POMOC PAŃSTWA — ZJEDNOCZONE KRÓLESTWO

Pomoc państwa SA.38762 (2015/C) (ex 2014/N)

Umowa inwestycyjna dotycząca przekształcenia elektrowni w Lynemouth w elektrownię na biomasę

Zaproszenie do zgłaszania uwag zgodnie z art. 108 ust. 2 Traktatu o funkcjonowaniu Unii Europejskiej

(Tekst mający znaczenie dla EOG)

(2015/C 116/04)

Pismem z dnia 19 lutego 2015 r., zamieszczonym w autentycznej wersji językowej na stronach następujących po niniejszym streszczeniu, Komisja powiadomiła Zjednoczone Królestwo o swojej decyzji o wszczęciu postępowania określonego w art. 108 ust. 2 Traktatu o funkcjonowaniu Unii Europejskiej dotyczącego wyżej wspomnianego środka pomocy.

Zainteresowane strony mogą zgłaszać uwagi na temat środka, w odniesieniu do którego Komisja wszczyna postępowanie, w ciągu jednego miesiąca od daty publikacji niniejszego streszczenia i następującego po nim pisma na następujący adres lub numer faksu:

European Commission
Directorate-General for Competition
Directorate for State Aid
State Aid Greffe
1049 Bruxelles/Brussel
BELGIQUE/BELGIË
Faks: + 32 22961242
Stateaidgreffe@ec.europa.eu

Otrzymane uwagi zostaną przekazane władzom Zjednoczonego Królestwa. Zainteresowane strony zgłaszające uwagi mogą wystąpić z odpowiednio uzasadnionym pisemnym wnioskiem o objęcie ich tożsamości klauzulą poufności.

STRESZCZENIE

1. PROCEDURA

W następstwie kontaktów przedzgłoszeniowych w dniu 17 grudnia 2014 r. Zjednoczone Królestwo zgłosiło, zgodnie z art. 108 ust. 3 Traktatu o funkcjonowaniu Unii Europejskiej (TFUE), wsparcie dla projektu przekształcenia elektrowni w Lynemouth w elektrownię na biomasę. W dniu 5 lutego 2015 r. władze Zjednoczonego Królestwa przedstawiły dodatkowe informacje.

2. OPIS ŚRODKA

Zgłoszony środek pomocy dotyczy przekształcenia elektrowni w Lynemouth zasilanej węglem w elektrownię zasilaną w całości biomasą. Elektrownia znajduje się w hrabstwie Northumberland na północno-wschodnim wybrzeżu Anglii. Elektrownia w Lynemouth ma moc 420 MW i jest zasilana węglem; zgodnie z przedmiotowym wnioskiem zostanie ona doposażona, aby umożliwić zasilanie jej wyłącznie biomasą. Właścicielem i operatorem elektrowni jest spółka Lynemouth Power Limited należąca w całości do RWE Supply & Trading GmbH.

Zakład będzie zasilany wyłącznie granulatem drzewnym dostarczanym głównie z zagranicy, a w szczególności z południowo-wschodniej części Stanów Zjednoczonych, z zachodniej Kanady i z Rosji. Zakład musi spełniać brytyjskie kryteria zrównoważonego rozwoju określone w programie dotyczącym kontraktu na transakcje różnicowe, w tym kryterium ograniczenia o co najmniej 60 % emisji gazów cieplarnianych w porównaniu ze średnią intensywnością w unijnej sieci zasilanej paliwami kopalnymi (tj. w porównaniu z unijną średnią dla węgla i gazu, mierzoną z zastosowaniem metodyki określonej w dyrektywie w sprawie odnawialnych źródeł energii). Cele te zostaną podwyższone, tak aby osiągnąć zmniejszenie o co najmniej 72 % emisji gazów cieplarnianych od kwietnia 2020 r., a następnie o co najmniej 75 % od kwietnia 2025 r.

Według szacunków Zjednoczonego Królestwa projekt pozwoli ograniczyć emisję CO_2 o około 17,7 mln ton w całym okresie jego realizacji oraz dostarczyć około 2,3 TWh energii elektrycznej rocznie.

Według władz Zjednoczonego Królestwa zakład jest zaprojektowany do działania przy nominalnej mocy 420 MW i współczynniku średniego obciążenia na poziomie 75,3 %. Zakład będzie wykorzystywać około 1,44–1,56 mln ton suchego granulatu drzewnego rocznie. Przekształcenie zakładu nie zostanie przeprowadzone zgodnie z przepisami dotyczącymi spalania odpadów, dlatego nie będzie możliwe spalanie w nim odpadów drzewnych.

Tabela 1 pokazuje prognozowane parametry operacyjne elektrowni w Lynemouth.

Tabela 1

Parametry operacyjne elektrowni

Koszty paliwa GBP/GJ	Sprawność cieplna (%)	Współczynnik średniego obciążenia (%)
7,17	36,9	75,3

Według szacunków przedstawionych przez Zjednoczone Królestwo do 2025 r. będzie występować nadwyżka włókien drzewnych w ilości około 46 mln ton rocznie. Nadwyżka ta odpowiadałaby 23 mln ton granulatu drzewnego rocznie. Oczekuje się, że w następnej dekadzie Europa będzie importować zasoby biomasy w celu zaspokojenia rosnącego zużycia. Handel biomasą do celów energetycznych jest nadal stosunkowo ograniczony. W 2011 r. światowy handel wiórami drzewnymi szacowano na poziomie 22 mln ton rocznie. W tym samym roku import netto granulatu drzewnego do UE szacowano na 3,2 mln ton rocznie i uległ on zwiększeniu do około 4 mln ton rocznie w 2012 r.

Zgłoszona pomoc jest przyznawana na podstawie zmiennej premii obliczanej jako różnica płatności pomiędzy wcześniej ustaloną ceną (kurs wykonania) a stwierdzoną rynkową cenę energii elektrycznej (ceną referencyjną). Beneficjent będzie uzyskiwać dochód ze sprzedaży energii elektrycznej na rynku, jednak w przypadku gdy średnia hurtowa cena energii elektrycznej jest niższa niż kurs wykonania, beneficjent otrzyma z tytułu tej różnicy dopłatę wyrównawczą od kontrahenta będącego brytyjską spółką państwową (Low Carbon Contracts Company Ltd – „kontrahent kontraktów na transakcje różnicowe").

Główne założenia przyjęte do obliczenia kursu wykonania, w tym dotyczące uśrednionych kosztów, cen paliw kopalnych, efektywnych stawek podatkowych, rabatów wynikających z umów zakupu energii oraz założenia dotyczące maksymalnego potencjału są wymienione w sprawozdaniu rządu brytyjskiego dotyczącym uśrednionych kosztów ([1]) oraz w sprawozdaniach Departamentu Energetyki i Zmiany Klimatu (ang. DECC) ([2]). Do tego celu przyjmuje się, że hurtowa cena energii elektrycznej wynosi około 55 GBP/MWh w ujęciu realnym i wzrośnie do poziomu 65 GBP/MWh w 2020 r.

