

DRAFT STATUTORY INSTRUMENTS

**2015 No.**

**The Renewable Heat Incentive Scheme  
and Domestic Renewable Heat Incentive  
Scheme (Amendment) Regulations 2015**

**PART 2**

**Amendments to the 2011 Regulations**

**Sustainability criteria**

9. After Schedule 2 insert—

“SCHEDULE 2A

Regulation 36A

**Greenhouse gas criteria**

1. Solid biomass, biogas or biomethane meets the greenhouse gas criteria if the lifecycle greenhouse gas emissions associated with each consignment of that solid biomass, biogas or biomethane are less than or equal to 34.8g of CO<sub>2</sub>eq per MJ of heat generated (in the case of solid biomass or biogas) or biomethane injected.

2. Lifecycle greenhouse gas emissions shall be calculated as follows—

(a) where heat and power is generated from solid biomass or biogas, the following formula shall be used—

$$\frac{E}{\eta_h} \left( \frac{C_h \times \eta_h}{\eta_{el} + C_h \times \eta_h} \right)$$

(b) where heat is generated from solid biomass or biogas, the following formula shall be used—

$$\frac{E}{\eta_h}$$

(c) where biomethane is produced from biogas, lifecycle greenhouse gas emissions shall be E.

3. For the purposes of paragraph 2—

(a)  $\eta_h$  is the efficiency of the plant in which the heat is generated, calculated

as  $\frac{H}{F}$  where—

(i) H is the heat produced by the plant in the form of liquid or steam from all fuels used in that plant, and

- (ii) F is the energy content of all those fuels;
- (b)  $\eta_{el}$  is the efficiency of the plant in which electricity is generated, calculated as  $\frac{A}{F}$  where—
- (i) A is the total amount of electricity generated by the plant from all the fuels used by that plant, and
- (ii) F is the energy content of all those fuels;
- (c)  $C_h$  is equal to—
- (i) where the temperature (T) is less than 423 kelvin, 0.3546, and
- (ii)  $\frac{T - 273}{T}$  where T is temperature measured in kelvin of the heat produced by the plant in the form of liquid or steam;
- (d) E is the greenhouse gas emissions expressed in grammes of CO<sub>2</sub> eq per MJ of heat produced, from the production of the biomass, biogas or biomethane and calculated—
- (i) using the actual value method in the case of participants producing biomethane for injection or using heat for a process in an accredited RHI installation with an installation capacity of 1MWth or above; or
- (ii) in all other cases, using the actual value method or the default value method.

**4. In this Schedule—**

- (a) “actual value method” means the method set out in Part C of Annex 5 of [Directive 2009/28/EC](#) of the European Parliament and of the Council on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives [2001/77/EC](#) and [2003/30/EC](#)(1) but with the following modifications to that part—
- (i) in paragraph 1—
- (aa) for “and use of transport fuels, biofuels and bioliquids” substitute “of solid biomass, biogas or biomethane”;
- (bb) for “E=total emissions from the use of the fuel” substitute “E=greenhouse gas emissions from the production of the solid biomass, biogas or biomethane”; and
- (cc) for “ $e_u$ =emission from the fuel in use” substitute “ $e_u$ =zero”;
- (ii) in paragraph 2, for “fuels” and “fuel” substitute “solid biomass, biogas or biomethane”;
- (iii) omit paragraphs 3 and 4;
- (iv) in paragraph 7—
- (aa) for each reference to “biofuel” substitute “solid biomass, biogas or biomethane”, and
- (bb) omit the words “or bioliquid” in each place in which they occur;
- (v) in paragraph 11—
- (aa) at the end of the first sentence add “and in the case of biomethane shall include emissions from processing biogas into biomethane”;

---

(1) O.J. L 140 5.6.2009 p.16.

