



EUROPEAN COMMISSION

Brussels, 14.04.2010
C(2010)2445

**Subject: State aid N 94/2010 – United Kingdom
Feed in Tariffs to support the generation of renewable electricity
from low carbon sources**

Sir,

1. PROCEDURE

1. By electronic notification of 11 March 2010, registered at the Commission on the same day, the UK authorities, in accordance with Article 108(3) of the Treaty on the Functioning of the European Union (hereinafter referred to as the TFEU)¹, notified the aid scheme "Feed in Tariffs to support the generation of renewable electricity from low carbon sources".
2. The notified measure supplements the main Renewables Obligation (hereinafter referred to as the RO) scheme as previously modified by N 414/2008².
3. The notified measure intends to support generation of electricity from renewable energy sources with a capacity up to 5 megawatt (MW) through Feed in Tariffs (hereinafter referred to as FITs). Non-renewable CHP systems with an electrical capacity of 2 kilowatt (kW) or less may also be eligible for FITs payments

¹ With effect from 1 December 2009, Articles 87 and 88 of the EC Treaty have become Articles 107 and 108, respectively, of the TFEU. The two sets of provisions are, in substance, identical. For the purposes of this Decision, references to Articles 107 and 108 of the TFEU should be understood as references to Articles 87 and 88, respectively, of the EC Treaty where appropriate.

² The Renewable Obligation – Introduction of a banding mechanism, approved by the Commission on 11 February 2009, OJ C 106, 8.5. 2009, p. 14. N 414/2008 modifies the original Renewables obligation as approved in N 504/2000 Renewables Obligation and Capital Grants for Renewable technologies, OJ C 30, 2.2. 2002, p.15. N 504/2000 was subsequently amended by N 209/2002, N 600/2003, N 362/2004, N 474/2005 and specifically for Scotland by N 851/2006 and N 590/2008 and for Northern Ireland by N 22/2009 (landfill gas generation).

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2. DESCRIPTION

2.1. Objective

4. The main purpose of the notified measure is to enable a switch to a low carbon economy and society in line with the Renewable Energy Directive (2009/28/EC) setting a binding target of achieving 20% of the EU's energy consumption from renewable sources by 2020 (with an objective of 15% for the UK) by providing a support mechanism for distributed and small scale electricity generation using renewable sources.
5. In conjunction with a large increase in the use of renewable heat and, to a lesser extent, renewable transport fuels, renewable electricity is expected to make a major contribution to the achievement of this target. By introducing differentiated levels of support for different technologies (banding), recent changes to the RO are predicted to deliver large amounts of renewable electricity from large-scale technologies, such as onshore and offshore wind. However, the banding of support within the RO does not provide sufficient incentives to small-scale renewable generators to encourage widespread uptake. For this reason, in the Energy Act 2008 the Government took powers to introduce a Feed in Tariff for renewable electricity technologies up to 5MW and non-renewable CHP systems up to 50 kW.
6. This scheme is projected to deliver approximately 2% (or 8 TWh) of the final UK electricity consumption in 2020.
7. Additionally, the UK authorities indicated that the measure will achieve a level of public engagement that will generate widespread behavioural change. This is intended to result in a better understanding of energy use and acceptance of renewable energy technologies. Greater deployment of small-scale technologies will allow supply chains and economies of scale on production costs to develop so that the costs of installing renewable technologies will fall, and so that they become more competitive.

2.2. Legal basis

8. The following documents constitute the legal basis for the aid:

The Energy Act 2008 SS 41-43 enables the Secretary of State to introduce Feed in Tariffs (FITs) by modifying the operating licences for electricity distribution and supply companies as established under the Electricity Act 1989:

- S 41(1) sets out the licence modification power.
- S 41(2) limits the use of the power to a scheme of financial incentives to encourage small-scale low-carbon generation of electricity and provides that distribution licence holders may be required to make arrangements for electricity generated by small-scale low-carbon generation and that the holder of a licence (supply or distribution) can be required to make arrangements in relation to either of those matters, all through licence modification.
- S 41(3) gives a non-exclusive list of the matters that may be covered by the power of modification including:
 - o a requirement to make the payment to a small-scale low-carbon generator
 - o how that payment is calculated

- circumstances in which no or a reduced payment can be made or recouped to accommodate mistake or fraud
 - an obligation on suppliers to pay a levy to the Office of the Gas and Electricity Markets (hereinafter referred to as Ofgem)³ its calculation and an equivalent entitlement for suppliers to receive payments from the Authority to enable proportionate attribution of the costs burden across the sector.
- S 41(4) provides that the Order (secondary legislation) made under the Energy Act limits the scale of generation to 5MW.

The Secretary of State is also enabled to make an Order giving administrative functions to Ofgem.

2.3. Scope of the notified measure

9. The notified measure concerns support of generation of electricity from renewable energy sources and to high efficiency co-generation installations.

2.3.1. Generation of electricity from renewable energy sources

10. The UK authorities indicated that the notified measure covers renewable energy sources as defined in point (70) of the Community Guidelines on State Aid for Environmental Protection⁴ (hereinafter referred to as the Environmental aid guidelines):

- wind,
- solar (photovoltaic),
- hydropower,
- anaerobic digestion.