Kurs wykonania mający zastosowanie do tego projektu wynosi 105 GBP/MWh (ceny z 2012 r. – corocznie indeksowane wskaźnikiem cen towarów konsumpcyjnych).

Wewnętrzną stopę zwrotu (IRR) dla projektu szacuje się na poziomie 7,9 % w ujęciu realnym, po opodatkowaniu. Proponowana umowa inwestycyjna wygaśnie z dniem 31 marca 2027 r. Władze brytyjskie przewidują, że po upływie tego terminu elektrownia zostanie zamknięta ze względu na późniejszy brak rentowności prowadzonej działalności.

([1]) Sprawozdanie „Electricity Generation Costs December 2013" (Koszty wytwarzania energii elektrycznej – grudzień 2013 r.) DECC (2013), dostępne na stronie: https://www.gov.uk/government/publications/electricity-generation-costs.

([2]) Dostępne na stronie: https://www.gov.uk/government/publications/electricity-market-reform-delivery-plan.

Krajową podstawą prawną jest ustawa o energii z 2013 r. (ang. Energy Act 2013). Całkowity budżet projektu szacowany jest na 0,8 mld GBP.

3. **OCENA ŚRODKA**

Beneficjent otrzyma wsparcie od kontrahenta będącego brytyjską spółką państwową, Low Carbon Contracts Company Ltd, w odniesieniu do wytwarzanej energii elektrycznej. Zgłoszony środek wspiera wytwarzanie energii elektrycznej ze źródeł odnawialnych przez wybranego beneficjenta. Elektrownia będzie ponadto konkurować na rynku surowcowym w zakresie biomasy wykorzystywanej jako paliwo. Państwa członkowskie prowadzą intensywny handel w zakresie energii elektrycznej i zasobów leśnych. Przyjmuje się zatem, że zgłoszony środek zakłóci konkurencję na rynku energii elektrycznej i biomasy oraz będzie miał wpływ na wymianę handlową między państwami członkowskimi. Zgłoszony środek stanowi zatem pomoc państwa w rozumieniu artykułu 107 TFUE.

Komisja stwierdza, że zgłoszony środek ma na celu wspieranie wytwarzania energii elektrycznej ze źródeł odnawialnych, szczególnie z biomasy. Zgłoszony środek wchodzi w zakres Wytycznych w sprawie pomocy państwa na ochronę środowiska i cele związane z energią w latach 2014–2020 (EEAG) ([3]).

Zjednoczone Królestwo wyjaśniło, że poziom kursu wykonania dla projektów dotyczących przekształcenia elektrowni w celu zasilania ich biomasą obliczono przyjmując stopy zwrotu w przedziale 8,8–12,7 %. Takie stopy byłyby zgodne ze stopami wcześniej zatwierdzonymi przez Komisję w odniesieniu do brytyjskich projektów dotyczących biomasy (np. do programu zobowiązania dotyczącego odnawialnych źródeł energii – SA.35565, Dz.U. C 167 z 13.6.2013). Tabela 2 przedstawia uśrednione koszty i prognozowaną wewnętrzną stopę zwrotu dla zgłoszonego projektu, jak również ogólne szacunki Zjednoczonego Królestwa w odniesieniu do tej technologii.

Tabela 2

Zestawienie uśrednionych kosztów i prognozowanej wewnętrznej stopy zwrotu dla zgłoszonego projektu

Zakres uśrednionych kosztów ogólnych (wg DECC)	**Zakres realnej IRR przed opodatkowaniem (wg DECC)**	**Zakres realnej IRR po opodatkowaniu (wg DECC)**
Zakres: 105–115 GBP/MWh Wariant uśredniony: 109 GBP/MWh	Zakres: 8,8—12,7 % Wariant uśredniony: 10,9 %	Zakres: 8,7—11,8 % Wariant uśredniony: 10,3 %
Uśrednione koszty projektu	**Realna IRR projektu przed opodatkowaniem**	**Nominalna IRR po opodatkowaniu**
105 GBP/MWh	9,7 %	9,9 %

Obliczenia wykazują, że na wewnętrzną stopę zwrotu znaczący wpływ mają pierwotne założenia przyjęte w kalkulacjach finansowych. Na przykład według szacunków opartych na danych Zjednoczonego Królestwa, gdyby sprawność cieplna i współczynnik obciążenia zwiększyły się o 5 %, a koszty paliwa zmniejszyły się o 5 %, wewnętrzna stopa zwrotu (w ujęciu realnym, po opodatkowaniu) wzrosłaby z 7,9 % do 16,8 %.

Parametry wejściowe, takie jak sprawność cieplna, współczynnik obciążenia i koszty paliwa są danymi szacunkowymi i w związku z tym są podatne na pewien margines błędu. W szczególności informacje te przekazane zostały przez promotorów projektu i należy je zweryfikować z informacjami rynkowymi. Na przykład ostatnie dane przedłożone przez Zjednoczone Królestwo wskazują na współczynnik obciążenia wyższy niż 85 %, co stanowi również średnią dla posiadanych przez RWE elektrowni węglowych.

Komisja stwierdza zatem, że wątpliwości co do założeń przyjętych do kalkulacji kosztów mogą spowodować znaczące zmiany wysokości wewnętrznej stopy zwrotu, co może potencjalnie skutkować nadmierną rekompensatą. W szczególności wewnętrzna stopa zwrotu może z łatwością przekroczyć zakresy szacowane przez Zjednoczone Królestwo i ujęte w tabeli 2.

([3]) Dz.U. C 200 z 28.06.2014.

Biorąc pod uwagę powyższe kwestie, Komisja ma wątpliwości, czy pomoc przyznana na rzecz zgłoszonego projektu jest ograniczona do niezbędnego minimum.

Komisja zwraca ponadto uwagę na fakt, że beneficjent odpowiada za niewielką część brytyjskiego rynku energii elektrycznej. Elektrownia w Lynemouth będzie posiadać 0,7 % zainstalowanej zdolności wytwarzania energii elektrycznej w Zjednoczonym Królestwie. Ponadto projekt polega na doposażeniu już istniejącej elektrowni węglowej.

W związku z powyższym Komisja uważa, że zgłoszony projekt nie będzie miał znacznego wpływu na konkurencję na rynku wytwarzania energii elektrycznej w Zjednoczonym Królestwie. Komisja jest jednak zdania, że ilość surowców niezbędna do zasilania elektrowni w Lynemouth wyłącznie biomasą – zgodnie z powyższymi wyjaśnieniami około 1,5 mln ton rocznie – jest znacząca w porównaniu z rynkiem europejskim i światowym, w szczególności konkretnie pod względem surowca potrzebnego tej elektrowni.

