab1a2d9e-060e-11e5-bc72-f3e16bf50bb6\\_story.html](http://www.washingtonpost.com/national/health-science/how-europes-climate-policies-have-led-to-more-trees-cut-down-in-the-us/2015/06/01/ab1a2d9e-060e-11e5-bc72-f3e16bf50bb6_story.html)

10 Southern Environmental Law Center study using BEaC to assess emissions from observed sourcing for Drax from Enviva: [https://www.southernenvironment.org/uploads/audio/2015-05-27\\_BEAC\\_calculations\\_SE\\_hardwoods.pdf](https://www.southernenvironment.org/uploads/audio/2015-05-27_BEAC_calculations_SE_hardwoods.pdf)

Natural Resources Defense Council <http://www.nrdc.org/land/bioenergy-modelling.asp>

11 <http://www.greenpeace.org.uk/media/press-releases/biomass-standards-greenpeace-response-20130822>

12 <http://www.drax.com/media/56583/biomass-supply-report-2014.pdf> p6 see definitions of biomass

13 <http://www.businessgreen.com/bg/analysis/2379184/report-draxs-biomass-plans-could-slash-decarbonisation-costs-compared-to-offshore-wind>

14 <http://www.biofuelwatch.org.uk/axedrax-campaign/#4>

15 <https://www.gov.uk/government/speeches/secretary-of-state-speech-on-climate-change>

- CCS is unproven at scale and risky.
- The Oxyfuel technology has been abandoned by energy companies and governments as uncommercial
- The White Rose project could meet carbon targets by burning biomass of which Drax already imports millions of tonnes.<sup>16</sup> It is not low carbon and therefore could never, even if added to successful CCS bring negative emissions<sup>17</sup>.
- The Green Investment Bank funded projects only have to meet one of its 5 green targets and this does not have to be 'carbon reduction'.
  - GIB 'Green lighted' and kickstarted Drax's biomass conversion with a £100m loan without which Vince Cable said it would have had to close<sup>18</sup>. It told the EAComm in 2013 that this loan could be rescinded if Drax did not adhere to its agreements<sup>19</sup>. Privately they have said 'this will never happen'.
  - GIB is now supporting Energy from Waste on the back of a flawed report<sup>20</sup> identifying a 'funding gap'. Campaigners and consultants identify over-capacity, inefficiency of <30%, reduced recycling and reuse rates, and dangerous pollution as issues. EfW technology is likely to higher carbon than grid average emissions in very few years so not a solution<sup>21</sup>.
  - GIB have been investing in 'biomass gasification', highly inefficient, polluting, to be delivered by Nexterra who have never successfully delivered a similar project anywhere, and developed by Carbonarius who have presided over several failed gasifier projects and the loss of ~£50m of investors money<sup>22</sup>.
- In 2009 the government estimated that air pollution resulting from its biomass policy would result in between 340,000 and 1.75m life years lost in 2020<sup>23</sup>. Bio-energy emits high levels of NOx and small particulates. The government is failing to meet NO2 reduction targets and is not adequately monitoring 'small particulate pollution (PM2.5 and smaller) for which there is no safe level according to the WHO.

### Why not?

- Government insists on a finite pot under the Levy Control Framework. This work should be a first-line government policy and should be supported with a much bigger budget from general taxation.
- Government policy responds to corporate lobbying (Drax) and favours the big centralised players over small-scale, local, domestic transformation.
- The minister cites 'energy efficiency' as a way to 'keep down bills for people and businesses'. 'Reducing energy demand, not just generating more energy,' will 'help to meet our energy security needs'<sup>24</sup>. Yet funding for energy efficiency and cheap, domestic, using freely available energy sources (wind, solar) is cut.
- Biomass subsidies are not displacing fossil energy but genuinely low carbon renewables.

### How might policy be improved?

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<sup>16</sup> <http://www.biofuelwatch.org.uk/2015/white-rose-briefing/>

<sup>17</sup> <https://www.opendemocracy.net/ourkingdom/oli-munnion/blazing-trail-of-deception-white-rose-project-and-%E2%80%9Cnegative-emissions%E2%80%9D-techno>

<sup>18</sup> [http://www.ft.com/cms/s/d46bfe86-b7e9-11e2-bd62-00144feabdc0,Authorised=false.html?\\_i\\_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fd46bfe86-b7e9-11e2-bd62-00144feabdc0.html&\\_i\\_referer=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fd46bfe86-b7e9-11e2-bd62-00144feabdc0.html](http://www.ft.com/cms/s/d46bfe86-b7e9-11e2-bd62-00144feabdc0,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fd46bfe86-b7e9-11e2-bd62-00144feabdc0.html&_i_referer=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fd46bfe86-b7e9-11e2-bd62-00144feabdc0.html)

<sup>19</sup> <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenvaud/191/19106.htm> para47

<sup>20</sup> <http://www.greeninvestmentbank.com/news-and-insight/2014/capacity-gap-means-uk-needs-more-waste-infrastructure/>

<sup>21</sup> <http://resource.co/article/gib-investments-risk-hindering-country%E2%80%99s-efforts-increase-recycling-9949>

<sup>22</sup> <http://www.biofuelwatch.org.uk/2015/biomass-gasification-and-pyrolysis/>

<sup>23</sup> <http://www.publications.parliament.uk/pa/cm200809/cmhansrd/cm091110/text/91110w0010.htm>

<sup>24</sup> <https://www.gov.uk/government/speeches/secretary-of-state-speech-on-climate-change>

1. Cease 'Environmentally Harmful Subsidies' for bio-energy (especially biomass electricity) and energy from waste<sup>25</sup>
2. Redefine Renewable Energy as only that which does more good than harm, excluding bio-energy and energy from waste.
3. Invest in demand reduction, energy efficiency and home insulation, reducing emissions, the need for new generating capacity and household costs and improving well-being and health.

**Where should responsibility lie in Government for ensuring the sustainable development approach is adopted by all Government departments?**

1. Since we the Prime Minister has been compromised ('greenest government ever/green crap') there should be scrutiny/legal enforcer department, the Office for Environmental Responsibility?perhaps with a strong steer from the Climate Change Committee and EAComm. It should have powers to scrutinise policy and legislation and their execution and ensure that it is clear of loop-holes and unintended consequences. It should seek input from specialist NGOs such as Biofuelwatch and scrutinise lobbying by corporates and vested interests.

**What metrics could the Committee use to monitor the Government's performance on sustainable development over the course of the Parliament?**

1. Genuine long-term carbon reduction with shortest carbon debt and positive environmental and social impact.
2. Amount of electricity produced from genuine renewables (excluding Biomass and Waste from Energy).
3. Amount of energy demand reduced by government measures (rather than destroyed by recession)
4. Number of houses retrofitted with full spec insulation including wall and floor.
5. How much it advances the essential transition away from burning and fossil fuels, building energy resilience, ensuring infrastructure is fit for the future – houses to be lived in with less input – grid to be balanced from renewables.

~1495 words not including questions and footnotes.