11. The notified scheme will apply to the above-mentioned technologies with maximum generating capacity of 5 MW.

2.3.2. Generation of electricity in co-generation installations

12. In addition, CHP installations with an electrical capacity of 2 kW or less are eligible for FITs payments. The UK authorities indicated that the aid is granted only to the high efficiency co-generation installations as defined in point 70(11) of the Environmental aid guidelines⁵. The eligible co-generation installations must comply as well with the requirement of primary energy savings compared to the separate production as defined by Directive 2004/8/EC⁶ and Commission Decision 2007/74/EC⁷.

³ Ofgem is the UK energy regulator.

⁴ OJ C 82, 1.4.2008, p.1.

⁵ The Environmental aid guidelines refer in this context to Directive 2004/8/EC and Commission Decision 2007/74/EC.

⁶ Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal market and amending Directive 92/42/EC, OJ L 52, 21.2. 2004, p. 50.

⁷ Commission Decision of 21 December 2006 establishing harmonised efficiency reference values for separate production of electricity and heat in application of Directive 2004/8/EC of the European Parliament and of the Council, OJ L 32, 6.2. 2007, p. 183.

2.3.3. Geographical scope

13. As regards the geographical scope, the notified measure covers the whole territory of Great Britain (therefore not including Northern Ireland⁸).

2.4. Organisation and structure

14. The Department of Energy and Climate Change (hereinafter referred to as the DECC) acts as the granting authority. The eligibility for aid is assessed by Ofgem, which is also responsible for ensuring compliance with the cumulation rules set in the Environmental aid guidelines.
15. FITs payments are to be made by licensed electricity suppliers. The UK authorities indicated that the six largest electricity suppliers are privately owned companies, which cover 99% of the residential electricity consumers and the majority of the non-residential market. In addition, there are five smaller suppliers that are not former incumbents and that serve less than 0.3% of the domestic electricity supply market. It is also expected that a small number of privately owned smaller suppliers will participate in the scheme.

2.5. Beneficiaries

16. The beneficiaries of this scheme are non-energy professionals and include for instance households, community groups and schools. The expected number of beneficiaries is over 1,000.

2.6. Form of the aid and granting period

17. The notified measure is an operating aid. It is granted in the form of a feed-in tariff comprising a fixed payment (“generation tariff”) from the electricity supplier for each kWh generated plus an additional guaranteed payment (“export tariff”) for every kWh exported to the electricity grid. In addition, generators can use the electricity they generate on-site to offset some or all of the electricity they would otherwise have had to buy.
18. Hence, under the proposed tariff model, beneficiaries that use energy on-site will receive three different strands of benefit from FITs (see Formula 1 below):
 - a fixed price for each unit of electricity generated;
 - a guaranteed price for each unit of electricity exported onto the electricity grid;
 - the benefit from reducing their imports of electricity by using the electricity they generate in their premises.

Formula 1:

$$\text{TOTAL BENEFIT} = \text{GENERATION TARIFF} + \text{EXPORT TARIFF} + \text{IMPORT SAVINGS}$$

19. Tariff lifetimes have been set to reflect the projected lifetimes of the equipment. This is consistent with the economic life used for calculating depreciation according to national accounting rules. The UK uses International Accounting Standard 16, applying to Property, Plant and Equipment.

⁸ See case N 76/2009.

20. While the life of the installation may exceed projections, no further aid will be granted beyond the following durations:
- 20 years for all renewable energy installations other than photovoltaic,
 - 25 years for photovoltaic,
 - 10 years for micro CHP.

2.7. Aid amounts

21. The notified tariffs have been set so as to provide an expected rate of return of 5-8% for well located installations (and up to 12% for some specific technologies) through consideration of levelised technology costs and electricity generation expectations at different scales.
22. The export tariff has been developed taking into account an assumed guaranteed export price of GBP 0.03/kWh (see section 2.7.3). Based on this export tariff, the generation tariffs have been set so that the total benefits (i.e. the sum of the generation tariff, the export tariff and the benefit stemming from reduced electricity imports from the grid) do not exceed the levelised technology costs assessed at the above-mentioned rate of return.

2.7.1. Rates of return

23. The UK authorities indicated that the rate of return is set conservatively, generally at 5-8%, and not higher than 12%.
24. They explained that the rates of return have been determined to drive the uptake of small-scale renewable electricity technologies by comparing these rates to the hurdle rates of potential investors. Table 1 below summarises the hurdle rates by technology as they emerged from a study commissioned by the DECC. It shows that large-scale utility companies generally have lower hurdle rates than developers, and that investors expect returns that range from 8% to 12%.

Table 1

	Large-scale utility companies	Medium-scale utility companies	Large-scale developers
Solar PV	8%	12%	10%
Onshore Wind	8%	12%	10%
Hydro	8%	n.a.	10%
Anaerobic digestion	8%	10%	10%

Source: Design of Feed-in Tariffs for Sub-5MW Electricity in Great Britain – Quantitative analysis for DECC – Final Report, July 2009, Element Energy Limited/Pöyry

25. The UK authorities also indicated that smaller-scale investors such as households do not use a single rate of return when assessing investment decisions. Instead, the effective hurdle rate of a project includes a number of intangible factors such as inconvenience and transaction costs, which vary significantly between investors. The UK authorities added that literature on uptake of energy efficiency measures suggests that many domestic consumers have very high hurdle rates, expecting returns of 20% per year, while early adopters invest in technologies which do not provide positive returns in their lifetimes.