W szczególności elektrownia będzie potrzebować granulatu drzewnego zgodnego z dokładnie określoną specyfikacją, a zatem nie będzie mogła być zasilana odpadami drzewnymi lub wiórami drzewnymi. Rynek takiego granulatu jest znacznie mniejszy niż na przykład rynek wiórów drzewnych. Granulat drzewny potrzebny elektrowni w Lynemouth będzie importowany głównie z południowo-wschodniej części Stanów Zjednoczonych, z zachodniej Kanady i z Rosji. Odnotowuje się szybki wzrost produkcji granulatu w tych regionach świata, jednak ze względu na wymagane ilości zgłoszony środek pomocy niesie ryzyko zakłócenia konkurencji na światowym rynku granulatu drzewnego. Ponadto w zależności od warunków panujących na rynku lokalnym, cena granulatu drzewnego może być porównywalna do ceny surowców wymaganych do innych celów (takich jak produkcja masy celulozowej i papieru lub kartonu). W związku z powyższym istnieje ryzyko zakłócenia konkurencji na rynku surowców wymaganych do innych celów. Wreszcie, ponieważ występuje korelacja między cenami drewna do różnych zastosowań i na różnych rynkach, istnieje ryzyko, że zakłócenia rynkowe zostaną rozszerzone na inne regiony produkcji. W oparciu o informacje dostępne na obecnym etapie Komisja nie może wykluczyć z wystarczającą pewnością, że nie wystąpią takie ewentualne zakłócenia.

Na tym etapie Komisja nie może stwierdzić, czy związane z przedmiotowym środkiem oczekiwane korzyści dla środowiska będą przeważać nad ewentualnymi negatywnymi skutkami dla innych uczestników rynku. Z tego powodu Komisja uważa, że przed dokonaniem ostatecznej oceny musi zapewnić wszystkim zainteresowanym stronom możliwość wyrażenia swoich opinii odnośnie do dwóch kwestii: ewentualnej nadmiernej rekompensaty i ewentualnych zakłóceń na rynku biomasy w celu zakończenia jej oceny.

TEKST PISMA

'The Commission wishes to inform the UK that, having examined the information supplied by your authorities on the measure referred to above, it has decided to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union (TFEU) in respect to the support to the biomass conversion of the Lynemouth power station.

I. **PROCEDURE**

1. Following pre-notification contacts, on 17 December 2014 the United Kingdom notified, pursuant to Article 108(3) TFEU, the support for the Lynemouth Power Station Biomass Conversion Project. On 5 February 2015, the UK authorities submitted additional information.

II. **DESCRIPTION OF THE MEASURE**

Background and objectives of the notified project

2. The UK intends to restructure its support for renewable energy. In this context, the UK notified to the Commission a system based on Contracts for Difference (CfD), which is known as the CfD for Renewables Scheme (hereinafter referred to as the CfD scheme). The Commission adopted a favourable decision approving the CfD Scheme on 23 July 2014 ([1]). Aid will be granted under the CfD Scheme from 1 April 2015 onwards.

3. As a transitory measure, the UK has also organised a tender process and selected eight advanced renewable projects under the Final Investment Decision Enabling for Renewables (FIDeR) process ([2]). Support for these selected projects will be provided on the basis of Investment Contracts. The notified project is part of the eight projects selected under FIDeR.

4. The selection process was designed as an open, transparent, competitive and non-discriminatory process. The budget for this process was constrained and not all projects that met the minimum threshold Evaluation Criteria were able to receive Investment Contracts.

5. Of the 57 projects that applied, 26 passed the first phase of the selection process, based on the qualification criteria established by the UK ([3]).

6. In the second phase of the selection process, 16 applicants from the four technology groups were selected, as they met the required minimum evaluation criteria thresholds ([4]). The projects meeting the minimum threshold evaluation criteria were ranked for each technology, and they were further subject to an affordability assessment and down-selection methodology, allowing the UK to select only the projects for which there was a budget available.

7. The UK wished to ensure that the selection process would provide support to a variety of technologies. It therefore allocated Investment Contracts to the top quartile of projects which met the minimum threshold Evaluation Criteria within each of the technology types for which there was at least one project remaining in the process.

8. At the end of the selection process, eight projects were awarded Investment Contracts. According to the UK, the eight selected projects will contribute over 4,5 GW of low carbon electricity capacity to the UK's energy mix. The proposed projects will generate about 15 TWh of electricity, corresponding to 14 % of the renewable electricity the UK expects to develop by 2020, helping the UK to meet its 2020 renewable energy target ([5]). The projects will also reduce emissions by 10 Mt CO_2 per year compared to fossil fuel power generation, and will contribute to meeting the UK's security of supply and diversity of supply objectives by ensuring that a range of technologies contribute to the UK energy mix.

([1]) C(2014) 5079 final (JOCE C/393/2014).

([2]) The Commission adopted a decision on six of these eight projects. On 23 July 2014 a no objection decision was adopted for five offshore wind project (cases SA.38758, SA.38759, SA.38761, SA.38763 and SA.38812; C(2014) 5074 final; JOCE C/393/2014) and on 22 January 2015 a no objection decision was adopted for the Teesside CHP biomass project (SA.38796, decision not yet published).

([3]) Only projects eligible for support under the Renewable Obligation scheme that however had not actually been accredited under that regime, could participate. Furthermore the applicants needed to demonstrate that their projects would start generating electricity by 31 March 2019 and would not be carried out or would be significantly delayed without an Investment Contract. They had to be located in the UK (although the process was open to developers from other Member States) and needed to have a capacity of 50 MW or greater (or in the case of offshore projects, 100 MW or greater).

([4]) The evaluation criteria related to the project deliverability and its impact on industry development, with particular focus on whether a project was likely to support industries associated with the generation of electricity from renewable sources and whether it contributed to the development of the supply chain and the reduction of the cost of renewable generation over the long term.

([5]) Or over 6 % of the overall 2020 UK target for renewable energy.

Beneficiary

9. The notified aid measure concerns the conversion of the coal fired Lynemouth power station to operate entirely on biomass. The power plant is situated in Northumberland on the north-eastern coast of England. The power plant is owned and operated by Lynemouth Power Limited, a wholly owned subsidiary of RWE Supply & Trading GmbH.

10. Lynemouth is a 420 MW coal fired power station that started commercial operation in 1972. Under the current proposal, the power plant will be retrofitted to operate exclusively on biomass. The commissioning of the plant is foreseen by September 2016 ([6]). The plant will provide electricity to the Northern Power Grid powering the north-east of England.

