

EUROPEAN COMMISSION

Brussels, 19.09.2012 C(2012) 6330 final

In the published version of this decision, some information has been omitted, pursuant to articles 24 and 25 of Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty, concerning non-disclosure of information covered by professional secrecy. The omissions are shown thus [...].

PUBLIC VERSION

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Subject: State aid SA.34051 (2012/N) – United Kingdom Energy Works Hull

Sir,

The Commission wishes to inform you that the individual aid to Energy Works Hull Ltd. for the construction of an "energy from waste" gasification plant in Kingston upon Hull is compatible with the common market in accordance with Article 107(3)(c) of the Treaty on the Functioning of the European Union ("TFEU") and has therefore decided not to raise objections to the notified measure.

1. **PROCEDURE**

- 1. Following prenotification contacts, UK notified its proposed measure on 23.03.2012.
- 2. The Commission sent a request for additional information on 27.04.2012, to which the UK authorities replied on 17.07.2012.

The Rt Hon William HAGUE Secretary of State for Foreign Affairs Foreign and Commonwealth Office King Charles Street London SW1A 2AH United Kingdom

2. **DESCRIPTION**

2.1. Background and objective

- 3. The UK authorities have notified their intention to provide GBP 19.904 million in investment aid to support an individual company, in the construction and commissioning of an "energy from waste" gasification plant in Kingston upon Hull. The facility will generate 25MW (gross) of electricity (with a further 0.25MW generated from Solar Photovoltaics) from 190kT of waste materials.
- 4. The aid beneficiary will be the newly founded Energy Works (Hull) Limited (hereinafter "Energy Works").
- 5. The notified measure will provide European Regional Development Fund (ERDF) grant funding to Energy Works (Hull) Limited, to undertake the building and commissioning of an Advanced¹ Fluidised Bed Gasification plant creating a partially renewable energy facility in the economically underperforming area of Hull.
- 6. The total budget for the project will be $[...]^*$ (ex-Vat).

2.2. Project description and environmental impact

- 7. Energy Works will use Advanced Fluidised Bed Gasification to recover energy from waste materials. Allegedly, the Advanced Fluidised Bed Gasification technology will allow cleaner and more efficient recovery of energy from waste than is achievable through traditional techniques.
- 8. According to the information submitted by the UK authorities although gasification technology has been widely used, it has not been used in the combination of fluidised bed gasification with the use of waste as a feedstock. Key outcome of the project will be the development of this technology, with the potential to roll-out future projects throughout Europe.
- 9. The feedstock of the facility will initially comprise of approximately 150,000 tonnes of waste wood and 37,000 tonnes of processed commercial and industrial waste (CIW RDF). It is anticipated that the facility will eventually shift its fuel mix towards the processing of more municipal solid waste materials.
- 10. The primary fuel source for Energy Works will be approximately 150,000 tonnes of waste wood. This will be sourced from the local area where possible to reduce transport emissions.
- 11. A smaller fraction of the fuel feedstock will come from local commercial & industrial solid waste. Approximately 37,000 tonnes of waste will be sourced locally. Before

¹ The terms "Advanced Gasification" and "Standard Gasification" are terms used by OFGEM (Office of Gas and Electricity Markets) and the Energy industry in relation to the quality of synthetic gas produced by a Gasifier. "Advanced Gasification" produces a synthetic gas (syngas) with higher energy content than that of "Standard Gasification".

^{*} Business secret

Energy Works will receive the feedstock, pre-treatment is required, this process will remove significant amounts of recyclable materials primarily aggregates, glass, plastic and metals. This increases the biomass portion of the waste and creates a more consistent fuel.

- 12. Energy Works will only use conventional fuels (petroleum, gas, coal or nuclear) outside of normal operation. Natural gas consumption is expected to be approximately 1,030 MWh per annum. This will only occur during start up/ shut down and in order to maintain an 850°C temperature to comply with the Waste Incineration Directive.
- 13. During normal operation no conventional fuels will be used. However the feedstock will contain a non-biomass portion. The non-biomass portion will consist of fossil derived materials that it is not economically beneficial to remove from the feedstock such as paints and adhesives on the Waste Wood, and non-recyclable plastics in the Refuse Derived Fuel (RDF).
- 14. The normal feedstock will be 77% waste wood, which is anticipated to consist of 95% biomass material and have a nett calorific value of 14MJ/kg. The remaining 23% of the feedstock will be Commercial & Industrial Waste Refuse Derived Fuel (herein CIW RDF) which is anticipated to consist of 50% biomass material and have a net calorific value of 17MJ/kg. The attribution to electricity production of each fuel is stated in the table below:

Fuel	NCV (MJ/kg)	Renewable Energy (%)	Point of Use	Attributable Electricity Production (%)
Waste Wood	14	95%	Normal Operation	77%
Refuse Derived Fuel	17	50%	Normal Operation	23%
Natural Gas	39	0%	Start up/ Shut down	0%

Table 1: Energy Works Energy Sources

- 15. The biomass portion of both feedstock sources comply with the definition of biomass as set in the Environmental Aid Guidelines (EAG) point 70 (6) (Biomass "biomass means the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste").
- 16. In support of the gasifier, a facility for feedstock storage will be constructed. The storage facility will be capable of holding enough feedstock to feed the gasifier for approximately 10 weeks. According to the UK authorities this will provide a buffer against delayed supply of feedstock materials, as well as providing an opportunity to protect against short term price fluctuations. Materials handling systems will link the main facility with that of the feedstock storage buildings.
- 17. Energy Works plant has been developed to receive screen and store the two waste streams indicated in the table below (base scenario). These are blended onto a common conveyor feeding the gasifier feed hoppers. The table shows the annual consumption of

the plant with an availability of 90%. The fossil derived material (such as plastic) contributes approximately 50% of the CIW RDF energy as shown. Overall, the renewable energy content of the combined feedstock is 84.65%.

Capacity	25 MWe				
Availability	90%				
Fuel intake	23 t/h				
	Quantity (tpa)	LCV (MJ/kg)	Energy (MW)	Energy (%)	Renewable Energy %
Waste wood	148,610	14	73.3	77%	95%
CIW RDF	36,557	17	21.9	23%	50%

Table 2 - Base Scenario

18. According to the UK authorities the worst case scenario as regards the biomass content of the feedstock would be that the Energy Works plant would be fuelled by an alternative municipal solid waste derived feedstock (herein MSW RDF) in future years. The UK authorities stated that this possibility is quite uncertain. An MSW RDF waste stream would require substantial pre-treatment and would reduce the average energy and biomass content of the combined feedstock. Under the worst case scenario the renewable energy content of the combined feedstock would be 61.7%. The below table shows the worst case scenario anticipated fuel mix based upon a higher proportion of RDF and less waste wood.