2.7.2. Technology costs

26. Technology costs are defined as total costs (including annual capital costs and operating costs) divided by annual energy production (see Formula 2 below). Capital and operating costs are represented using fixed and marginal elements, which allows for size independent element to be valued separately from size dependent ones.

Formula 2:

$$\text{TECHNOLOGY COSTS} = \text{TOTAL COSTS} / \text{ENERGY PRODUCTION}$$

Where:

$$\text{TOTAL COSTS} = \text{capital costs} + \text{operating costs}$$
$$= \text{fixed costs} + \text{variable costs}$$

$$\text{ENERGY PRODUCTION} = \text{expected electricity production per year}$$

(kWh)

27. Fixed costs are capital costs, which are independent of the size of the system (e.g. mechanical and electrical installation). They are typically a high percentage of the total costs where small systems are installed. For larger systems, capital costs are represented as a cost per installed capacity, i.e. as variable costs. Variable costs may also include, depending on the size of the system, operating and maintenance costs.
28. To provide the above-mentioned return rates, total costs are annuitized – that is to say spread evenly over the plant's lifetime – at the corresponding discount rate.
29. Levelised technology costs are then obtained by dividing the annuitized total costs by the plant's annual energy production.
30. The expected annual electricity production of a plant is calculated by applying the load factor to the theoretical maximum capacity of the technology multiplied by the number of hours in a year (approximately 8,760 hours). The load factor represents the actual percentage of the theoretical maximum capacity of the technology in question producing electricity 24 hours a day every day of the year.

2.7.3. Export tariff

31. The UK authorities indicated that the aim is for the level of export tariffs to reflect the value to suppliers of the electricity purchased. The range is considered to be between the minimum price paid for unplanned exports to the electricity system and the retail price for electricity, which was estimated by Ofgem within the range of GBP 0.001/kWh to GBP 0.059/kWh.
32. The export tariffs have been developed based on an assumed guaranteed export price of GBP 0.03/kWh, and will be indexed annually by the Retail Price Index.

2.7.4. Generation tariff

33. As for the export tariff, the generation tariff will be indexed annually by the Retail Price Index.
34. Generation tariffs for new installations are set at a lower level each year than for installations made in previous years. This is to reflect, encourage and drive decreases in technology and installation costs. When tariffs are decreased, they are

decreased only for new installations from that point forward. Therefore, the tariffs paid to existing generators at that time are not affected.

35. Based on feedback from the industry, the UK decided that the decrease of tariffs will begin in 2012 only, whilst increasing decrease rates in later years to compensate. This is based on concerns that cost reductions could not be delivered until the industry has had the opportunity to gear up and deliver sizeable volumes.

2.7.5. Tariff lifetimes

36. Tariff lifetimes have been set to reflect the projected lifetimes of the equipment (see section 2.6). Once an installation has been allocated a generation tariff, that tariff remains fixed (though will alter with inflation as above) for the life of that installation or the life of the tariff, whichever is the shorter.

2.7.6. Tariff values

37. Table 2 below provides information on the levelised cost of the technologies eligible to FIT payments and compares this with the expected revenue stream received by the corresponding technologies. All costs and tariffs are expressed in 2008 prices because the cost modeling took place on this basis. However, for greater clarity about the effective FIT payments to be granted, generation tariffs for the first year of implementation of the notified scheme (i.e. from the start of the FIT scheme to 31 March 2011) are also expressed in 2010 prices (see the first to last column of Table 2).
38. Table 2 shows that the proposed FITs should yield a return on investment between 5% and 8% for all eligible technologies, except for hydropower installations with a capacity below 15 kW, anaerobic digestion and wind installations with a capacity from 1.5 to 15 kW and from 500 kW to 1.5 MW that will yield higher returns which however stay below 12%.