11. Overall, the market share ([7]) of the project will amount to 0,7 % of the UK future electricity generation market.

12. The plant will be fuelled exclusively by wood pellets mainly sourced from abroad and in particular from Southeast United States, West Canada, and Russia. The plant is required to meet the UK sustainability criteria described in the CfD scheme including a minimum of 60 % greenhouse gas savings against the average EU fossil grid intensity (i.e. against the EU coal and gas average, measured using the methodology set out in the Renewable Energy Directive). These targets will be reinforced to a minimum of 72 % greenhouse gas saving from April 2020, and then to a minimum of 75 % saving from April 2025.

13. According to UK estimates, the project will save approximately 17,7 million tons of CO_2 over its 12 year lifetime and supply about 2,3 TWh of electricity per year. The plant will operate at base-load thus providing schedulable low-carbon energy in an increasingly intermittent non-fossil energy mix.

14. According to the UK authorities, the plant is designed to operate at 420 MW nominal electrical power with a mean load factor of 75,3 %. The plant will use approximately 1,44- 1,56 million dry tonnes of wood pellets a year. The plant conversion will not be designed to be compliant with the waste incineration regulations, and therefore will not be able to burn waste wood.

15. Table 1 shows the expected operating parameters of the Lynemouth plant. According to the UK authorities, the load factor is the product of the amount of time the plant is technically available to generate electricity (subtracting, for example, the time required for maintenance or repair) and the time the plant is actually scheduled to generate based on the wholesale electricity price (this is sometimes referred to as the gross load factor). The net load factor shown in Table 2 is the product of a mean technical availability of 80,77 % and a gross load factor of 93,34 % ([8]).

Table 1

Plant operating parameters

Fuel cost £/GJ	Thermal efficiency %	Mean load factor %
7,17	36,9 %	75,3 %

Source: UK authorities.

Use and availability of biomass

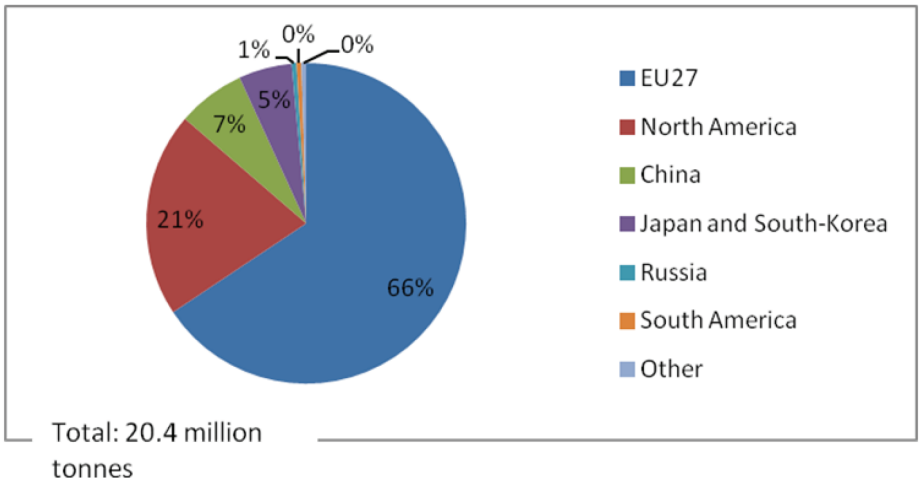
16. According to estimates submitted by the UK, there will be an annual surplus of woodfibre of around 46 million tonnes until 2025. This surplus would correspond to 23 million tonnes of wood pellets per year. Europe is expected to import biomass resources in the next decade to satisfy its growing consumption. Trade of biomass for energy uses is still relatively limited. The global trade of wood chips was estimated at 22 million tonnes/year in 2011. Net imports of wood pellets in the EU in the same year was estimated at 3,2 million tonnes per year and increased to about 4 million tonnes per year in 2012.

([6]) In their submission of 5 February 2015, the UK authorities state that the generation start date may be delayed to 1 March 2017.
([7]) Calculated as the proportion of electricity generated by the project as a percentage of the total amount of electricity generated in the UK.
([8]) In their submission of 5 February 2015, the UK authorities acknowledged that, when operating for a now closed local aluminium smelter, the Lynemouth plant could reach an 85 % net load factor.

17. The global wood pellets consumption was estimated at 22,4 to 24,5 million tonnes ([9]) in 2012, of which approximately 15,1 million tonnes were consumed in Europe. Figure 1 shows the global wood pellets consumption.

Figure 1

Global wood pellet consumption (2012)

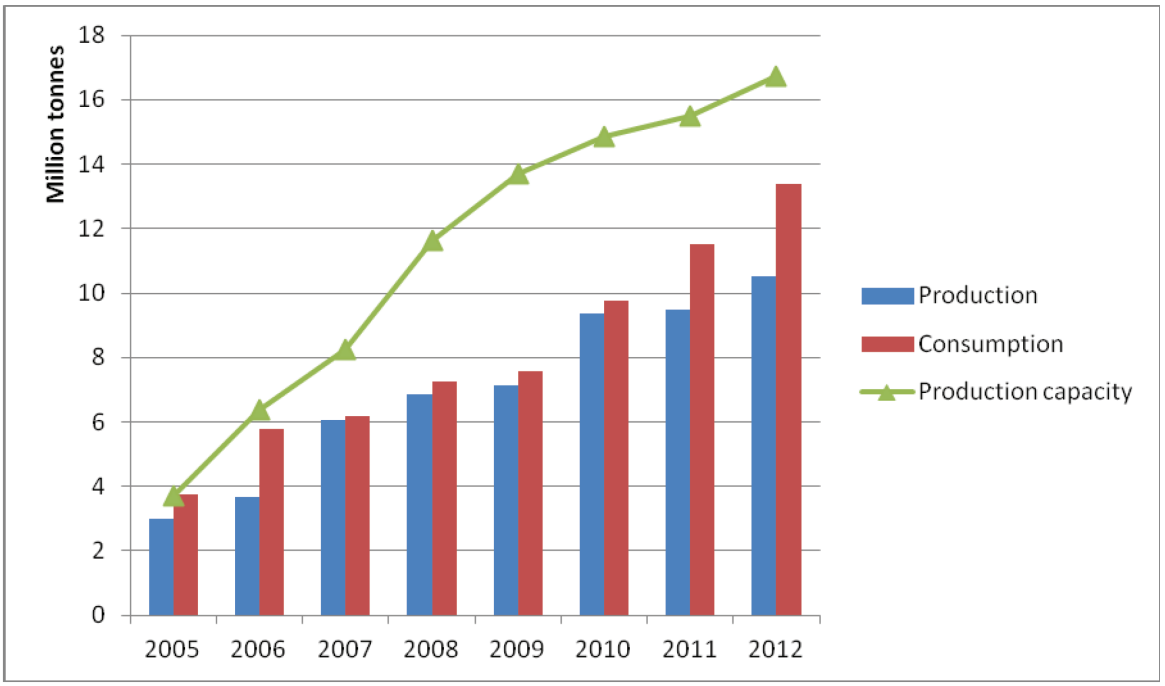


Source: AEBIOM European Bioenergy Outlook 2013

18. Figure 2 gives indications ([10]) of the production, consumption and production capacity of wood pellets in EU27 in 2012.