Capacity Availability	25 Mwe 90%				
Fuel Intake	23 t/h				
	Quantity (tpa)	LCV (MJ/kg)	Energy (MW)	Energy (%)	Renewable Energy content %
MSW RDF	106,813	12	44.7	47%	50
Waste wood	49,451	14	24.1	26%	95
CIW RDF	46,996	17	25.3	27%	50
			94.2	100%	61.7

Table 3 – Worst Case Scenario

- 19. The Commission notes that Energy Works aims to maximize the biomass portion of the feedstock as non-biomass electricity generation does not attract renewable energy subsidies (Renewable Obligations Certificates, hereinafter ROC).
- 20. The gasification process takes place in two stages. In the first stage, the feedstock is gasified in a sub-stoichiometric atmosphere. Volatile gases (methane, carbon monoxide and hydrogen) are driven off the feedstock in the resulting syngas. In the second stage the syngas is oxidised and a hot combustion gas is produced. A typical composition of syngas (dry) is provided below:

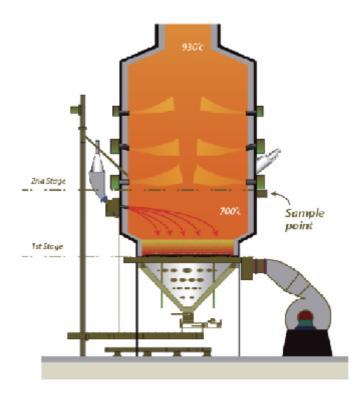
Compound	Proportion (%)
H ₂	6%
CO	19%
CO ₂	17%
CH ₄	5%
N ₂	53%
	100%

Table 4 - Syngas Composition

- 21. Char (from the feedstock) is burnt in the gasifier bed in order to sustain the syngas production process without the need for a supplementary fuel. The syngas is sampled as it travels upwards in the chamber into the second stage; here the syngas is oxidised and a hot combustion gas (suitable for raising steam) exits the top of the chamber.
- 22. Allegedly the fluidised bed gasification process provides several advantages over more conventional combustion technologies. Some are listed below:
 - Better fuel mixing/heat distribution, improved conversion efficiency
 - Lower fan power requirement, improved conversion efficiency
 - Lower operating temperature, less emissions to air
- 23. Furthermore the gasification process produces a gas with the potential to be used in high efficiency processes and it is complementary to recycling (easy to extract recyclates from the pre-treatment line). According to UK authorities the syngas production is gaining more importance to meet long term energy needs². Moreover, gasification technology is considered to be an emerging technology in the waste treatment sector requiring careful pre-treatment of waste as opposed to simple 'mass burn' incineration, which does not require a highly conditioned feedstock. Consequently there is a capital cost related to the pre-treatment plant, or as applicable in the case of Energy Works a lower gate fee is applicable to the RDF. This makes such a plant more expensive than a standard combustion plant. Figure 1 below shows the staged gasification process.

² According to the DECC Renewables Obligation Banding Review – Public Consultation, "Advanced Conversion Technologies have the potential, in the long term to produce a wide range of energy outputs – electricity, heat and liquid fuel as well as bio-methane and renewable low carbon chemicals."

Figure 1 - Gasification Process



- 24. Energy Works using a partially carbon neutral energy source, by sourcing waste wood and biodegradable fraction of commercial & industrial solid waste will create significant CO_2 emission savings over the lifetime of the plant. It is expected that approximately 57,000 tonnes of CO_2 will be saved annually once the plant is fully operational compared to the emissions of a conventional gas fired electricity generating plant.
- 25. Additional greenhouse gas savings are made by not having waste decompose at landfill releasing harmful methane³. The facility will divert approximately 190,000 tonnes of waste material from landfill per annum for use as feedstock for the gasifier. It is calculated that Energy Works will create 30,860.28 tonnes of CO_2 equivalent savings per annum⁴ by diverting waste from landfill.
- 26. Energy Works plant will help to meet waste to landfill targets⁵ of reducing biodegradable municipal waste to landfill. This target aims to reduce waste to landfill to 10,161,000 tonnes by 2020; this will be 35% of 1995 level as per the Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste⁶.

³ One tonne of methane is equivalent to 21 tonnes of CO_2 in terms of global warming

⁴ According to Defra's Impact of Energy from Waste and recycling Policy on UK Greenhouse Gas Emissions – Final Report, January 2006 indicates that the CO2 emission factor (tonnes CO2 produced per tonne of waste processed) for the land filling of 'miscellaneous combustible material' is 165kg CO2 per tonne of waste. Therefore by diverting approximately 190,000 tonnes of waste away from landfill every year will create 30,860.28 tonnes of CO₂ equivalent savings.

⁵ <u>http://www.defra.gov.uk/environment/waste/local-authorities/landfill-scheme/</u>

⁶ OJ L 182, 16.7.1999, p. 1 – 19.

- 27. In respect of the proximity principle, Energy Works plant has been placed in a location where a significant quantity of the waste material to power the development can be sourced from. Currently, this waste is being transported by road out of the area. The Energy Works development would process this material by reducing the need to transport waste large distances and their transport emissions.
- 28. Pre-treatment of the feedstock of Energy Works is required to increase the biomass portion of the waste and to create a more consistent fuel. During pre treatment the recyclable part of waste is removed. This has the associated benefit of also increasing recycling of these products which would otherwise go to landfill respecting the waste hierarchy.
- 29. Directive 2009/28/EC⁷ obliges Member States collectively to generate 20% of total energy from renewable sources by 2020 (using 1990 levels as baseline). In 2009 2010, the UK produced 6.6% of its electricity from renewable sources and so, requires further energy infrastructure deployment in order to reach the 20% mark in eight years time. The total power output from the Energy Works project will contribute to this target.
- 30. EU Parliament and Council Decision 406/2009/EC⁸ states that all Member States must cut green house gas emissions by 20% from 1990 levels. Energy Works project would help achieve this target by using sustainable sources to produce power it would reduce carbon dioxide emissions by 92% compared to generating the same amount of power from the UK's average fuel mix⁹. Furthermore, Energy Works project contributes towards the 20% reduction target by preventing material to go to landfill and produce methane as a result.
- 31. Energy Works development will include a berthing facility, to carry out collections and deliveries of feedstock via waterborne transport, a more environmental friendly form of transportation compared to road transport. In relation to CO₂ emissions, barge movements emit approximately 10% of those emitted by road transport and so represent a much more environmental sustainable form of transport material.
- 32. Energy Works project has undergone a detailed Environmental Assessment which outlines the potential environmental impacts which may result from any activity associated with the development. The Environmental Statement has provided advice on mitigation measures and monitoring procedures in the form of 'Management Plans' for any potential negative impacts associated with, or derivative of the construction and operation stages.