- (bb) for “fuel” substitute “solid biomass, biogas or biomethane”;
- (vi) in paragraph 12, after “storage and distribution of finished materials” insert “, except in the case of biomethane”;
- (vii) omit paragraph 13;
- (viii) in paragraph 14, for “fuel” substitute “solid biomass, biogas or biomethane”;
- (ix) in paragraph 16, for each reference to “fuel” substitute “solid biomass or biogas”;
- (x) in paragraph 17, for each reference to “fuel” substitute “solid biomass or biogas”;
- (xi) in paragraph 18—
  - (aa) for “fuel” and “fuels” substitute “solid biomass or biogas”;
  - (bb) omit the words “In the case of biofuels and bioliquids,”;
  - (cc) before “and residues from processing” insert “residues from forestry, arboriculture, aquaculture and fisheries”;
- (xii) for paragraph 19 substitute—

“19. Where material is added to the solid biomass to act as a binding agent or to reduce the emissions of dust, carbon dioxide, methane or nitrous oxide from the use of the biomass, the material so added shall be considered to have zero greenhouse gas emissions provided that the material so added does not exceed 2% by weight of the solid biomass.”;

- (b) “default value method” means the use of the figures set out in the second column of the following table headed “Default values for solid biomass and biogas” to represent ‘E’ in relation to the corresponding type of fuel set out in the first column of that table;
- (c) “energy content” means the energy contained within a substance (whether measured by a calorimeter or determined in some other way) expressed in terms of the substance’s net calorific value within the meaning of BS 7420:1991 (Guide for the determination of calorific values of solid, liquid and gaseous fuels (including definitions))(2).

#### **Default values for solid biomass or biogas**

<i>Primary solid biomass or biogas</i>	<i>Default value for greenhouse gas emissions (in grams of CO<sub>2</sub> eq per MJ of heat produced)</i>
Wood chips from forest residues (European temperate continental forest)	1
Wood chips from forest residues (tropical and sub-tropical forest)	25
Wood chips from short rotation forestry (European temperate continental forest)	4
Wood chips from short rotation forestry (tropical and sub-tropical, for example, eucalyptus)	28
Wood briquettes or pellets made from European temperate continental forest residues where the production process uses wood as fuel	2

<i>Primary solid biomass or biogas</i>	<i>Default value for greenhouse gas emissions (in grams of CO<sub>2</sub> eq per MJ of heat produced)</i>
Wood briquettes or pellets made from tropical or sub-tropical forest residues where the production process uses natural gas as fuel	20
Wood briquettes or pellets made from tropical or sub-tropical forest residues where the production process uses wood as fuel	17
Wood briquettes or pellets made from the product of short rotation forestry in European temperate continental forest where the production process uses wood as fuel	4
Wood briquettes or pellets made from the product of short rotation forestry in European temperate continental forest where the production process uses natural gas as fuel	22
Wood briquettes or pellets made from the produce of short rotation forestry in tropical and sub-tropical forest, for example eucalyptus, where the production process uses wood as fuel	22
Wheat straw	2
Bagasse briquettes using wood as process fuel	17
Bagasse bales	20
Palm kernel	27
Rice husk briquettes	28
Miscanthus bales	7
Biogas from wheat and straw (wheat whole plant)	21
Biogas from organic maize as a whole plant (maize as main crop)	19

## SCHEDULE 2B

Regulation 36A

## Land criteria

## PART 1

## Interpretation

1. In this Schedule, material is added to solid biomass for an exempt purpose if—
  - (a) it is added for the purpose of the use of that solid biomass as a fuel, in order to—
    - (i) act as a binding agent, or
    - (ii) reduce emissions of dust, carbon dioxide, methane or nitrous oxide from the use of the fuel, and
  - (b) it does not exceed 2% of the weight of the fuel.

**2.** In this Schedule—

“continuously forested area” means land of an area of more than one hectare which includes—

- (a) trees more than five metres tall providing a tree canopy cover of more than 30%; or
- (b) trees collectively having the capacity to provide a tree canopy cover of more than 30% which—
  - (i) are more than five metres tall; or
  - (ii) have the capacity to grow to a height of more than five metres;

“designated for nature protection purposes” means designated pursuant to the law of the United Kingdom or of any part of the United Kingdom or pursuant to the law of any country or territory outside the United Kingdom, for the purpose of protecting the natural environment;