Figure 2

Production, consumption and production capacity of wood pellets in EU27



Source: AEBIOM European Bioenergy Outlook 2013

([9]) AEBIOM European Bioenergy Outlook 2013.
([10]) Due to statistical uncertainties, these data should be considered an approximation.

19. The Member States consuming most wood pellets in power plants are the UK (1,3 million tonnes, in 2013) ([11]), Belgium (1,3 million tonnes), Netherlands (1,2 million tonnes), Denmark (1 million tonnes) and Sweden (1 million tonnes).

Form of aid level of support and return on investment

20. The notified aid is granted based on CfD and takes the form of a variable premium calculated as the difference payment between a pre-fixed price (the strike price) and a measure of the market price for electricity (the reference price). The beneficiary will earn money from selling its electricity into the market, but when the average wholesale price of electricity is below the strike price, the beneficiary will receive a top-up payment from a UK Government-owned counterparty (Low Carbon Contracts Company Ltd — the "CfD Counterparty" ([12])) for the difference. The beneficiary will however retain the risks of not achieving the reference price and a volume risk of not achieving the forecasted sales volumes.

21. When the reference price exceeds the strike price, the CfD mechanism requires the beneficiary to pay the difference between the reference price and the strike price to the CfD Counterparty. According to the UK authorities, this ensures that the beneficiary is not overcompensated.

22. The reference price is a price based on forward wholesale market electricity prices in a given period. The generator is however not obliged to sell in the forward market but can for example sell in the day-ahead market. This ensures that the generator participates actively in the electricity market by seeking to obtain the best price for the electricity it generated.

23. The support to the biomass project is therefore determined on the basis of an administratively set strike price. Strike prices were set at such levels that the support under the FIDeR is broadly equivalent to that provided under the current Renewable Obligation scheme ([13]), in order to smoothen the transition between the support schemes.

24. For the calculation of strike prices for dedicated biomass conversion plants (applicable to the Lynemouth plant), the UK in particular considered the ranges of levelised costs presented in table 2 below. The UK presented in detail how these costs were calculated, the sources of data used and the hurdle rates considered ([14]).

Table 2

Levelised cost estimates for projects commissioning in 2014 and 2016

£/MWh (2012 prices)

Technology	2014	2016
Biomass conversion	106-116	105-115

Source: UK authorities

25. The "levelised costs" are the average costs over the lifetime of a power plant per MWh of electricity generated (a standardised measure of the net present value of lifetime costs divided by generation for a generic plant under each technology). They reflect the costs of building a generic plant for each technology, while potential revenue streams are not considered. Levelised costs estimates are highly sensitive to the underlying data and assumptions used including those on capital costs, fuel and carbon costs, operating costs, conversion efficiency, operating profile, load factor and discount rates. Some of these uncertainties are captured through the use of ranges around key estimates (e. g. for capex and fuel costs).

26. The levelised costs include the financing costs of new power plants based on a 10 % discount rate for all technologies.

27. The calculation of the strike price is based on a range of factors, including technology specific factors (such as capital and operating costs, financing costs as well as any building constraints), market conditions (such as wholesale prices and the discount which generators face when signing a power purchase agreement) and policy considerations (such as the specific contract design, choices about technology mix and meeting the ambition for renewable electricity).

([11]) AEBIOM European Bioenergy Outlook 2013.

([12]) Initially the Investment Contracts have been entered into by the UK Government. Once State aid approval has been obtained, the UK Government will transfer the remaining Investment Contracts to the CfD Counterparty.

([13]) The scheme was originally approved by the Commission Decision of 28 February 2001 in case N504/2000 and subsequently amended several times. In its current form, the scheme was approved by the Commission in its Decision of 2 April 2013 in case SA.35565 (OJ C 167, 13.6.2013, p. 5). Some specific elements were afterwards approved for Northern Ireland (case SA.36084) and Scotland (case SA.37453).

([14]) All these elements have been published by the UK authorities in the document "Electricity Generation Costs", available on https://www.gov.uk/government/publications/electricity-generation-costs

28. The strike price for a particular technology is different than the levelised costs of the respective technology, due to the factors indicated above, but also for a number of other reasons:

— some costs are not included in the levelised costs (e.g. those related to the generator's share of transmission losses);

— contract length: the levelised costs are defined over the operating life of a project. If the CfD contract length is shorter than the operating life and wholesale prices and capacity market revenue post-contract are lower than the levelised costs then, all other things being equal, the strike price must be increased above the levelised costs to compensate for this; and

— other revenues that generators may receive: e.g. Climate Change Levy Exemption Certificates ("LEC") provide around £5/MWh revenue and it was assumed the beneficiaries will receive LEC revenue; therefore the strike price was reduced to account for this.

29. The key assumptions used for the calculation of strike prices, including for levelised costs, fossil fuel prices, effective tax rates, PPA discounts and maximum build assumptions are listed in the UK Government's levelised cost report ([15]) and the reports from the Department of Energy and Climate Change ([16]). For this purpose, the wholesale price of electricity is assumed to be approximately £ 55MWh in real terms increasing to £ 65MWh in 2020.

30. The strike prices were administratively set to reflect the expected levelised generation costs.

31. The applicable strike price for this project is £105/MWh (2012 Prices — indexed annually to CPI). The same amount per MWh will be the maximum strike price offered to biomass conversion plants under the CfD Scheme.

32. The Internal Rate of Return (IRR) for the project is estimated at 7,9 % on a real, post-tax basis. The proposed investment contract will end on 31 March 2027. After this date, the UK authorities expect the plant to close as it is expected not to be economically viable thereafter. Based on a financial analysis, the UK argues that the levelised cost of the electricity produced by the biomass plant will be higher than the wholesale price of electricity.

33. Based on data submitted by the UK, the Commission carried out a sensitivity analysis of the IRR with respect to key input parameters: fuel costs, thermal efficiency and load factor. The results are summarized in table 3. Table 3 shows the ranges of fuel costs, thermal efficiency and load factor corresponding to a variation of plus or minus 5 % and 10 % ([17]) from the central value as well as the resultant IRR (the central values are the ones shown in Table 1).

Table 3

Real post-tax IRR as a function of input parameters.