⁷ OJ L 140, 5.6.2009, p. 16–62

⁸ OJ L 140, 5.6.2009, p. 136–148

⁹ UK Department of Energy and Climate Change (DECC)

- 33. Directive 2004/35/EC of the EP and the Council on Environmental liability with regard to the prevention and remedying of environmental damage¹⁰ that implements the polluter pays principle, applies to the occupational activities of Energy Works project. In respect to the polluter pays principle, the project has been assessed to identify potential environmental impacts which may pose a threat to the environment. The project does not involve any remediation works to the Energy Works site.
- 34. In addition a by-product of the gasification process is an inert ash which will be captured and available for use as an alternative raw material in cement kilns or as aggregate. This will reduce the need to use non-renewable raw materials and create environmental benefits by off setting their use.
- 35. It is expected that the project will also lead to improved knowledge from research & development and will improve sustainable waste management and lower risks in similar future projects.

2.3. Scope of the notification, legal basis, granting authority

- 36. The notification concerns investment aid for the generation of electricity from the biodegradable part of waste based on advanced fluidised bed gasification technology.
- 37. Aid will be funded through the European Regional Development Fund (ERDF) from the granting authority of the Department for Communities and Local Government (DCLG).
- 38. The Structural Funds Regulations, Yorkshire and Humber ERDF Operational Programme 2007-2013, Statutory Instrument 1398-2011 transferring ERDF managing authority status from Yorkshire Forward to the Department of Communities and Local Government set out the legal framework upon which the grant is offered¹¹.
- 39. The ERDF Managing Authority exercises discretion over the award of grants, reviewing all applications before deciding on whether to award support.
- 40. The project falls under the scope of Priority Axis 1 of the Competitiveness Operational Programme for Yorkshire and the Humber 2007-2013.
- 41. Notification of the measure was necessary pursuant to the 2008 Community Guidelines on State Aid for Environmental Protection (hereinafter referred to as "the Environmental Aid Guidelines" or "EAG"),¹² which stipulates that Member States should notify in advance any investment aid granted.

¹⁰ OJ L 143, 30.4.2004, p. 56–75

¹¹ European Council Regulation 1080/2006 (OJ L 210/1 of 31.7.2006) as amended European Council Regulation 1083/2006 (OJ L 210/25 of 31.7.2006) as amended European Commission Regulation 1828/2006 (OJ L 371/1 of 27.12.2006)

¹² OJ C 82, 1.4.2008, p. 1.

2.4. Beneficiary, form of the aid, aid intensity

- 42. The Beneficiary of the measure concerned is Energy Works (Hull) Limited that is located in in the city of Kingston upon Hull which is a region eligible for assistance under Article 107 (3)(c) TFEU.
- 43. Energy Works is active in electric power generation, waste collection, treatment and disposal activities; materials recovery in the area of Hull.
- 44. The overall aid amount of the measure concerned is 19,904,304 GBP and will be granted upon defrayal and milestones. The total budget for the build of the Energy Works plant is [...] ([...]). This corresponds according to the submitted "Cost build-up of Energy Works site" calculations to the capital costs of Energy Works. Construction of the facility is anticipated between March 2012 and July 2014. The aid is fully taxable to UK corporation tax in the hands of the recipient.
- 45. The maximum aid intensity for measures falling under 3.1.6.1 "Promotion of Renewable Energy" under the Environmental Aid Guidelines is 60% of the eligible investment costs. The Commission notes, as discussed in greater detail in Section 2.5 below, that Energy Works applies for an aid intensity of [...] and that aid intensity reaches the rate of [...] in the worst case scenario.
- 46. The aid instrument is a direct grant provided under the terms of the Structural Funds Regulations, which set out the legal framework upon which the grant is offered, in particular the Competitiveness Operational Programme for Yorkshire and the Humber 2007-2013 (Priority 1 Axis).

2.5. Counterfactual Scenario – Eligible Costs Calculations

- 47. The UK authorities notified the measure in accordance with section 3.1.6.1 'Promotion of Renewable Energy' of the Environmental Aid Guidelines. The eligible costs according to point 81(b) are the additional costs to bring about the environmental protection over the costs of a conventional facility (counterfactual scenario) producing the same outputs without the additional environmental protection.
- 48. The Counterfactual Scenario is based upon a Combined Cycle Gas Turbine generating station (herein CCGT plant). The Counterfactual Scenario facility is technically comparable to the Energy Works facility; the generating capacity is equal to that of the Energy Works facility. The facility could be credibly realised without aid as demonstrated by the UK authorities in the submitted projected cash flows. The projected cash flows are based upon an industry recognised report¹³.

¹³ <u>http://www.decc.gov.uk/assets/decc/statistics/projections/71-uk-electricity-generation-costs-update-.pdf</u> Mott McDonald Report June 2010

- 49. In this case the two scenarios that are used for the calculation of the eligible costs are the proposed Energy Works site with a 25MW capacity to produce electricity through gasification of waste wood and commercial and industrial waste and a comparable conventional gas fired Combined Cycle Gas Turbine plant (CCGT). The comparable CCGT option has a lower total capacity due to a higher efficiency and the lower parasitic load of the plant compared to Energy Works.
- 50. The costs of building a CCGT plant were based upon the UK Electricity Generation Costs Update report¹⁴ on the Costs of Low Carbon Generation Technologies. This prices a CCGT plant with a comparable output at 16,225,660 GBP.
- 51. In addition to these capital costs the benefits from operating during the first 5 years are factored into the calculations of eligible costs as per point 82 EAG. The extra net benefits from the Energy Works over a CCGT are calculated at [...] over the first 5 years.
- 52. The net benefits are derived from revenues (primarily the sale of electricity and ROCs) less the operational costs (primarily fuel and labour). The difference between these net benefits arising from Energy Works compared to the counterfactual situation is subtracted from the difference in capital cost of the two options.
- 53. When these are taken into account the extra costs for the Energy Works plant are [...]. To calculate the eligible costs this amount is multiplied by the renewable energy content of the feedstock (that is 84.65% for the base scenario, see point 17). Accordingly the eligible costs of Energy Works are [...]. In case of the worst case scenario (energy content of the feedstock of 61.7%, see point 18) the eligible costs of Energy Works would be [...].