Table 2

Technology	Band	Levelised production cost (p/kWh)		Generation tariff (p/kWh) [2008 prices]	Export tariff ** (p/kWh) [2008 prices]	Import savings (p/kWh) [2008 prices]	Total benefit (p/kWh) [2008 prices]	Generation tariff (p/kWh) for year 1 [2010 prices]	Tariff span (years)
		5%*	8%*						
Hydroelectric	≤15kW	19,7	24,0	19,0	2,2	3,3	24,5	19,9	20
Hydroelectric	15-100kW	18,6	21,8	17,0	3,0	0,0	20,0	17,8	20
Hydroelectric	100kW-2MW	9,7	13,9	10,5	3,0	0,0	13,5	11,0	20
Hydroelectric	2MW-5MW	7,4	9,3	4,5	3,0	0,0	7,5	4,5	20
Photovoltaic	≤4kW (new build***)	40,4	51,7	34,5	1,5	6,5	42,5	36,1	25
Photovoltaic	<4kW (retrofit***)	46	59,0	39,5	1,5	6,5	47,5	41,3	25
Photovoltaic	4-10kW	39	50,7	34,5	1,5	6,5	42,5	36,1	25
Photovoltaic	10-100kW	35	45,4	30,0	1,5	5,5	37,0	31,4	25
Photovoltaic	100kW-5MW	32,5	42,3	28,0	1,5	5,5	35,0	29,3	25
Photovoltaic	Stand alone***	32,5	42,3	28,0	3,0	0,0	31,0	29,3	25
Anaerobic digestion	≤500kW	11,4	13,6	11,5	3,0	0,0	14,5	11,5	20
Anaerobic digestion	500kW-5MW	8,6	10,0	9,0	3,0	0,0	12,0	9,0	20
Wind	≤1.5kW	49,1	59,5	33,0	1,5	6,5	41,0	34,5	20
Wind	1.5-15kW	24,2	30,0	25,5	1,5	5,5	32,5	26,7	20
Wind	15-100kW	23,1	27,9	23,0	3,0	0,0	26,0	24,1	20
Wind	100-500kW	22,2	26,8	18,0	3,0	0,0	21,0	18,8	20
Wind	500kW-1.5MW	9,5	11,5	9,0	3,0	0,0	12,0	9,4	20
Wind	1.5MW-5MW	7,8	9,3	4,5	3,0	0,0	7,5	4,5	20
Existing microgen (transferred from RO)	≤50kW	Technology-specific		9,0	1,5	6,5	17,0	9,0	to 2027
Micro CHP	≤2kW	[...] ⁹	[...] ⁹	10,0	1,5	6,5	18,0	10,0	10

Notes:

* Production cost calculated with 5% (8%) discount rate.

** A generator would be entitled to receive a guaranteed payment of GBP 0.03/kWh (3p/kWh) per unit of electricity exported. This does not vary across technologies and scales. Since the generator only receives the export tariff on the proportion of total generation that is exported back to the grid, the income from the export tariff is attributed to total generation in order to assess the benefit stream. For example, hydropower installations below 15kW are assumed to export 75% of the total electricity generated. The generator would receive GBP 3p/kWh per unit of electricity exported, which is equivalent to GBP 2.2p/kWh per unit of electricity generated.

*** "New Build" means installed on a new building before first occupation ; "Retrofit" means installed on a building which is already occupied ; "Stand-alone" means not attached to a building and not wired to provide electricity to an occupied building.

Source: UK authorities

⁹ Covered by the obligation of professional secrecy.

2.7.7. Tariff reviews

39. The UK authorities indicated that three-year reviews will be carried out by the DECC. They will reassess the costs of technologies, electricity price forecasts and whether the target rate of return is still appropriate, and consider revision of tariff levels and decrease rates accordingly. In particular, consideration of tariff and decrease levels will take account of any decreases in the levelised production costs to ensure there is no overcompensation.
40. However, levels of FITs to plants existing at the time of these future reviews will, in general, be maintained to provide long term certainty for investors.
41. Scheme reviews will also consider technologies not currently supported through FITs and whether or not it is appropriate to allow those technologies to access the scheme and set appropriate generation tariffs.

2.8. Duration

42. The notified scheme is to be launched on 1 April 2010 and scheduled to last until 1 April 2037.
43. The UK authorities are seeking Commission's approval for ten years, after which time they intend to renotify the scheme.

2.9. Financing mechanism and budget of the measure

2.9.1. Financing mechanism

44. A so-called levelisation mechanism will ensure that no electricity supplier is disadvantaged by the payment of FITs compared to other suppliers. The cost of making FITs payments to generators will thus be shared among suppliers in proportion to the market share of each supplier.
 - *Allocation of costs among suppliers*
45. Following the end of each year that the FIT scheme is in operation, each supplier will notify to Ofgem the net payments it has made to generators during the year and its qualifying costs of operating the scheme. These payments and costs are together described as the supplier's "FIT contribution". Ofgem will calculate the total costs of the scheme, and for each supplier it will multiply that total by a percentage corresponding to the supplier's market share in order to calculate the so-called supplier's "market share FIT contribution". If a supplier's actual FIT contribution in the year was less than its "market share FIT contribution", it will pay the difference into the levelisation fund. If a supplier's actual FIT contribution in the year was greater than its market share FIT contribution, it will receive the difference out of the levelisation fund.
46. Suppliers will be required to deduct the amount of imported renewable electricity from the reported supplied amounts that will be used to allocate costs.