“highly biodiverse grassland” is to be construed in accordance with Article 17(3)(c) of [Directive 2009/28/EC](#) of the European Parliament and of the Council on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives [2001/77/EC](#) and [2003/30/EC](#)(3);

“lightly forested area” means land of an area of more than one hectare which includes—

- (a) trees more than five metres tall providing a tree canopy cover of between 10% and 30%, or
- (b) trees collectively having the capacity to provide a tree canopy cover of between 10% and 30% which—
  - (i) are more than five metres tall; or
  - (ii) have the capacity to grow to a height of more than five metres;

“local and national laws” means laws applying in the locality in which the site is situated, whether made at a local or national level;

“primary forest” means woodland of native species, where there is no clearly visible indication of human activity and ecological processes are not significantly disturbed; and

“wetland area” means land that is covered with or saturated by water—

- (a) permanently; or
- (b) for a significant part of the year.

**3.** For the purposes of this Schedule—

- (a) solid biomass was obtained from a former continuously forested area if the land—
  - (i) was a continuously forested area at any time during January 2008; and
  - (ii) was not a continuously forested area when the solid biomass was obtained from it;
- (b) solid biomass was obtained from a former lightly forested area if the land—
  - (i) was a lightly forested area at any time during January 2008; and
  - (ii) was not a lightly forested area or a continuously forested area when the solid biomass was obtained from it; and
- (c) solid biomass was obtained from a former wetland area if the land—
  - (i) was a wetland area at any time during January 2008; and
  - (ii) was not a wetland area when the solid biomass was obtained from it.

---

(3) OJ L No 140, 5.6.2009, p 16.

## PART 2

### Land criteria for solid biomass which is wood or wholly derived from wood, excluding energy crops

4. Solid biomass which is wood or wholly derived from wood (except energy crops) meets the land criteria if—

- (a) at least 70% of each consignment; or
- (b) where more than one consignment is used in a quarterly period, at least 70% of the solid biomass used

meets one or more of the requirements in paragraph 5.

5. The requirements in this paragraph are that the solid biomass—

- (a) was grown within an area of forest or other land which is managed in accordance with a management plan that meets the requirements specified in paragraph 7;
- (b) was residue from arboriculture; or
- (c) was removed for the purpose of restoring or maintaining the ecosystem of an area which was not a forest.

6. Material added to solid biomass for an exempt purpose shall be disregarded for the purposes of paragraph 4.

7. A management plan meets the requirements specified in this paragraph if it—

- (a) requires the area to be managed in a way that ensures harm to ecosystems is minimised, in particular by—
  - (i) assessing the impacts of the extraction of wood from the area and adopting plans to minimise any negative impacts,
  - (ii) protecting soil, water and biodiversity,
  - (iii) controlling the use of chemicals and ensuring that chemicals are used in an appropriate way,
  - (iv) wherever possible, encouraging natural pest control mechanisms and using methods of pest control that cause the least disruption to ecosystems, and
  - (v) disposing of waste in a manner that minimises any negative impacts;
- (b) requires—

- (i) the area to be managed in a way that ensures its productivity is maintained, in particular by—

- (aa) adopting plans to avoid significant negative impacts on productivity,
    - (bb) adopting procedures for the extraction of wood that minimise the impact on other uses of the area,
    - (cc) ensuring all of the contractors and workers who are working in the area of forest or other land are adequately trained in relation to the maintenance of productivity, and
    - (dd) maintaining an adequate inventory of the trees in the area (including data on the growth of the trees and on the extraction of wood) so as to ensure that wood is extracted from the area at a rate which does not exceed its long-term capacity to produce wood; and

- (ii) monitoring of compliance with the requirement in paragraph (i), reviewing the results of that monitoring and updating the management plan accordingly;