2.6. Financial Aspects

- 54. The UK authorities indicate that the internal rate of return of the investment would be [...] without aid, and [...] with aid. This is lower than the rate of return [...] of the counterfactual project i.e. a CCGT plant as documented by the UK authorities.
- 55. The Commission notes that, as Energy Works employs an innovative technology, to produce electricity from waste and as such it has a higher risk profile and demands a suitably high reward to attract investors. The UK authorities have documented that a financer's opportunity cost and hence the expected rate of return for exposure to an investment with a comparable risk profile to that of Energy Works would be in excess of [...].

¹⁴ <u>http://www.decc.gov.uk/assets/decc/statistics/projections/71-uk-electricity-generation-costs-update-.pdf</u> Mott McDonald Report June 2010

3. Assessment

3.1. State aid within the meaning of Article 107(1) TFEU

- 56. State aid is defined in Article 107(1) TFEU as any aid granted by a Member State or through State resources in any form whatsoever, which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods in so far as it affects trade between Member States.
- 57. The aid will be granted by a Member State through State resources within the meaning of Article 107(1) of the TFEU because the project will be financed through resources from the European Regional Development Fund (ERDF) under the Competitiveness Operational Programme for Yorkshire and the Humber 2007-2013. Resources granted under the Operational Programme for Yorkshire and the Humber 2007-2013 qualify as State resources, as the transfer of ERDF resources is subject to the discretion of the UK authorities.
- 58. The notified measure will only benefit one undertaking, Energy Works and will allow the beneficiary to be relieved of a part of the initial investment costs, which he would normally have to bear himself. Consequently, it will strengthen its financial position in relation to its competitors in the European Union and therefore have potentially distorting effects on competition on output markets (i.e. gas, electricity) and on input markets (wood waste, CIW/MSW RDF, waste). On the output market, products of the beneficiary concerned might be subject to cross-border trade within the EU. It follows that the planned aid is likely to distort or threaten to distort competition and affect the patterns of trade between Member States. On the input market, the realization of the project might eventually put the beneficiary in a favourable position when bidding for future waste management contracts in the area.
- 59. Accordingly, the Commission concludes that the notified measure constitutes State aid within the meaning of Article 107(1) TFEU.

3.2. Lawfulness of the aid

60. Given that the aid amount exceeds EUR 7.5 million, and as stipulated in the Environmental Aid Guidelines,¹⁵ the UK authorities notified the aid measure to the Commission before its implementation, and confirmed that the transfer of funds is subject to the approval by the Commission of the measure. The Commission thus considers that the UK authorities fulfilled their obligation according to Article 108(3) of the TFEU.

3.3. Compatibility of the aid

61. The Commission has assessed the compatibility of the notified measure according to Article 107(3)(c) TFEU and in light of the Environmental Aid Guidelines¹⁶.

¹⁵ OJ C 82, 1.4.2008, p. 1.

¹⁶ OJ C 82, 1.4.2008, p. 1.

- 62. Given the fact that the notified measure concerns investment aid only for the part of energy produced from renewable energy sources, namely biomass, the compatibility conditions laid down in Section 3.1.6.1 (investment aid for renewable energy sources) of the Environmental Aid Guidelines apply.
- 63. First, the Commission notes that the UK authorities have confirmed that the aid is only granted in respect of the part of the production of electricity using renewable energy sources as defined in paragraph 70(5) of the Environmental Aid Guidelines.
- 64. Second, the lack of existence of mandatory EU standards concerning the share of energy from renewable sources for individual undertakings means that the aid may be justified, as prescribed in paragraph 101 of the Environmental Aid Guidelines.
- 65. Paragraph 102 of the Environmental Aid Guidelines prescribes that the investment aid intensity of measures destined to the use of renewable energy sources must not exceed 60% of the eligible costs, and paragraph 106 further specifies that eligible costs must be net of any operating benefits and operating costs during the first five years of operations. The Commission notes that the eligible costs are compliant with point 105 of the EAG. In fact the eligible costs as shown in paragraph 2.5 above, are limited to the additional costs to bring about the environmental protection over the costs of a conventional facility (counterfactual scenario) producing the same outputs without the additional environmental protection. Moreover the eligible costs have been calculated net of any operating benefits and operating costs related to the extra investment needed for the "Energy Works" plant and arising during the first five years of the life of this investment.
- 66. The aid of GBP 19,904,304, when compared to the investment costs and the net benefits from operating during the first five years provided in Section 2.5 above, results in an aid intensity of [...], as Table 5 below shows. The aid intensity reaches the level of [...] in the worst-case scenario.

		Counterfactual	
	Energy Works	/ CCGT	Differences
Total investment (GBP)	[]	[]	[]
Net Benefit in first Five Years	[]	[]	[]
Extra Costs			[]
Eligible Costs (Base scenario) Eligible Costs (Worst case	Renewable energy content Renewable energy	[]	[]
scenario)	content	[]	[]
State Aid			[]
Aid Intensity (Base scenario) Aid Intensity (Worst case			[]
scenario)			[]
Source: UK authorities			

Table 5 – Aid Level and Aid Intensity

Countorfootual

- 67. The Commission thus considers that the aid is compatible with the criteria laid out in Section 3.1.6.1 of the Environmental Aid Guidelines.
- 68. Given that the notified measure exceeds EUR 7.5 million, it must also be assessed in the light of Section 5 of the Environmental Aid Guidelines.

3.3.1. Existence of a market failure

- 69. The combustion of fossil fuels entails externalities, which are not factored in their price as compared to that of renewable energy sources such as biomass. The recognition of this market failure lies at the heart of the Environmental Aid Guidelines and justifies, under certain conditions, certain state aid measures, including those highlighted in the Environmental Aid Guidelines.
- 70. First, the Commission notes that in the absence of aid, Energy Works would not consider investing in an "energy from waste" gasification plant to generate electricity from biomass content of waste materials would in all likelihood choose the considerably cheaper alternative of building a Combined Cycle Gas Turbine electricity generating plant. This counterfactual will be used throughout this Section.
- 71. As regards the notified measure, the production of electricity using feedstock with increased biomass content has direct benefits for the environment based on the specific activity of Energy Works. The Energy Works project will clearly translate into lower CO₂ emissions, as indicated in points 24-25 above and 73-75 below.
- 72. The counterfactual scenario, where a Combined Cycle Gas Turbine generating Plant would be built, is a clearly less environmentally friendly solution to be adopted.
- 73. The plant will save approximately $57,000 \text{ t CO}_2$ per annum in comparison to an equivalent gas fired station.
- 74. Energy Works plant will help to meet waste to landfill targets¹⁷ of reducing biodegradable municipal waste to landfill. According to the Cost Benefit Analysis of Options the project will help to meet this target by diverting approximately 37,000 tonnes of residual waste away from landfill and approximately 150,000 tonnes of waste wood away from landfill on an annual basis once fully operational. The Commission notes that, even if the realization of this project might give an advantage to the beneficiary in obtaining future waste management contracts in the area, the proposed project clearly leads to a more environmentally friendly waste disposal management.
- 75. According to the UK authorities additional greenhouse gas savings are expected by not having waste decompose at landfill. It is calculated that Energy Works will create 30,860 tonnes of CO₂ equivalent savings per annum¹⁸ by diverting waste from landfill.