47. In addition, during a year suppliers will make or receive interim levelisation payments on account of their expected entitlement or liability for that year. The final amounts that each supplier pays into or receives out of the levelisation fund following the year end will be adjusted to take account of the interim payments they have already made or received.
48. The amount of payments made by suppliers into the levelisation fund in respect of any period will be exactly equal to the amount of payments made to suppliers out of the fund.
 - Total cost of the scheme
49. The total cost of the scheme will be determined by Ofgem as part of the levelisation process. This will be based on information that is provided by suppliers at the end of each year. The total cost will be the sum of the following:
 - the generation tariff payments actually made by suppliers;
 - the net cost of suppliers of export tariffs for metered exports, that is to say the payments which are made less the value that suppliers can realise by the purchase of that electricity through selling it on in the open market or by a reduced requirement to buy electricity from other sources;
 - qualifying FITs costs, which will include the unavoidable costs incurred by suppliers in order to administer the FIT scheme (including the costs of accreditation and registration, administration of payments, data provision and audit, and system set-up costs);
 - the net cost to suppliers of electricity that is not metered, since at the very small scale (i.e. below 30 kW) it is not economic to meter electricity.
50. The methodology for determining the net cost to suppliers recognises that, unlike metered exports, suppliers paying FITs will not have the opportunity to benefit directly from the purchase of that non-metered electricity. However, because these exports will be spilled onto the electricity system, there is a benefit to electricity suppliers through lower grid correction factors to cover losses. This benefit will be estimated as part of the levelisation process and will be netted off the value of the deemed export payments according to each supplier's market share.
 - Pass-through of costs to end-consumers
51. There will be no compulsory requirement on suppliers to treat the cost of FITs as an increase in the wholesale cost of electricity that is to be passed on to all of their electricity consumers.
52. The UK authorities indicated that the incidence of the cost will depend on the market and on the decisions of individual suppliers. It will be up to each supplier whether and how much to increase its prices in order to cover the cost of paying FITs.

2.9.2. Budget

53. As for the overall budget of the scheme, the UK authorities estimated that the notified scheme may deliver 780,000 installations at a cost of GBP 3.1 billion cumulative to 2020.

2.10. Combination of aid

2.10.1. Combination with the RO

54. The introduction of FITs for small-scale electricity generation up to a maximum of 5 MW will provide an alternative support mechanism for certain categories of generator that would previously have been eligible for support under the RO.
55. Generating stations that had become operational before 15 July 2009 but had not applied for accreditation under the RO before this date will not be eligible for FITs. Any generating station eligible for FITs where installation is completed after publication of the details of the FITs scheme (i.e. 15 July 2009) and before the start of the FITs scheme (the interim period) will be able to benefit from FITs as if the installation had been completed on the start-up date of the scheme (see below).
56. The following arrangements will apply to generators below 50 kW (microgenerators):
 - Installations that had applied for accreditation under the RO before 15 July 2009 will be transferred to FITs and will be equivalently remunerated as that they received under the RO. They will receive support under the FITs until 2027 (i.e. the same end date for support as the current end date of the RO).
 - Microgenerators that applied for accreditation under the RO during the interim period will have this accreditation transferred to the FIT scheme. They will be excluded from the RO, and it will be for them to seek a supplier in order to access FITs.
 - Installations installed after the start of the scheme will be supported only by FITs.
57. The following arrangements will apply to generators in the range of 50 kW to 5 MW (small generators):
 - Installations that had applied for accreditation under the RO before 15 July 2009 will remain within the RO.
 - Generating stations that applied for the RO during the interim period will have a one-off choice to enter the FITs scheme. They can do this at any time before the start of the scheme for a switch effective from the start of the scheme or until the end of August 2010 for a switch effective from 1 April 2011. Small generators that do not exercise this option will remain in the RO.
 - Renewable generators installed after the start of the scheme may choose between support under the RO and the FITs.
58. For small generators that applied for the RO during the interim period transferred to the FITs scheme, the support period will be shortened by six months if they opt in from the start, and 18 months if they opt in from 1 April 2011.

2.10.2. Cumulation with other schemes

59. The UK authorities provided that they will ensure that generators which have received investment aid will not be allowed to receive FITs for the same plant. A person applying for FITs will be required to declare whether they have received any aid for their generation plant, and a grant will disqualify the recipient from also receiving a feed-in tariff. However, there are two exceptions to this rule.
60. First, in certain specific situations, combination of investment aid and FIT payments will be allowed on an individual basis. This will be the case where the costs for a particular installation eligible to FITs are significantly greater than the standardised costs on which the FITs are calculated. The UK authorities indicated that such additional costs may, for instance, relate to measures to reduce the environmental impact of installations (e.g. measures to protect fish and other wildlife in small hydro schemes).
61. In any such situation, Ofgem, acting as administrator of the scheme, will ensure that the applicant demonstrates that the difference between the two following terms is positive or equal to zero:
 - the first term is the production cost of the electricity generated by the plant, from which the investment aid granted to the plant in question is deducted;
 - the second term is the amount of FIT payment to be received by the generating plant.
62. Second, the UK authorities indicated that households may be allowed to receive investment aid combined with FIT payments provided the totality of aid is within the limit of *de minimis* aid and that the granting of such cumulated aid complies with the rules laid down in Commission Regulation No 1998/2006 of 15 December 2006 on the application of Articles 107 and 108 of the Treaty to *de minimis* aid¹⁰.

3. ASSESSMENT OF THE MEASURE

3.1. Existence of State aid in the sense of Article 107 (1) of the TFEU

63. The Commission has first analysed to which extent the notified measure includes State aid within the meaning of article 107 (1) of the TFEU. For a measure to be State aid within this meaning, it has to be imputable to the State and be financed through State resources, provide a selective advantage to undertakings, distort competition and affect or threaten to affect trade between Member States.