- (c) requires the area to be managed in a way that ensures health and vitality of ecosystems is maintained, in particular by—
    - (i) adopting plans to maintain or increase the health and vitality of ecosystems,
    - (ii) adopting plans to deal with natural events such as fires, pests and diseases, and
    - (iii) taking adequate measures to protect the area from unauthorised activities such as illegal logging, mining and encroachment;
  - (d) requires the area to be managed in a way that ensures biodiversity is maintained, in particular by—
    - (i) implementing safeguards to protect rare, threatened and endangered species,
    - (ii) conserving key ecosystems in their natural state, and
    - (iii) protecting features and species of outstanding or exceptional value;
  - (e) requires those responsible for management of the area (and any contractors engaged by them) to comply with the local and national laws relating to health and safety and the welfare of workers at the site;
  - (f) requires those responsible for the management of the area to have regard to—
    - (i) legal, customary and traditional rights of tenure and land use,
    - (ii) mechanisms for resolving grievances and disputes relating to tenure and land use rights, site management practices and working conditions,
    - (iii) safeguarding the health and safety and rights of workers at the site;
  - (g) requires the regular assessment of the extent to which those responsible for the management of the area have met the requirements set by the management plan in accordance with sub-paragraphs (a) to (f);
  - (h) has been adopted following a process—
    - (i) which sought to obtain a balanced representation of the views of interest groupings in relation to the forest or other location where the wood was grown,
    - (ii) which sought to ensure that no single interest grouping could dominate the process for setting the management plan,
    - (iii) which sought to ensure that no decision on the contents of the management plan could be made in the absence of agreement from a majority of each interest grouping in relation to the forest or other location where the wood was grown;
  - (i) sets out a process for making changes to the management plan—
    - (i) which seeks to ensure that no single interest grouping can dominate the process, and
    - (ii) which seeks to ensure that no decision on changes to the management plan can be made in the absence of agreement from a majority of each interest grouping in relation to the forest or other location where the wood was grown; and
  - (j) subject to paragraphs (a) to (i), is consistent with the Forest Europe Sustainable Forest Management Criteria<sup>(4)</sup> or an equivalent set of international principles for the sustainable management of land.
8. For the purposes of paragraph 7(h) and (i), each of the following is an interest grouping in relation to a forest or other location where the wood was grown—
- (a) persons with interests in the location which are predominantly economic in nature,

---

(4) published at [Khttp://www.foresteurope.org/sfm\\_criteria/criteria](http://www.foresteurope.org/sfm_criteria/criteria).

- (b) persons with interests in the location which are predominantly environmental in nature, and
- (c) persons with interests in the location which are predominantly social in nature.

**9.** In this Part, “Forest Europe Sustainable Forest Management Criteria” means the criteria for sustainable forest management in Lisbon Resolution L2 of the third Ministerial conference on the Protection of Forests in Europe held in June 1998<sup>(5)</sup>.

## PART 3

### Land criteria for other solid biomass including energy crops

**10.** Solid biomass which is not wood or derived wholly from wood, or which is an energy crop, meets the land criteria if it—

- (a) was not obtained from a protected source;
- (b) was an energy crop in respect of which financial assistance was paid under the Energy Crops Regulations 2000<sup>(6)</sup> or under an equivalent financial assistance scheme;
- (c) was residue (other than residue from agriculture, aquaculture, fisheries or forestry).

**11.** Material added to solid biomass for an exempt purpose shall be disregarded for the purposes of paragraph 10.

**12.** Solid biomass is obtained from a protected source if it is obtained from—

- (a) land which at any time during or after January 2008 was primary forest;
- (b) except where paragraph 13 applies, land which at any time during or after January 2008 was designated for nature protection purposes;
- (c) highly biodiverse grassland;
- (d) except where paragraph 14 applies, land which at any time during January 2008 was peatland;
- (e) a former continuously forested area;
- (f) a former lightly forested area; or
- (g) a former wetland area.

**13.** This paragraph applies if the production of the solid biomass did not interfere with the nature protection purposes for which the land was designated.

**14.** This paragraph applies if the cultivation and harvesting of the solid biomass did not involve the drainage of previously undrained soil.”

---

(5) Lisbon Resolution L2 is entitled “Pan-European Criteria, Indicators and Operational Level Guidelines for Sustainable Forest Management”. Copies are available at [http://www.foresteurope.org/ministerial\\_conferences/lisbon1998](http://www.foresteurope.org/ministerial_conferences/lisbon1998). Copies can also be obtained from the Department of Energy and Climate Change.

(6) S.I. 2000/3042.