¹⁷ <u>http://www.defra.gov.uk/environment/waste/local-authorities/landfill-scheme/</u>

 ¹⁸ According to Defra's Impact of Energy from Waste and recycling Policy on UK Greenhouse Gas Emissions
 – Final Report, January 2006 the CO₂ emission factor (tonnes CO₂ produced per tonne of waste processed for

- 76. For these reasons, the Commission considers that the measure will contribute to mitigating the market failure related to the use of electricity generation from fossil fuels and, in particular, through a conventional gas-fired Combined Cycle Gas Turbine (CCGT) power plant in this case.
- 77. The measure may also have positive repercussions on the future deployment of biomass projects and the development of biomass-related gasification facilities. Energy Works considers the project as strategic because it can lead to improved knowledge from Research & Development and will improve sustainable waste management and lower risks in similar future projects.

3.3.2. Appropriate instrument

- 78. The Commission needs to consider whether providing state aid is an appropriate instrument to attain the objective of environmental protection, in particular in light of the potential existence of less distortive instruments which may be able to achieve the same result.
- 79. There are a number of instruments, which are being used throughout the European Union to protect the environment and limit polluting activities. The Emission Trading System is the main European legislative tool to reduce industrial greenhouse gas emissions cost-effectively and the Europe 2020 objectives include the promotion of sustainable growth¹⁹.
- 80. The UK Government operates an incentive scheme The Renewables Obligation (RO) which incentivises renewable electricity generation. The RO incentivises only the renewable portion of any electricity produced. The onus is placed on the electricity generator to demonstrate with accurate and reliable information, each month, how much renewable electricity has been generated. In order to receive this subsidy a detailed monitoring and compliance system must be agreed between the beneficiary and the UK energy regulator Ofgem. In order to become accredited and receive ROCs Renewables Obligation Certificates) as a generator, the beneficiary will have to meet qualifying and operation criteria laid down by the regulator.
- 81. However the type of investment needed for the specific type of technology under consideration, i.e. advanced fluidized bed gasification, and for the high risks being considered, i.e. for a new and not proven technology, would be unlikely to be undertaken in the absence of *ad hoc* aid measures. The aid allows Energy Works to use to a more environmentally sustainable production process for electricity generation, which it would not otherwise be likely to use.
- 82. For these considerations, the Commission concludes that the notified measure is an appropriate instrument to achieve the aim of reducing CO_2 emission and in the same time contributing to the reducing biodegradable municipal waste to landfill.

the landfilling of 'miscellaneous combustible material' is 165kg CO_2 per tonne of waste. CO₂ savings are based on diverting approximately 190,000 tonnes of waste away from landfill every year.

¹⁹ COM(2010) 2020, 3.3.2010

3.3.3. Incentive effect and necessity

- 83. Based on the information provided, the beneficiary applied for ERDF funds on the basis of the Competitiveness Operational Programme for Yorkshire and the Humber 2007-2013 before implementing the project. Hence the aid can have an incentive effect, as specified in paragraph 143 of the Environmental Aid Guidelines, provided that the conditions under Section 5.2.1.3 are satisfied.
- 84. According to paragraph 171 of the Environmental Aid Guidelines, a state aid is necessary when it results in the recipient changing its behaviour to increase the level of environmental protection.
- 85. The incentive effect of the measure is identified through the counterfactual analysis, which compares the levels of intended activity with aid and without aid.
- 86. According to the UK authorities the counterfactual situation, for Energy Works would be to invest in an Open Combined Cycle Gas Turbine plant. The facility would be focussed solely on the generation of electricity from fossil fuels and no renewable or refuse derived fuel would be used.
- 87. Costs calculations within the counterfactual situation were based upon an independently commissioned report on UK electricity generation costs by the United Kingdom's Department of Energy and Climate Change²⁰.
- 88. The proposed counterfactual scenario consisting of the use of medium scale (<50MW) fossil fuel power plants provides a technically comparable facility for comparison. In contrast, energy from waste facilities meets a negative marginal net economic benefit at a large scale. This is as a result of a need to import waste feedstock where quantities of local feedstock are insufficient. The Commission notes that Energy Works' capacity was sized in order to utilise easily accessible domestic waste, avoiding negative marginal net economic benefit.
- 89. A comparable net capacity for a CCGT plant to Energy Works would be 22.53MW. This is lower than the gross 25MW capacity of Energy Works due to a lower parasitic load and greater availability, resulting in a lower capacity being necessary to generate the same amount of electricity. This net capacity was used to calculate the total capital cost according to the report commissioned by the United Kingdom's Department of Energy and Climate Change. The plant's capacity is multiplied by a rounded capital cost/kW of 720GBP /kW (which is the median prediction²¹ for a similar kind of project). This equals a capital cost of 16,225,660 GBP.

²⁰ Mott McDonald Report, June 2010, commissioned by the Department for Energy and Climate Change (DECC) and assesses the costs for a range of electricity generating technologies

²¹ Mott McDonald Report, June 2010, commissioned by the Department for Energy and Climate Change (DECC) and assesses the costs for a range of electricity generating technologies

- 90. According to the calculations submitted the conventional CCGT plant would generate annual revenues of approximately [...] and positive cash flows of approximately [...], becoming cash positive in year 12. These calculations demonstrate the commercial viability of the alternative proposal.
- 91. The IRR of the counterfactual project will be [...] providing a commercial incentive to pursue this option in preference to the Energy Works project. The fuel, which is primarily used for electricity generation in the UK, is natural gas with plants fired with gas providing 46% of the UK's electricity²². The CCGT plant is a proven and reliable technology and as such would represent a lower risk investment. It would require no state resources to be financially viable.
- 92. The extra costs compliant with point 81 b) of the EAG are the costs over and above those of a conventional CCGT natural gas fired plant. The table below presents the costs of the counterfactual scenario and Energy Works project taking in consideration the revenue streams during the first 5 years of the investments. The operating benefits derived during the first 5 years are subtracted from the extra investment costs to give an extra cost figure of [...]. This amount is multiplied by the renewable energy content of the feedstock to give a final eligible cost figure of [...] for the base scenario and [...] for the worst case scenario. The eligible costs cover the additional investment required in order to achieve the environmental benefits of Energy Works plant.

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Table 6 –	Eligible	Costs	Calculations	(GBP)
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93. To calculate the profitability of the project the major revenue streams and costs have been analysed in the Cost Benefit Analysis of the two options. Revenues are primarily generated through the sale of electricity and Renewable Obligation Certificates (ROC's). The major on-going costs will be labour, waste wood and waste disposal. A build-up of these costs and revenues can be found within Profitability Report of the site. A summary of costs and revenues from the Energy Works plant is shown in the table below.

²² Dukes Electricitym Digest 2011

	Revenues
Sale of Electricity	[]
ROC Sale	[]
LEC ²³ Sale	[]
Triad Benefit	[]
FiT	[]
Total Revenue	[]
	Costs
Labour / Staff	[]
Feedstock 1 Cost	[]
Fees	[]
Non-Feedstock Consumables	[]
Waste Disposal	[]
Maintenance	[]
General Operation Cost	[]
Total Cost	[]
NET Benefit	[]

Table 7 – Costs and Revenues (GBP per annum)

- 94. The Commission notes that according to the Profitability Report of the site the Net Present Value (NPV) of the investment in Energy Works without the ERDF grant is [...] with an exchange rate of 1.15 Euro/GB Pound. As stated in the above table significant revenues are generated by the project but the substantial capital costs at the outset are prohibitive to its undertaking. [...]. This would not represent an attractive return to an investor. In contrast the counterfactual situation would provide an IRR of [...] over 20 years. The greater financial returns of the counterfactual situation are generated from a net benefit of approximately [...] per annum but the relative low cost of technology for the counterfactual plant and its proven track record make it much more attractive investment.
- 95. Without aid, the project would have an internal rate of return, which would make it unattractive to a private investor. Hence, without aid, the specific project would never be undertaken.
- 96. Therefore, the notified measure is likely to result in a change of behaviour, which, as explained above, has a clear environmental benefit.
- 97. In addition, the use of advanced fluidised bed gasification to recover energy from waste does not yield any production advantage for Energy Works. The only apparent

²³ Levy Exemption Certificates (LECs) are certificates that provide an exemption from the Climate Change Levy. The Climate Change Levy is a tax on the taxable supply of energy products (including electricity) to non-domestic consumers. All revenue received by the levy is recycled back to companies through a 0.3 percentage point cut in employers' national insurance contributions.

advantage, which Energy Works is likely to consider, is that by using the biomass part of the waste, the price of electricity produced is independent of the price of gas, which would be the fuel to produce it under the counterfactual scenario. Also, Energy Works is likely to see a benefit in the use of biomass fuel if it takes into account the price of CO_2 emissions which it would need to pay under the Emission Trading System as well as the revenues from the sale of ROC's. However, both of those benefits have been considered in the eligible costs calculations.

- 98. Hence, the aid measure concerned is not expected to result in a clear production advantage for Energy Works.
- 99. According to the UK authorities the envisaged returns of the facility are dependent on several variables and create a considerable level of risk to the investors.
- 100. More specifically the facility will need to secure a regular supply of feedstock made up of waste products. The market for these is relatively new and as such it is hard to predict the level of any future prices. A substantial proportion of one of the potentially available feedstock, Municipal Solid Waste, is accessed through the local Councils. The Councils require counterparties to have a large proportion of the finance secured in advance of entering into supply contracts. Another uncertain variable is the future price of electricity. As Energy Works is a long-term investment with a long payback period it involves a greater chance of price predictions being inaccurate. Furthermore, financial uncertainty is provided by the significant reliance of the investment on revenues from ROC payments. The value of the ROCs is determined by the market. As a relatively new initiative the market for ROCs is not fully established, making predictions on revenues more prone to inaccuracy. Moreover, Energy Works relies on the combination of a fluidised bed gasifier with a feedstock of waste, a new and unproven technology, increasing the uncertainty as to how it will operate on a commercial scale. Variable mixtures of waste with different properties may have impact on the efficiency of the gasification process and the quality of the syngas produced affecting the electricity generated and therefore the revenue streams.
- 101. There are no planned future mandatory standards in the area of fluidised bed gasification from waste, which would lead to a level of environmental protection comparable to the one, which would be achieved if the state aid were to be provided. In fact, market pressures should normally lead Energy Works to choose the lower-priced gas-fuelled plant in the absence of aid.
- 102. For these considerations, the Commission concludes that the notified measure is necessary to achieve the aim of reducing CO_2 emissions in the present case.

3.3.4. Proportionality of the aid

103. The UK authorities have provided a detailed and credible assessment of the eligible costs, in line with the methodology foreseen in the Environmental Guidelines as presented in point 92.

- 104. The Commission notes that Energy Works has been selected by bidding for state aid through the ERDF scheme. This scheme allows SME's across the UK and larger companies in assisted areas to apply for funding of projects which are compatible with specified funding priorities. The Energy Works project was submitted on the grounds of meeting the Yorkshire & Humber's priority 1 specification of encouraging innovation and Research and Development by delivering an innovative and environmentally friendly project into an assisted region.
- 105. According to the UK authorities the project was approved by the Local Management Committee (LMC). The competent UK authorities shall ensure that the project meets EU rules and objectives and complies with the principles of non-discrimination, openness and transparency.
- 106. The Commission notes that the aid intensity remains below the maximum thresholds allowed under point 103 of the Environmental Aid Guidelines. In particular, the planned aid intensity is [...], to be compared with a maximum aid intensity of 60% for this type of investment.
- 107. The aid intensity is calculated with reference to a discounted cash flow projection over its 20 year life cycle according to the profitability report of the project. The aid is calculated on the basis of the present value of the initial investment costs less its projected net revenues over the next 20 years. Article 3.1.6.1 of the Environmental Guidelines only requires net revenues to be taken into account for the first 5 years after the investment, while the aid quantum in this case is calculated after taking into account 20 years' worth of net revenues.
- 108. The Commission notes that cash flows over the lifetime of the project once the aid has been taken into account show a rate of return of [...]. This rate of return is below that of the counterfactual situation [...]. As such a reasonable rate of return for a similar project can be assumed to be at the same level. With the IRR of the project including state aid falling below this level, it cannot be considered that aid is more than the minimum necessary.
- 109. Energy Works intends to carry out all work of the project by awarding them to contractors. As such, work packages will be put out under a competitive tender process, which will lead to competition between contractors ensuring competitive pricing. As aid is only claimed once costs have been incurred, this will mean that any costs, which come in under budget, will not be used as extra profit but will result in a smaller claim. This ensures that costs are kept to a minimum and aid received is the minimum needed to achieve the realisation of this project.
- 110. For these considerations, the Commission concludes that the notified measure is proportional to achieve the aim of reducing greenhouse gas emission in the present case.