3.1.1. Imputability to the State and financing through State resources

- Imputability to the State
64. The notified measure will stem from legislative and regulatory provisions and thus be imposed by the State. The notified measure is therefore imputable to the State.
 - Transfer of State resources
 65. The financing of the notified measure is based on a levelisation mechanism which allocates the financial burden arising from the obligation imposed on electricity

¹⁰ OJ L 379, 28.12.2006, p. 5.

supply companies to purchase electricity produced in their area of supply from renewable energy sources at fixed prices amongst these electricity suppliers.

66. A long standing case law of the Court of Justice¹¹ establishes three criteria for levies to constitute State resources:
- the levy must be imposed by the State (i);
 - its proceeds must be poured into a body designated by the State (ii);
 - the proceeds must be used to give an advantage to certain undertakings (iii).
67. Case law also introduces the concept of imputability to the State in the parafiscal levy context and adds thus the condition of imputability to the State to the three listed above¹²:
- the proceeds must be used in a way which is prescribed by the State (iv).
68. As regards these criteria:
- The UK authorities confirmed that contributions to the levelisation fund will be mandatory in the sense that if a supplier's actual contribution to the costs of the FIT scheme is less than the calculated market share based contribution, it will be required to pay into the levelisation fund (i);
 - payments into the levelisation fund will be made to Ofgem, which is the administrator of the fund. Ofgem is a public body, and will collect and redistribute the payments into the fund. Therefore, the monies transferred as part of the levelisation process shall be regarded as resources which are under public control (ii);
 - the proceeds of the levelisation fund will be used to grant an advantage in the form of a compensation for the cost incurred by certain electricity suppliers in participating to the FIT system (iii);
 - Ofgem will redistribute the proceeds according to precise rules established by the State to ensure that the contribution of electricity suppliers to the costs of the FIT scheme is allocated according to their respective market shares (iv).
69. The Commission concludes therefore that the notified scheme involves a transfer of State resources.

3.1.2. Economic advantage

70. FIT payments confer an advantage to the producers of green electricity since it guarantees them a minimum electricity price which is higher than the market price.

3.1.3. Selectivity

71. The beneficiaries constitute a selective group of undertakings in the sense of Article 107 (1) of the TFEU as the measure favours only producers of green electricity, and among them, those who produce electricity from small-scale and micro generation installations.

¹¹ See Judgement of 22.3.1977 in Case C-78/76 *Steinike & Weinlig* [1995] ECR 595.

¹² See Judgment of the Court (First Chamber) of 15 July 2004 in Case C-345/02 *Pearle BV and Others v Hoofdbedrijfschap Ambachten*, [2004] ECR I-7139.

3.1.4. Distortion of competition and affectation of trade between Member States

72. Since electricity is a good traded between member States, and since there are already interconnection lines allowing such trade between the UK and neighbouring Member States, the measure may affect trade between Member States and is liable to distort competition.

3.1.5. Conclusion

73. Accordingly, the notified measure constitutes State aid pursuant to Article 107 (1) of the TFEU.
74. As regards the financing mechanism¹³, the Commission considers that no State aid is involved at the level of electricity suppliers. This is a levelisation mechanism whereby the costs incurred by the suppliers are allocated equally between them according to their respective market shares. Hence, even though some suppliers will be net contributors and others will be net beneficiaries in terms of payments made to or received from Ofgem, the levelisation mechanism as such does not confer a selective advantage on the latter companies since it merely compensates for the share of their costs which exceeds their normal contribution to the total costs of the scheme (i.e. their so-called "market share FIT contribution"). It is indeed in the logic of a levelisation mechanism to provide undertakings with differentiated payments on the basis of their respective contribution to the overall costs of the scheme. Once their costs are equalised, there is neither any net contributor to the overall costs of the scheme nor any net beneficiary among the suppliers obliged under the FITs.¹⁴
75. Accordingly, the Commission found that the financing mechanism does not involve State aid.

3.2. Lawfulness of the aid

76. By notifying the aid measure before its implementation, the UK authorities fulfilled their obligation according to Article 108 (3) of the TFEU.

¹³ The financing mechanism consists in a levelisation system based on compulsory payments made by electricity suppliers to Ofgem which redistribute the proceeds to other suppliers.

¹⁴ The Commission notes that this system differs from that followed under the Renewables Obligation schemes in which the Commission took the view that there is State aid at the level of electricity suppliers insofar as the suppliers contributing to the recycle fund and those benefiting from it are not necessarily the same group of enterprises. In case N 504/2000 on the Renewables Obligation, electricity suppliers can instead of purchasing green electricity (and therefore receive green certificates) pay a buyout price to a fund managed by Ofgem whose proceeds are then recycled to suppliers in order to redistribute the contributions from suppliers to the funding of renewable production: the more the latter comply with their respective Renewables Obligation (through the number of green certificates they received), the more they receive. The recycle fund was aimed at both equalising costs among suppliers and giving them extra incentives to buy green certificates. In the absence of any advantage granted to suppliers, the financing mechanism under the Renewables Obligation would be deprived of its incentive effect. On the contrary, there is no such incentive under the notified FIT scheme.