FUEL COSTS					
	+ 10 %	+ 5 %	Central (+ 0 %)	-5 %	-10 %
Mean Fuel Cost (£/GJ)	7,89	7,53	7,17	6,81	6,45
IRR	0,00 %	3,90 %	7,90 %	11,50 %	14,80 %
THERMAL EFFICIENCY					
	+ 10 %	+ 5 %	Central (+ 0 %)	-5 %	-10 %
Mean Net Input Efficiency (LHV)	40,59 %	38,75 %	36,90 %	35,06 %	33,21 %
IRR	14,30 %	11,38 %	7,90 %	5,00 %	0,00 %

([15]) "Electricity Generation Costs December 2013" DECC (2013), available a https://www.gov.uk/government/publications/electricity-generation-costs

([16]) Available at https://www.gov.uk/government/publications/electricity-market-reform-delivery-plan

([17]) The UK authorities have indicated that in their view this range is too wide, and they do not expect the eventual changes to exceed a range of +/- 5 % for fuel cost and load factor and +/- 2 % for the thermal efficiency of the plant.

LOAD FACTOR

	+ 10 %	+ 5 %	Central (+ 0 %)	-5 %	-10 %
Mean Net Load Factor	82,83 %	79,07 %	75,30 %	71,54 %	67,77 %
IRR	11,50 %	9,70 %	7,90 %	6,00 %	4,00 %

National legal basis

34. The national legal basis is the Energy Act 2013.

Financing: budget, aid intensity and duration

35. The total budget for this project is estimated at £ 0,8 billion.

36. The final investment decision will be taken only after the Commission adopts a decision on the compatibility of the aid. No aid will be paid to the beneficiary before the commissioning date.

37. Regardless of the commissioning date, payments through the Investment Contract will end on 31 March 2027.

38. The CfD counterparty will be funded through a statutory levy imposed on all licensed electricity suppliers, based on the suppliers' market share, defined by metered electricity use. Suppliers will have to meet their obligations from their own resources but will be free to pass the costs on to consumers as part of their overall pricing strategies.

Transparency

39. With regard to reporting and transparency, the UK indicated that all the Investment Contracts awarded through the FIDeR process have been published online in the form in which they were signed ([18]).

Cumulation

40. The UK clarified that the projects that have been awarded Investment Contracts will be unable to receive a CfD for the same electricity generation under the new support scheme. Moreover, no project receiving payments under Investment Contracts will be able to receive Renewable Obligation Certificates for the same electricity generation. Finally, renewable generation that receives support through an Investment Contract will not be able to participate in the Capacity Market or receive investment aid during the term of the Investment Contract.

41. The UK explained that LECs are available for renewable electricity generation. LECs are not considered to be State aid by the UK. Nevertheless, since it has been assumed that CfD plants (including those with Investment Contracts) will receive LEC revenue, the strike price has been reduced to account for this, as explained in recital 28 above.

42. Based on the above principles, the UK confirmed that neither the generator nor any of its direct or indirect stakeholders has received, been granted or applied for any other support from the UK or from any other Member State.

III. **ASSESSMENT**

Presence of state aid

43. A measure constitutes State aid in the meaning of Article 107(1) TFEU if it is *'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.*

44. The beneficiary will receive support from the UK Government-owned counterparty, the Low Carbon Contracts Company Ltd, for the electricity generated by the notified project. The notified measure favours the generation of electricity from renewable sources (in this case biomass) by the selected beneficiary. Electricity is widely traded between Member States. The notified measure is therefore assumed to distort competition on the electricity market and affect trade between the Member States. Moreover, the plant will compete for biomass fuel in the raw material market. More specifically, due to a lack of sufficient local forestry resources, most of the biomass needed to fuel the plant will be imported from abroad. There is therefore a risk that the measure might distort competition in the raw material market. Therefore the notified measures constitute State aid in the meaning of Article 107 TFEU.

([18]) Available on the website: https://www.gov.uk/government/publications/final-investment-decision-fid-enabling-for-renewables-investment-contracts

Legality of the aid

45. Based on the information provided by the UK, the Commission notes that no final investment decision has been taken. No payments will be made before State aid approval has been obtained. The Commission considers therefore that the UK has fulfilled its obligations under Article 108(3) TFEU.

Compatibility of the aid

46. The Commission notes that the notified measure aims at promoting the generation of electricity from renewable sources, namely from biomass. The notified measure falls within the scope of the Guidelines on State aid for environmental protection and energy 2014-2020 (EEAG) ([19]). The Commission has therefore assessed the notified measure based on the general compatibility provisions of the EEAG (set out in its section 3,2) and based on the specific compatibility criteria for operating aid granted for electricity from renewable energy sources (section 3.3.2.1 EEAG).

Objective of common interest

47. The aim of the notified aid measure is to help the UK achieve the CO_2 reduction and renewable energy targets set by the EU as part of its EU 2020 strategy. The project will increase the share of the electricity produced from renewable sources in the UK and, according to the estimates presented in paragraph 13 above, will have a significant contribution in terms of reducing CO_2 emissions. In line with points 30 and 31 EEAG, the UK defined the objective of the measure and explained the expected contributions towards ensuring a competitive, sustainable and secure energy system.

48. The Commission thus considers that the notified aid measure is aimed at an objective of common interest in accordance with Article 107(3)(c) of the Treaty.

Need for state aid and appropriate instrument

49. In point 107 EEAG the Commission acknowledges that *"under certain conditions State aid can be an appropriate instrument to contribute to the achievement of the EU objectives and related national targets"*.

50. The UK provided a detailed financial analysis illustrating the costs of the project. Based on this analysis, the Commission notes that without the aid the notified project would not be financially viable, as the costs for generating electricity would be higher than the income from the sale of the electricity thus generated.

51. According to point 116 EEAG, in order to allow Member States to achieve their targets in line with the EU 2020 objectives, the Commission presumes the appropriateness of aid to energy from renewable sources provided all other conditions are met.

52. Consequently, the Commission considers that the aid for the notified project is necessary and that it is granted by means of an appropriate instrument to address the objective of common interest.

Incentive effect

53. In line with point 49 EEAG, a measure has an incentive effect if the aid induces the beneficiary to change his behaviour towards reaching the objective of common interest which he would not do without the aid.

54. The levelised costs of electricity from biomass plants illustrated in table 2 are well above the expected electricity market price ([20]). The UK authorities have provided a financial analysis to demonstrate that, without aid, the IRR of the notified project would be negative because, as stated in paragraph 32 above, the operating costs are expected to be higher than the forecasted revenues from the sale of electricity. In such a situation, rational market players would not want to invest in the notified biomass project. The aid therefore changes the beneficiary's behaviour.

55. The UK confirmed that the applicants for Investment Contracts were required to submit a number of applications under the application process. The Commission notes that the notified measure complies with the obligation to use an application form for aid, as set out in point 51 EEAG. The Commission further notes that the application was submitted before work on the project has started.

Proportionality

56. According to point 69 EEAG, environmental aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the environmental protection objective aimed for.