3.3.5. Potential distortions of competition and trade

- 111. The extent of the distortion of competition entailed by the aid, in the product markets affected by the operation of Energy Works, i.e waste management, electricity generation and waste wood is not such as to be an obstacle to the compatibility of the aid.
- 112. The Commission notes that according to the Department of Energy and UK's total generative capacity was 90,208MW²⁴ in 2010 meaning with a generative capacity of 25MW Energy works would have a market share of 0.028% and is unlikely to have a distorting effect. In 2010 the UK generated 381TWh²⁵. The Energy Works site has a capacity of 192,977MWh and as such represents an insignificant share of the market at 0.05%.
- 113. According to the UK Government Document "The Energy Challenge"²⁶ there are significant barriers to entry in the EU electricity markets with vertical integration and high degrees of market concentration. Therefore any new entrants such as Energy Works are to be welcomed in bringing about a more competitive environment.
- 114. According to Ekosgen Report²⁷ England's waste management market consists out of 5,152 companies with commercial and industrial waste production in England of 48m tonnes. As such Energy Works handling of around 190,000 tonnes of waste wood and commercial & industrial waste would be unlikely to distort the market.
- 115. According to Defra's Waste Management overview²⁸, which shows that in 09/10 26.5mt of waste was collected from local authorities alone. Energy Works would be dealing with approximately 40,000 tonnes of commercial and industrial waste. This is equivalent to 0.1% of the waste collected by local authorities. Hull City Council and East Riding of Yorkshire Council collect approximately 330,000²⁹ tonnes of household and commercial waste each year, Energy Works could handle 11% of this total.
- 116. A Wood Waste Market study in the UK from WRAP³⁰ suggests the total annual market would be around 4.6m tonnes, whilst acknowledging this is significantly understated due to poor data collection. The Energy Works plant plans to use up to 150,000 tonnes of waste wood per annum as fuel. This again would be an insignificant portion of the total market.

²⁴ <u>http://www.decc.gov.uk/assets/decc/11/stats/publications/dukes/2307-dukes-2011-chapter-5-electricity.pdf</u> Dukes Electricity Digest 2011

²⁵ <u>http://www.decc.gov.uk/assets/decc/11/stats/publications/dukes/2307-dukes-2011-chapter-5-electricity.pdf</u> Dukes Electricity Digest 2011

²⁶ <u>http://www.decc.gov.uk/assets/decc/publications/energy_rev_06/file31890.pdf</u>

²⁷ <u>http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery.pdf</u>

²⁸ http://www.decc.gov.uk/assets/decc/publications/energy_rev_06/file31890.pdf

 ²⁹ http://www.hullcc.gov.uk/pls/portal/docs/PAGE/HOME/COUNCIL%20GOVERNMENT%20AND%20DEM OCRACY/COUNCILS/COUNCIL%20POLICIES%20AND%20PLANS/SUSTAINABLE%20WASTE%20 MANAGEMENT%20STRATEGY/STRATEGYREVIEW.PDF
 ³⁰ http:///www.hullcc.gov.uk/pls/portal/docs/PAGE/HOME/COUNCIL%20GOVERNMENT%20AND%20DEM

³⁰ <u>http://www.wrap.org.uk/downloads/Wood waste market in the UK.6919be98.7547.pdf</u>

- 117. Indeed, Energy Work's advanced fluidised bed gasification unit is barely competitive to the counterfactual project i.e. a gas fired CCGT plant. The notified measure is also not likely to provide a major production advantage to Energy Works, taking into account the documented costs of obtaining electricity from advanced fluidised bed gasification unit, as compared to the counterfactual gas fired plant.
- 118. The only advantage which Energy Works may derive from the use of the fluidised bed gasification technology for electricity generation from waste is a more stable price of raw materials against the gas fired CCTG plant and revenues from the sale of ROC's. However, those potential revenues have been already considered in the eligible cost calculations and have been subtracted from the eligible aid amount.

Dynamic incentives / crowding out

- 119. As a user of a new innovative technology involved in the construction and operation of it Energy Works is unlikely to crowd out other technologies or other Member States from the industry. It is assumed that early entry into this market will help to drive down future prices which other states could benefit from.
- 120. The Commission notes that the amount of aid provided is equivalent to [...] of the total projects capital cost and that the majority of funding is to be secured privately while the aid amount is limited to the amount to make the project financially attractive to an investor.
- 121. The direct grant is also directly related to the capital stage of the plant and will only be claimed during the pre-operation phase. This will not persist once the plant is completed, when it will operate on commercial grounds.
- 122. The claims process for receiving the ERDF grant will protect against cross subsidisation of other projects. The commission notes that all claims will have to be submitted to DCLG with relevant documentation to ensure all costs are eligible and relevant to the completion of the project. Energy Works also has no existing presence within the electricity generation market and as such there can be no cross subsidisation of a less environmentally friendly comparable product via the aid for Energy Works.
- 123. The Commission notes that despite Energy Works project only focuses on fluidised bed gasification, as according to the UK authorities this is the technology believed to be the most effective, this does not, preclude the development of other gasification technology or any other renewable energy source.

Market power/exclusionary behaviour

124. As a new entrant into the market for electricity production the Energy Works is unable to exclude any other potential new entrants by abusing its market position. Indeed, quite the opposite, with its technology developed in this project and made available to the market Energy Works will be encouraging new entrants into the market.

- 125. The company was incorporated on 31.10.2011. Energy Works will have no significant market power, which could be artificially enhanced by the aid measure. Also the electricity produced would be the same vis-à-vis the counterfactual situation. As such the award of aid would not change the amount of electricity actually produced and therefore would not be artificially distorting the market. The submitted report of the UK Department of Energy³¹ provides details of the UK electricity market of which Energy Works would have a market share of 0.028% of generative capacity.
- 126. The aid measure will enable Energy Works to offer renewable energy to the wholesale energy markets rather than conventional fossil fuel derived electricity; however it is unlikely that a significant premium will be received due to this with electricity prices set primarily within a wholesale market. In addition the costs associated with the generation of renewable energy are far higher than from conventional production. These higher costs will mean Energy Works will not be able to undercut its conventional competitors.
- 127. The UK authorities have submitted an analysis of the electricity retail market³². There are a large numbers of electricity suppliers within the UK to whom the electricity generated could be sold, the majority of which have buying power far exceeding the total production possible from the Energy Works site. With electricity prices set via wholesale tradable markets and Energy Works relatively small output, it is highly unlikely for there to be a detrimental impact on consumers as a result of state aid.
- 128. According to the same report the six top UK electricity suppliers have a market share of 99%. With this dominance by the large suppliers it suggests a small producer would be unable to control price, with price being more dependent on these 6 large companies.
- 129. The Commission notes that the eligibility of Energy Works for ROCs proves of the limited effect Energy Works has on the market as ROCs to a certain extent fix the price which Energy Works can charge to electricity suppliers. The ROC is fixed by government policy and administered by central government and its regulatory arm.
- 130. In addition Energy Works is unlikely to be able to significantly affect the supplier prices for buying in functions. According to a Wood Waste Market study in the UK from WRAP³³ the wood waste supplier market is a well-established market where the costs of wood recyclers to review whether their prices are consistent with current demand and supply conditions are too high. As a result, pricing is only reviewed after a particular period of time or in response to particular events. Moreover the UK authorities confirmed that the ROC scheme has not had an appreciable effect on prices. Although this may be expected in the near future, the reason for price rises could equally be attributed to a decline in output. In addition the supplier market is too strong for a buyer the size of, and with the market share of, Energy Works to influence these prices. In addition, prices in the volatile wood waste technology market fluctuate for a variety of