3.3. Compatibility of the aid

77. The Commission has assessed the compatibility of the notified scheme according to Article 107 (3) (c) of the TFEU and in the light of the Environmental aid guidelines¹⁵.

3.3.1. Assessment of the support scheme under the Environmental aid guidelines

78. Given the fact that the notified measure concerns operating aid for renewable energy sources and co-generation, the compatibility conditions laid down in points 107 - 109 (Option 1) and 119 of the Environmental aid guidelines apply.

- Aid for renewable energy sources

79. The Commission notes that the FIT payments are made to the renewable energy sources as defined by the Environmental aid guidelines. In particular, the UK authorities confirmed that the materials undergoing anaerobic digestion fall within the scope of the definition of biomass given in Article 2 (e) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources¹⁶.

80. Points 107 to 111 of the Environmental aid guidelines provide Member States with three possible options for granting operating aid to renewable installations. The UK has chosen option 1 (point 109 of the Environmental aid guidelines).

- Aid for co-generation

81. The Commission notes that, in accordance with point 113 of the Environmental aid guidelines, the support will be granted only to co-generation installations satisfying the definition of high efficiency cogeneration set out in point 70 (11) of the Environmental aid guidelines and the requirement that there are overall primary energy savings compared to separate production as defined by Directive 2004/8/EC and Decision 2007/74/EC.

82. In line with point 119 a) of the Environmental aid guidelines, the UK authorities confirmed that the aid for high efficiency cogeneration will be granted exclusively to undertakings distributing electricity and heat to the public, where the costs of producing such electricity or heat exceed its market price.

83. Point 119 of the Environmental aid guidelines also stipulates that operating aid for high efficiency cogeneration must comply with the rules laid down at points 107 to 111. Those rules provide Member States with three possible options. As for the aid for renewable energy sources, the UK has chosen Option 1 (point 109 of the Environmental aid guidelines).

- Common parts of assessment

84. The UK authorities submitted a detailed calculation method for determination of the standardised production costs for different types of eligible installations. The

¹⁵ With reference to point 50 of the Environmental aid guidelines, the Commission reminds the UK authorities that the development of small-scale hydropower installations should be in accordance with the principles set out in the Water Framework Directive (2000/60/EC). The present decision does not prejudice any conclusion of the Commission as regards compliance with this directive.

¹⁶ OJ L 140, 5.6.2009, p. 16.

Commission has verified that its elements are in line with points 109 a) and 109 b) of the Environmental aid guidelines.

○ *Normal rates of return*

85. The calculations provided by the UK authorities, summarised in Table 2, show that, within 5 to 8% return rates, the costs of generating electricity from eligible technologies exceed the total expected benefits, except for hydropower installations with a generating capacity below 15 kW, anaerobic digestion and wind installations with a capacity from 1.5 to 15 kW and from 500 kW to 1.5 MW. As far as these three technologies are concerned, the UK authorities indicated that the productions costs must be assessed on the basis of higher return rates due to their specific characteristics. For instance, although it is changing very fast, the anaerobic digestion technology is, according to the UK authorities, still an unproven technology within Great Britain for which financiers require higher risk premium. Similarly, the production costs of wind installations with a capacity from 1.5 to 15 kW vary significantly with the location chosen (especially between rural and urban areas). The UK authorities confirmed however that the proposed tariffs for these technologies combined with return rates not higher than 12%¹⁷ will not lead to overcompensation.

86. The Commission notes that the above-mentioned levels of return (up to 12% and 5 to 8% for most technologies) are consistent with what the Commission has authorised in previous State aid decisions¹⁸. Additionally, the Commission notes that taking into account the calculation simplifications and specific features of certain production technologies, the level of support will not exceed what is necessary to cover the extra production costs, including depreciation of extra investments and a normal return of capital, in line with point 109 a) of the Environmental aid guidelines.

○ *Depreciation according to normal accounting rules*

87. On the basis of the information submitted, the Commission can take the view that tariff lifetimes were set to reflect the projected lifetimes of each type of technology in accordance with the economic life used for calculating depreciation according to national accounting rules, in line with the provision of point 109 a) of the Environmental aid guidelines which requires that the operating aid should be granted until the plant has been fully depreciated according to normal accounting rules.

○ *Account of other investment aid to be taken when calculating production costs*

88. As noted earlier (see section 2.10.2), the UK authorities will ensure that generators which have received investment aid will in general not be allowed to receive FITs for the same plant. However, combination of investment aid and FIT payments will be allowed in certain specific situations where the production costs are significantly greater than the standardised costs on which the FITs are calculated. In such particular case, the UK authorities confirmed that they would seek assurances that the additional production costs are justified. They will also ensure that there is no

¹⁷ The UK authorities indicated that the proposed tariffs are expected to yield returns on investments of 8.5% for hydropower installations with an installed capacity below 15 kW, 8.5% for anaerobic digestion installations whose capacity is below 500 kW, 11% for anaerobic digestion with a capacity above 500 kW and 9% for wind (1.5 – 15 kW).