([19]) OJ C 200, 28.6.2014.
([20]) The market price is assumed to be approximately £ 55MWh in real terms as described in point 29 above.

57. As laid down in point 124 EEAG, the aid is provided in the form of a variable premium on top of the reference price for electricity. This premium consists in the difference between the strike price (the level of revenues calculated as necessary for biomass conversion projects to reach an acceptable rate of return) and the reference price of electricity.

58. The Commission notes that the project was selected by means of a bidding process. However, the aid amount (strike price) was set administratively and at the same level (£105/MWh) as for all biomass conversion projects under the general CfD RES scheme (as explained in the decision regarding case SA.36196). In the bidding process, the project was therefore not evaluated on the basis of price.

59. The Commission verified the compliance of the notified measures with section 3.3.2.1 EEAG (Operating aid for electricity from renewable energy sources). The Commission notes that the beneficiary will sell the electricity produced directly in the market, as required by point 124 EEAG. The Commission further notes that the Investment Contract is already signed and will become binding on the UK once the measure is approved by the Commission. The aid will be granted before 1 January 2016. The aid is granted as a variable premium until 2027 and not exceeding the depreciation period of the investment.

60. The aid granted to the notified project will not be cumulated with any other aid. Moreover, the UK confirmed that neither the generator nor any of its direct or indirect stakeholders has received any other support from the UK or from any other Member State in relation to the notified project.

61. The UK explained that the level of the strike price for biomass conversion projects was calculated considering a range in hurdle rates of 8,8 % - 12,7 %. Such rates would be consistent with the ones previously approved by the Commission for biomass projects in the UK ([21]). Table 4 below presents the levelised costs and the expected IRR for the notified project, as well as the general estimates of the UK for this technology.

Table 4

Summary of the levelised costs and IRR details for the notified project

DECC generic levelised cost range	DECC generic pre-tax real IRR range	DECC generic post-tax nominal IRR range
Range: £105- £115/MWh Central scenario: £109/MWh	Range: 8,8- 12,7 % Central scenario: 10,9 %	Range: 8,7- 11,8 % Central scenario: 10,3 %
Project levelised cost	**Project pre-tax real IRR**	**Project post-tax nominal IRR**
£105/MWh	9,7 %	9,9 %

Source: UK authorities

62. Calculations show that the IRR is significantly affected by the initial assumptions used in the financial calculations. Based on the sensitivity analysis shown in point 33 above, if the thermal efficiency and the load factor were to increase by 5 % and fuel costs to decrease by 5 %, the IRR (on post-tax real basis) would increase from 7,9 % to 16,8 %. A similar 10 % variation of the three parameters would increase the rate of return to 24,8 %. Table 5 summarises the IRR changes corresponding to a 5 % and 10 % change in the input parameters.

Table 5

IRR change corresponding to a 5 % and 10 % increase in thermal efficiency and load factor and a 5 % and 10 % decrease in fuel costs.

	Variation from central value		
	+(-)10 %	*+(-)5 %*	0 %
Mean Fuel Cost (£/GJ)	6,45	*6,81*	7,17
Mean Net Input Efficency (LHV)	40,59 %	*38,75 %*	36,90 %
Mean Net Load Factor	82,83 %	*79,07 %*	75,30 %
IRR (post-tax, real)	24,8 %	*16,8 %*	7,9 %
IRR (pre-tax, real)	31,7 %	*23,1 %*	9,7 %

([21]) e.g. for the Renewable Obligation scheme — SA.35565, OJ C 167, 13.6.2013, p. 5.

63. The Commission therefore notes that uncertainties in the assumptions used in the cost calculation might result in significant changes to the IRR, so as to lead to potential overcompensation. In particular, the IRR might easily exceed the ranges envisaged by the UK and shown in Table 4.

64. The input parameters such as thermal efficiency, load factor and fuel costs are estimates and as such prone to a certain margin of error. Notably, the information is provided by the project promoters and has to be verified against market information. On the basis of the information received, the Commission has indications that the estimated values are indeed prone to a considerable margin of error so that overcompensation cannot be excluded.

65. For example market information ([22]) related to a similar biomass conversion project suggests that it is possible to reach thermal efficiency close to 39 % (instead of the 36,9 % assumed for this project). Based on this information, market analysts used a thermal efficiency of 38 % to 39 % for a similar biomass project. The Commission has reasons to believe that the 38 % — 39 % value refers to the total process efficiency and therefore such values should be considered as possible when calculating the economic performances of the Lynemouth plant. The expected thermal efficiency may therefore be under-estimated which would lead to a structural over-compensation at the envisaged support level.

66. As explained in point 15 above, the load factor is the product of the technical availability and the time the plant is actually scheduled to generate. The UK estimated the availability initially at 80,77 %. However, more recent data submitted by the UK suggest an availability of more than 85 % which is also the average for the RWE's fleet of coal power plants.

67. The UK acknowledges that the strike price would make it profitable for the plant to operate almost irrespective of the actual electricity wholesale price as the strike price is very likely to almost always exceed the operating costs. In these conditions, the plant should operate whenever technically available. However, in the central scenario (see Table 2 above), the plant is scheduled to run only 93,34 % of the time it is technically available ([23]). The Commission could not verify the reasons for this lower value. In any event, if the project in practice operates with a higher load factor there is risk of substantial over-compensation.

68. The price assumed for wood pellets is broadly in line with the current spot price ([24]). However, the assumptions used to estimate the long term price are unclear. If the market surplus as assumed by the UK persists (as described in point 16 above), future market prices might be lower. In the past years ([25]), the market price of wood pellets has been as low as 160 $/tonne (corresponding to approximately 6,2 £/GJ i.e. about 1 £/GJ lower than assumed by the UK). Moreover, it is not fully clear how the logistics costs assumed on top of the market costs are calculated (in particular regarding the £ 75 million needed by Lynemouth to be associated with upgrading the port infrastructure).

69. Based on the foregoing considerations, the Commission is not able to verify with reasonable certainty that the amount of aid for the notified project is limited to what would be necessary to allow the project to reach a reasonable rate of return. Furthermore, the Commission notes that there are no safeguards in place to correct potential overcompensation.

Distortion of competition and balancing test

70. According to point 90 EEAG, the Commission considers that aid for environmental purposes will by its very nature tend to favour environmentally friendly products and technologies at the expense of other, more polluting ones. Furthermore, the effect of the aid will in principle not be viewed as an undue distortion of competition since it is inherently linked to its very objective.

71. The Commission further notes that the beneficiary represents a small fraction of the UK electricity market. As mentioned in point 11 above, the Lynemouth plant will amount to 0,7 % of the installed UK electricity generation capacity. Moreover, the project consists of retrofitting an already existing coal power plant. Therefore, the Commission considers that the notified project will not have any significant impact on competition in the UK electricity generation market.