³¹ <u>http://www.decc.gov.uk/assets/decc/11/stats/publications/dukes/2307-dukes-2011-chapter-5-electricity.pdf</u> Dukes Electricity Digest 2011

³² Frontier economics – Competition and entry in the GB electricity retail market

³³ <u>http://www.wrap.org.uk/downloads/Wood waste market in the UK.6919be98.7547.pdf</u>

reasons, including government policy, and not necessarily only because of increased buyer power.

131. The Commission notes that there is no evidence that the aid to Energy Works will result in product differentiation and price discrimination to the detriment of consumers. Indeed the development of new technology, innovative processes and knowledge in this area are expected to enhance an existing organic waste recycling. Even if the project might favour the beneficiary in obtaining future waste management contracts in the area, distortions on waste management markets are an inevitable consequence of improved environmental performance of the plant in waste disposal. Such distortions are, therefore necessary for the project in order to produce its environmentally positive results.

Effects on trade and location

- 132. The UK authorities have documented that Energy Works site was chosen as a result of surveys³⁴ by URS Corporation Limited for its environmental benefits. According to the surveys Energy Works site was chosen as the most suitable within the local area. After evaluation of preselected sites in partnership with the relevant local authorities. The sites were evaluated based on the following criteria:
 - Material supply opportunities in the local area, as the beneficiary aims to process fuel as close to source as possible.
 - Proximity to end users of the power generated;
 - Sufficient area for the construction of the proposed plant;
 - Preference for a 'Brownfield' site (derelict or underused industrial land), thereby minimising site preparation works, excavation and adverse effects on the natural and built environments;
 - Transport, traffic and access, with respect to proximity to existing roads, freight rail and river transport. The biodegradable material is anticipated to be delivered by road hence; road transport access is a primary concern for locating the facility;
 - Proximity and density of nearby residential development and other sensitive receptors, such that these areas are avoided as far as possible; and
 - Avoidance of significant ecological constraints.
 - Using these principles to guide the decision the Cleveland Street site was considered the most appropriate for Energy Works.
- 133. The Commission notes that UK authorities submitted a detailed description of the selection process for the Energy Works site.
- 134. For these considerations, the Commission concludes that the negative impact on competition and the effect on trade between Member States of the notified aid measure are limited.

³⁴ URS Environmental Statement of the site &d URS Environmental Assessment Technical Statement

3.4. Cumulation of Aid

- 135. The UK authorities confirmed that Energy Works will receive operating aid in the form of Renewable Obligation Certificates (ROCs) and Levy Exemption Certificates (LEC's). ROC's and LEC's will be awarded only for the biomass proportion of the proposed feedstock. The Commission in its written statement³⁵ has made clear that ROC's are compatible with investment aid for renewable energy production as long as cumulation rules are respected.
- 136. The maximum aid intensity for renewable energy generation is according to section 3.1.6.1 of the Environmental Guidelines 60% of eligible costs.
- 137. The Commission has already assessed in its previous decision State aid N 31/2005³⁶ that in the calculations for aid intensity ROCs are treated as extra revenues and expected profits are deducted from eligible costs to ensure cumulated aid does not exceed the ceiling set out in the Environmental Aid Guidelines.
- 138. Indeed, in the calculations submitted by the UK authorities for the eligible costs the anticipated revenues from ROCs and LEC's are added into the first 5 years of operating benefits and therefore deducted from the projects eligible costs. Accordingly revenue's from ROCs and LECs have been factored into aid intensity calculations and the aid intensity of the measure is calculated at [...], which is below the maximum aid intensity ceiling of 60%. Moreover, the UK authorities confirmed that if aid under this measure is will be combined with other State aid within the meaning of Article 107 (1) of the TFEU or with other forms of community financing the overall aid intensity of the project will be kept within limits laid down in the EAG.
- 139. Furthermore the UK authorities confirmed that claims for payment have to be submitted to the awarding body (DCLG) and payments are made after costs are incurred ensuring that aid intensity and payments will be in line with the Environmental Guidelines.
- 140. The UK authorities have confirmed that annual reports will be submitted and records will be maintained for 10 years after the aid is granted to ensure monitoring of measure and to allow accurate claw back if it is required.

3.5. Conclusion and balancing test

141. The Commission concludes that the positive effects of the notified measure offset its negative effects, and that the potential distortions caused by the measure do not alter market conditions to such an extent as to be detrimental to the common interest.

4. CONCLUSION

142. In the light of the foregoing, the Commission concludes that the notified aid to Energy Works Limited Hull is compatible with the internal market in accordance with Article 107(3)(c) TFEU and has therefore decided not to raise objections to it.

³⁵ OJ C 249 E, 26.8.2011, Reply to parliamentary question P-9065/2010 of 26 October 2010

³⁶ OJ C 220/2, 13.9.2006

- 143. The Commission reminds the UK authorities that, in accordance with Article 108(3) TFEU, plans to refinance, alter or change this scheme have to be notified to the Commission pursuant to provisions of Commission Regulation (EC) No 794/2004 implementing Council Regulation (EC) No 659/1999 laying down detailed rules for the application of Article 93 [now 108] of the TFEU.³⁷
- 144. If this letter contains confidential information, which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site: http://ec.europa.eu/competition/elojade/isef/index.cfm

Your request should be sent by registered letter or fax to:

European Commission Directorate-General for Competition State Aid Greffe B-1049 Brussels Fax No: 32 2 296 12 42

> Yours faithfully, For the Commission

> Joaquín ALMUNIA Vice-President

³⁷ OJ L 140, 30.4. 2004, p.1.