¹⁸ See for example, State aid case N 354/2009 – Slovenia – *Support for production of electricity from renewable energy sources and in co-generation installations* (OJ C 285, 26.11.2009, p. 2).

overcompensation and, in doing so, that account will be taken of the combination of the investment grant and FIT payments.

89. Thus, the Commission can take the view that the scheme is in line with point 109 b) of the Environmental aid guidelines, which provides that any investment aid must be deducted from the production costs when determining the amount of operating aid.

○ *No overcompensation over time*

90. The UK authorities indicated that they will carry out periodic reviews of the FIT levels, and, as the case may be, adjust them in accordance with updated data on technology costs, electricity price forecasts and rates of return. This mechanism will contribute to avoiding overcompensation by maintaining the target return rate.

91. To provide long term certainty for investors, the UK authorities intend to maintain the levels of FITs to plants existing at the time of future reviews (see section 2.7.7), which could entail some risk of overcompensation. In this respect, the UK authorities committed to adjusting tariffs for generators existing at the time of future reviews if circumstances have changed to the extent that they would result in overcompensation. The Commission considers that this mechanism should ensure that no beneficiary will be overcompensated over time.

○ *Conclusion on compliance with point 109 of the Environmental aid guidelines*

92. Therefore, based on the information submitted by the UK authorities, the Commission concludes that the operating aid granted under the notified measure does not lead to overcompensation of the increased production costs linked to the generation of electricity from renewable energy sources and that the provisions on the calculation of the FITs are in line with Environmental aid guidelines.

○ *Incentive effect*

93. With regard to the incentive effect as required by point 142 of the Environmental aid guidelines, the Commission notes that the calculations provided by the UK authorities – as summarised in Table 2 – show that the production costs of electricity from renewable energy sources and in high efficiency co-generation installations eligible to FIT payments are higher than the expected electricity market price. Hence, without the notified aid, there would be an insufficient incentive to undertake or carry on the generation of electricity from renewable energy sources or in high efficiency cogeneration installations, because it would be unlikely that this activity would be economically viable.

○ *Cumulation rules*

94. In order to ensure compliance with the cumulation rules of the Environmental aid guidelines as laid down in Section 6 of these guidelines, the UK authorities confirmed that while combination with other types of aid is possible, this will not result in overcompensation, which corresponds to the maximum aid intensity allowed.

○ *Other*

95. The Commission notes that the UK authorities undertook to re-notify the measure under assessment in 10 years following the date of Commission approval.

96. Furthermore, the UK authorities confirmed that they will follow annual reporting and monitoring provisions of the Environmental aid guidelines as laid down in Sections 7.1 and 7.3 of these guidelines.

97. Accordingly, the Commission takes the view that the notified measure complies with the Environmental aid guidelines and is therefore compatible with Article 107 (3) of the TFEU.

3.3.2. Assessment of the aid granted to existing installations transferred from the RO

98. As noted above (see section 2.10.1), installations with an installed capacity below 50 kW (microgenerators) that had applied for accreditation under the RO before 15 July 2009 will be transferred to FITs and will receive support under the FITs until 2027 (i.e. the same end date for support as the current end date of the RO).
99. Existing microgenerators transferred under the FIT scheme will be equivalently remunerated as that they received under the RO¹⁹. The aid amounts to be granted to microgenerators transferred under FITs are set at the same level as under the RO (i.e. GBP 0.09/kWh), the only difference being the form of the aid. The aid, its duration and the corresponding level of remuneration granted to microgenerators under the RO were regarded as compatible with Article 107 (3) of the TFEU in case N 504/2000, as subsequently amended by N 209/2002, N 600/2003, N 362/2004, N 474/2005 and 414/2008. The present notification does not alter this conclusion.
100. Besides, the UK authorities confirmed that the level of support offered to microgenerators accredited under the RO before 15 July 2009 will not result in overcompensation. Indeed, the levelised costs for all technologies with a generating capacity of 50 kW or less range from GBP 0.186/kWh for hydropower to GBP 0.39/kWh for photovoltaic (see Table 2), which exceeds the total benefit of GBP 0.17/kWh proposed under the notified scheme.
101. The Commission takes the view that the notified support for existing microgenerators transferred from the RO under the FITs is compatible with Article 107 (3) of the TFEU.

4. DECISION

102. The Commission concludes that the aid scheme "Feed in Tariffs to support the generation of renewable electricity from low carbon sources" is compatible with the internal market in accordance with Article 107 (3) (c) of the TFEU and has therefore decided not to raise objections to the notified measure.
103. The Commission reminds the UK authorities that, in accordance with Article 108 (3) of the 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 EC Treaty²⁰.
104. 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

¹⁹ Under the RO, eligible generators are entitled to a certain number of Renewables Obligation Certificates (ROC) representing a metered unit of eligible renewable electricity that has been generated. Microgenerators under the RO are entitled to 2 ROCs/MWh. The approximate value of one ROC is GBP 45/MWh (equivalent to 4.5 p/kWh). Hence, an entitlement of 2 ROCs is equivalent to the proposed generation tariff for existing microgenerators of 9 p/kWh.

²⁰ OJ L 140, 30.4. 2004, p.1.

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/community_law/state_aids/state_aids_texts_en.htm

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 of the Commission