72. However, the Commission is of the opinion that the amount of feedstock required to operate Lynemouth entirely on biomass — approximately 1,5 million tonnes/year, as explained in point 14 above — is significant compared to both the European and the global market in the particular feedstock needed for the plant. In particular, the plant will require wood pellets complying with well-defined specifications and cannot be fired by waste wood or wood chips. The market for such pellets is considerably smaller than, for example, the wood chips market.

([22]) See for example:
Transcript of the Q4 2013 Earning Call for the Drax Group, related to the biomass conversion projects of the Drax power plant, Bloomberg; "Drax: Reality bites! Subsidy risks and supply chain challenges drive downgrade to underperform" Bernstain Research analysis of 14 August 2014;"Drax, has the FID-Enabling CfD process delivered value for money or high returns for Drax?" Societe Generale, Cross Asset Research, 6 March 2014.

([23]) As of the second year of operation, the gross load factor is estimated at 95,54 %.

([24]) The 90 day cif ARA Index for industrial wood pellets is at the moment approximately 180 $/tonne or 6,9 £/GJ.

([25]) See for example time series of the Wood pellets 90 day Index cif ARA from May 2009 to May 2013.

73. Compared to 2012 data, the Lynemouth power station would consume approximately 7,4 % of the world wood pellet consumption, 11,2 % of the European consumption and 88,2 % of the UK consumption. Import of wood pellets in the EU would increase by an amount equivalent to approximately 1/3 of the 2012 total European imports.

74. The Commission acknowledges that the production capacity of wood pellets is growing rapidly. However, if the measure is approved, the Lynemouth conversion project should be completed in 2016. Taking also into account other similar schemes, the Commission has doubts that the market can accommodate the required demand increase in such a short timeframe without significant market distortions. In addition, wood biomass is used by a wide variety of companies for different uses, and such a sudden increase in demand for wood pellets might lead to more biomass being transformed in wood pellets to the detriment of other industries and sectors that use biomass as raw material.

75. The wood pellets required by Lynemouth will be imported mainly from the Southeast United States, West Canada, and Russia. Pellet production in these regions has been growing rapidly ([26]), but, due to the volumes required, the notified aid measure risks to distort competition in the global wood pellet market. Moreover, depending on conditions in the local market, the price of wood pellets could be comparable to the price of raw materials needed for other uses (such as pulp and paper or board manufacturing). Therefore, there is a risk of distorting competition in the market for raw materials needed for different uses. Finally, since the price of wood between different uses and different markets tends to correlate, there is a risk that market distortion will extend to other producing regions. Based on the information available at this stage, the Commission cannot exclude with sufficient certainty such possible distortions.

76. The measure will favour the generation of electricity from renewable sources to replace electricity generated from conventional sources, in this case coal. This switch and the enforcement of the UK sustainability requirements described above aim at reducing CO_2 emissions and thus contributing to objective of environmental protection. Moreover, the measure will contribute to the European renewable energy targets.

77. However, when assessing the overall effect of the aid, the Commission has to take into account the potential negative effects of the measure and in this case, more particularly, its potential distortive effect on competitors using the same feedstock. As described above, the measure could affect the raw material prices for other biomass-fired power plants and for other industries using wood pellets or, more generally, wood such as the pulp and paper or sawtimber industries.

78. At this stage, the Commission cannot conclude whether the expected environmental benefit of the measure will outweigh the potential negative effects on other market participants. For this reason, the Commission considers that it is important to give all interested parties the opportunity to express their views on such possible distortions on the biomass market in order to finalise its assessment.

79. Therefore, the Commission considers that the measure may significantly distort competition in the market for biomass raw materials and is not convinced that such distortions are outweighed by the positive effects of the aid.

Transparency

80. According to point 104 EEAG, Member States have the obligation to ensure the transparency of the aid granted, by publishing certain information on a comprehensive State aid website. In line with point 106 EEAG, Member States are requested to comply with this obligation as of 1 July 2016.

81. The Commission notes that the UK is committed to ensure the transparency of the aid granted to the notified project and indicated that all the Investment Contracts awarded through the FIDeR process have been published online in the form in which they were signed.

Other aspects — Compliance with Article 30 and 110 TFEU

82. In the context of the decision on CfD for Renewables (SA.36196) and the decision regarding FIDeR aid to five offshore wind projects (SA.38758, SA.38759, SA.38761, SA.38763 and SA.38812) and to a CHP biomass plant (SA.38796), the UK has committed that it will adjust the way in which electricity suppliers' liabilities for CfD payments are calculated so that eligible renewable electricity generated in EU Member States outside Great Britain and supplied to customers in Great Britain is not counted towards suppliers' markets shares.

83. The UK will ensure that no CfD payments are made before this exemption is in place, or if this is not possible the UK will put in place a mechanism to reimburse suppliers for any imported eligible renewable electricity supplied before the exemption comes into effect but after CfD payments have started to be made.

84. The above commitment will also apply to the notified measure.

([26]) US pellet production tripled during 2012-2013 in just two years.

85. In the light of the above commitment, the Commission considers that the financing mechanism of the notified aid measures should not introduce any restrictions contrary to Article 30 or Article 110 TFEU.

Conclusion with regard to the compatibility of the notified measures

86. In light of the concerns regarding proportionality of the aid and distortion of competition in the raw material market, the Commission has, at this stage, doubts about the compatibility of the measure with the internal market.

IV. **CONCLUSION**

The Commission has at this stage doubts as to the compatibility of the aid for the conversion to biomass of the Lynemouth power plant with the internal market. In particular, the Commission doubts that the aid is limited to the minimum necessary and that the distortions of competition on upstream biomass market are not too significant. In accordance with Article 4(4) of Regulation (EC) No 659/1999 the Commission has decided to open the formal investigation procedure, thereby inviting the UK to submit its comments.

In the light of the foregoing considerations, the Commission, acting under the procedure laid down in Article 108(2) of the TFEU, requests the UK to submit its comments and to provide all information which may help to assess the measure, within one month of the date of receipt of this letter.

It requests the UK authorities to forward a copy of this letter to the potential recipients of the aid immediately.

The Commission wishes to remind the UK that Article 108(3) of the TFEU has suspensory effect, and would draw your attention to Article 14 of Council Regulation (EC) No 659/1999 ([27]), which provides that all unlawful aid may be recovered from the recipient.

The Commission warns the UK that it will inform interested parties by publishing this letter and a meaningful summary of it in the *Official Journal of the European Union*. It will also inform interested parties in the EFTA countries which are signatories to the EEA Agreement, by publication of a notice in the EEA Supplement to the *Official Journal of the European Union* and will inform the EFTA Surveillance Authority by sending a copy of this letter. All such interested parties will be invited to submit their comments within one month of the date of such publication.'

([27]) Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty.