Title: Consultation on controlling the costs of biomass conversion and co-firing under the Renewables Obligation **IA No:** BEIS012(C)-17-EEAU **RPC Reference No:** **N/A** **Lead department or agency:** BEIS **Other departments or agencies:** N/A	**Impact Assessment (IA)** **Date: 15 September 2017** **Stage:** Consultation **Source of intervention:** Domestic **Type of measure:** Secondary Leg. **Contact for enquiries:** RO@beis.gov.uk

Summary: Intervention and Options

RPC Opinion: N/A

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
Zero	Zero	N/A	N/A	Not a regulatory provision

What is the problem under consideration? Why is government intervention necessary?

Biomass conversions and co-firing technologies are currently supported through the Renewables Obligation (RO). The costs of the RO are managed through the Levy Control Framework (LCF), which sets an annual budget for the overall costs to consumers of Government's levy-funded low carbon electricity policies. In the absence of intervention, additional biomass conversion and co-firing deployment may put significant pressure on the LCF budget, adding costs to consumer bills.

What are the policy objectives and the intended effects?

The policy objective is to limit additional unforecast LCF spend on biomass conversion and co-firing in comparison to recent LCF projections. The intended effect is to limit increases to consumer electricity bills and protect the LCF from additional unforecast spend from 2018/19 onwards.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

To limit additional LCF spend on non-grandfathered biomass conversions and co-firing, the following proposals have been considered:

- **'Do Nothing'** (the reference case);
- **Option A**: A generator cap of 105,000 Renewables Obligation Certificates (ROCs) per year for each biomass conversion or co-firing station in respect of generation at its non-grandfathered units; and
- **Option B**: A re-banding of support levels to 0.1 ROC/MWh for all non-grandfathered biomass conversion and biomass co-firing projects.

Options A or B are preferred for meeting the policy objective, as both lead to limited additional spend under the LCF, in comparison to the reference case. Evidence gathered during the consultation will help us assess the relative merits of Option A and Option B and any other options proposed.

Will the policy be reviewed? It will not be reviewed. **If applicable, set review date:** N/A

Does implementation go beyond minimum EU requirements?		N/A		
Are any of these organisations in scope?	**Micro** No	**Small** Yes	**Medium** Yes	**Large** No
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** 0	**Non-traded:** 0	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading Options.

Richard Harrington

Date: 15 September 2017

Summary: Analysis & Evidence

Policy Options A and B

Description: Reduced financial support under the Renewables Obligation for biomass co-firing and conversion projects which are not eligible for a guaranteed support rate under grandfathering arrangements[1].

FULL ECONOMIC ASSESSMENT

Price Base	PV Base Year	Time Period	Net Benefit (Present Value (PV)) (£m)		
2011/12	2017	Years 10	**Low:** £0	**High:** £0	**Best Estimate:** £0

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low				
High				
Best Estimate	N/A		N/A	**N/A**

Description and scale of key monetised costs by 'main affected groups'

None identified at this stage, as no change in generator behaviour is assumed at this stage of the IA (see Key assumptions below). This will be explored further in the consultation.

Other key non-monetised costs by 'main affected groups'

None identified at this stage, as this will be explored in the consultation. Should generation behaviour change as a result of policy proposals, there may potentially be energy resource costs, greenhouse gas emissions and air quality impacts.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low				
High				
Best Estimate	N/A		N/A	**N/A**

Description and scale of key monetised benefits by 'main affected groups'

The policy options are expected to reduce support levels for biomass conversions and co-firers under the RO compared to the 'Do Nothing' scenario, however this is a transfer from producers to consumers and therefore not an economic benefit. Under this assumption, Options A and B pose no monetised benefits from changes in resources, emissions or air pollution in comparison to the reference case.

Other key non-monetised benefits by 'main affected groups'

None identified at this stage, as this will be explored in the consultation.

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5%

- Load factors: the extent to which the LCF is put under pressure is contingent on assumptions around how much biomass conversions and co-firers will generate using biomass. Low, central and high scenarios are tested, informed by historical data by similar stations.
- Generator response to policy options: stations affected by the policy proposals may change their generation behaviours in a number of ways, such as switching away from using biomass as an input fuel or accepting lower support levels and maintaining currently planned levels of generation. For this IA it is assumed that generation behaviour does not change compared to the 'Do Nothing' scenario. More evidence will be gathered through the consultation.

BUSINESS ASSESSMENT (Options A/B)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: N/A	**Benefits:** N/A	**Net:** N/A	N/A

[1] Grandfathering under the RO reflects a policy intent that the rate of support that a generating station or unit receives at the time of its accreditation will remain fixed for the entire period it receives support under that scheme.

Background

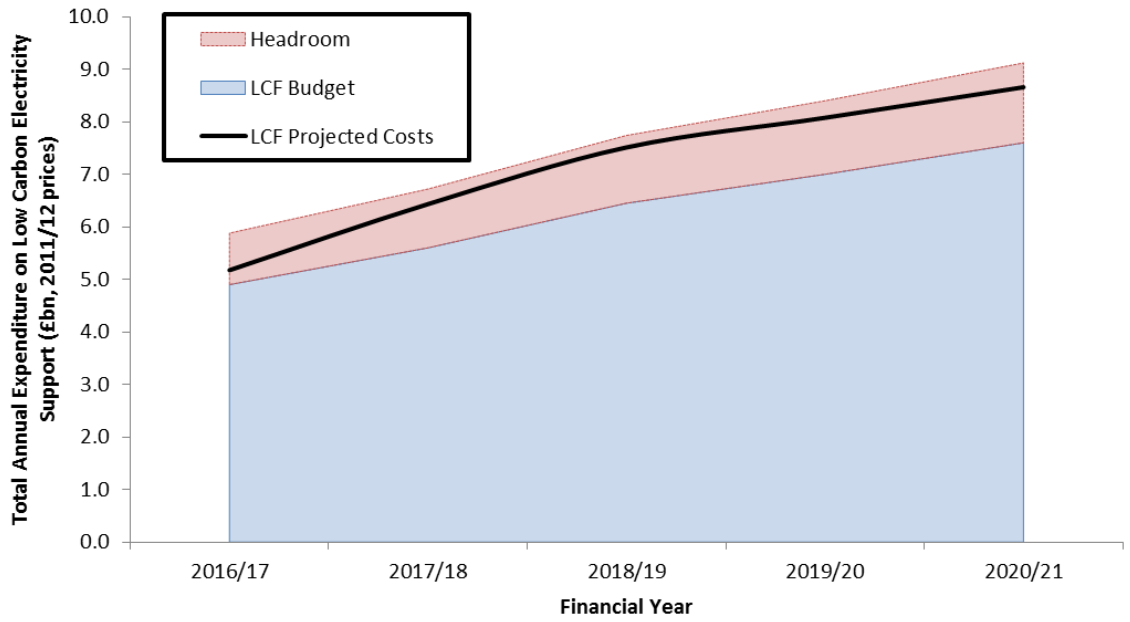
1. The Renewables Obligation (RO) was introduced in 2002 as the Government's main policy measure to incentivise deployment of renewable electricity generation in the UK. The RO closed to new capacity on 31 March 2017 (with exceptions that extend the deadline for certain projects to January 2019 in Great Britain and March 2019 in Northern Ireland). All support for biomass conversions and co-firing ends in 2027. Going forward, the RO has been replaced in Great Britain by the competitive 'Contracts for Difference (CFD)' scheme, ensuring better value for money for bill payers.
2. The RO places an obligation on UK electricity suppliers to produce a certain number of Renewables Obligation Certificates (ROCs) in respect of each MWh of electricity supplied during an obligation year (which runs from 1 April to 31 March). The total number of ROCs to be produced by suppliers – called 'the Obligation' – is set each year for the obligation year ahead. It is assumed that the costs to suppliers of meeting their obligations are passed on to consumers.
3. The RO is administered by Ofgem, who issue ROCs to generators for the renewable electricity they generate. Generators sell ROCs to suppliers or traders, with or without the electricity generated, as tradable commodities.
4. Biomass conversions are coal plants that have converted to run wholly on biomass, including wood pellets, straw, energy crops etc. Biomass co-firing plants use a mixture of biomass and coal. Generating stations with more than one combustion unit may fully or partially convert each unit on an individual basis.
5. Following the last comprehensive review of support levels under the RO in 2012[1], a number of new bands were created to support the full or partial conversion of coal-fired power stations to generate renewable electricity from biomass. The current bands are set out in Annex A. A combustion unit might change bands from month to month depending on the proportion of biomass used in the month. This is described as moving between the conversion or co-firing bands.
6. The Levy Control Framework (LCF), introduced in 2011, is a budget for low carbon electricity schemes, including the RO, paid for through consumer bills. The LCF requires BEIS to take early action to bring costs down if forecasts exceed this budget, with urgent action required if forecasts exceed a 20% headroom ('the LCF headroom') above the agreed budget. This headroom is in place because there are a number of uncertainties which affect projected expenditure including some, such as wholesale electricity prices, which are beyond the Government's control.
7. In 2015, a forecast overspend relative to the LCF budget was projected for the first time, to the value of £1.5bn. As part of a package of measures to control costs under the LCF and protect consumer bills, the Government stated in July 2015, following consultation, that the support rate under the RO for new biomass conversion and co-firing stations and combustion units should no longer be covered by grandfathering policy[2]. The removal of grandfathering also applies to generating stations or combustion units that are already receiving support under the RO and move for the first time into the mid-range co-firing, high-range co-firing or biomass conversion bands.

[1] https://www.gov.uk/government/consultations/renewables-obligation-banding-review
[2] https://www.gov.uk/government/consultations/changes-to-grandfathering-policy-with-respect-to-future-biomass-co-firing-and-conversion-projects-in-the-renewables-obligation

Rationale for intervention

8. In March 2017 the Office for Budget Responsibility published updated projections for the costs of environmental schemes covered by the LCF (Figure 1)[3], of which RO costs are the largest component. Figure 1 shows that the LCF budget is projected to be exceeded in all years to 2020/21 by around £1bn but spend will stay within the 20% LCF headroom permitted to reflect the inherent volatility of support costs. Any increase in projected spend under a support scheme under the LCF will take expected expenditure increasingly over the budget cap, adding further costs to consumer bills.

Figure 1 - Projected Levy Control Framework Expenditure, 2016/17 – 2020/21 (2011-12 prices)



Source: Office for Budget Responsibility Economic and Fiscal Outlook, March 2017

9. Despite the changes to grandfathering policy, Ofgem data now suggest that deployment of biomass conversions may be significantly higher than estimated in the LCF forecasts published in March 2017[4]. This deployment may result in an additional spend under the RO of around £110m to £195m per annum (2011/12 prices, central estimate) and an increase to average household bills of £1 to £2 per annum from 2018/19 (2011/12 prices). This increased deployment was unforeseen when the current support levels for biomass conversion and co-firing were set in 2012. Further detail on the LCF budget impacts of the 'Do Nothing' reference case and policy options considered is set out on page 7.

Description of Options considered

10. The following Options have been considered:

- **'Do Nothing'**: No changes are made to the RO;
- **Option A**: A generator cap of 105,000 ROCs per year applied to each biomass conversion or co-firing station in respect of generation at its non-grandfathered units;
- **Option B**: A re-banding of support levels to 0.1 ROC/MWh for all non-grandfathered biomass conversion and biomass co-firing projects.

[3] Available here: http://budgetresponsibility.org.uk/download/march-2017-economic-and-fiscal-outlook-supplementary-fiscal-tables-receipts-and-other/

[4] Data on ROCs issued can be found in Ofgem's publicly available Certificates Register: https://www.renewablesandchp.ofgem.gov.uk/Public/ReportManager.aspx?ReportVisibility=1&ReportCategory=0

'Do Nothing'

11. Under this option, no intervention would be taken to re-band support rates or cap the number of ROCs issued to biomass conversion or co-firing units under the RO. Therefore, generators would continue to receive the support rates set out in Annex A.

Option A: Generator cap

12. In order to minimise risk of unforecast LCF spend and protect consumers, we would implement an annual cap on the total number of ROCs that can be issued to each biomass conversion or co-firing station in respect of generation at its non-grandfathered units. The cap would apply each year up until the point at which a station is no longer eligible to receive support under the RO.

13. The policy intent is for the cap to reflect the highest number of ROCs claimed in a single year by non-grandfathered units of biomass conversion and co-firing stations. The highest number of ROCs issued under the biomass conversion and co-firing bands to non-grandfathered units of any station in any year prior to 2017/18 was, according to Ofgem, 105,000 (to the nearest 500 ROCs) in 2016/17. Therefore the proposed cap is set at 105,000 ROCs a year for each biomass conversion or co-firing station in respect of generation at its non-grandfathered units.

14. Further information on how the cap would be implemented, including details of which units are grandfathered and thus exempt from the proposal, can be found in the consultation document that accompanies this Impact Assessment.[5]

Option B: Re-banding of support levels

15. Under this option, in order to limit unforecast LCF spend, we would adjust the support levels for non-grandfathered units operating under the biomass conversion and biomass co-firing bands, as set out in Table 1 below. See Annex B for details on the methodology used for re-banding the support levels.

Table 1: Proposed RO bands for biomass conversion and co-firing projects

Band	Description	Support (ROC/MWh)
Low-range co-firing of biomass (excluding bioliquids)	Less than 50% regular biomass or energy crops co-fired in a unit	0.1
Mid-range co-firing of biomass (excluding bioliquids)	50% - less than 85% regular biomass or energy crops co-fired in a unit	0.1
High-range co-firing of biomass (excluding bioliquids)	85% - less than 100% regular biomass or energy crops co-fired in a unit	0.1
Biomass conversion	Electricity generated from 100% regular biomass, energy crops or regular bioliquids by a unit of a relevant fossil fuel station[6]	0.1

[5] https://www.gov.uk/government/consultations/controlling-the-costs-of-biomass-conversion-and-co-firing-under-the-renewables-obligation

[6] As defined in Schedule 5 of the Renewables Obligation Order 2015.

Band	Description	Support (ROC/MWh)
Low-range co-firing with CHP (excluding bioliquids)	Less than 50% regular biomass or energy crops co-fired in a unit of a qualifying Combined Heat and Power (CHP) generating station	0.1
Mid-range co-firing with CHP (excluding bioliquids)	50% - less than 85% regular biomass or energy crops co-fired in a unit of a qualifying CHP generating station	0.1
High-range co-firing with CHP (excluding bioliquids)	85% - less than 100% regular biomass or energy crops co-fired in a unit of a qualifying CHP generating station	0.1
Conversion with CHP	Electricity generated from 100% regular biomass, energy crops or regular bioliquids by a unit of a relevant fossil fuel CHP station	0.1

16. Further information on the proposed re-banding of support levels, including details of which units are grandfathered and thus exempt from the proposal, can be found in the consultation document that accompanies this Impact Assessment.[7]

Impact of shortlisted Options

17. This section outlines the costs and benefits of Options A (generator cap) and 2 (re-banding of support levels) against the 'Do Nothing' reference case.

Monetised Impacts of Options A and B: Net Present Value

18. At this stage we do not have robust evidence about the likely impact of the proposed policies on the behaviour of biomass co-firing or conversion units. As a result, this Impact Assessment assumes that Government intervention will not affect generation behaviour in respect of biomass co-firing or conversion units. During the consultation we would welcome further evidence from developers and wider stakeholders on the impacts the proposed options might have on:

    - Total annual generation; and
    - Fuel mix for total annual generation.

19. Some projects could choose to use high levels of biomass with reduced levels of support. Alternatively, it is possible that restricting RO support may lead to non-grandfathered co-firing units which might otherwise operate as conversions burning coal instead. This could affect both annual generation and fuel mix, changing expected LCF impact as well as causing monetised impacts of greenhouse gas emissions, air quality and resource costs. Generators' decisions may also take into account the recent consultation[8] on proposals to close unabated coal generation by 2025.

[7] https://www.gov.uk/government/consultations/controlling-the-costs-of-biomass-conversion-and-co-firing-under-the-renewables-obligation
[8] https://www.gov.uk/government/consultations/coal-generation-in-great-britain-the-pathway-to-a-low-carbon-future

20. The assumption of no change to generation in the cases of Options A (generator cap) and B (re-banding) means the monetised impacts are valued at zero for this Impact Assessment. Greenhouse gas emissions, air quality, and resource costs are assumed to be the same as under the 'Do Nothing' scenario.

Impact on Additional LCF Spend

21. The impact on the LCF of Options A and B are considered below and demonstrate that both options could reduce LCF spend compared to the 'Do Nothing' scenario (see Table 2). Reductions in support costs represent a transfer from generators to consumers. For this reason reductions in LCF spend are not reflected in the overall cost-benefit analysis of implementing Options A and B.

Table 2 – Estimated level of annual additional[9] LCF spend from non-grandfathered biomass co-firing and conversion units from 2018/19 (2011/12 prices, rounded to nearest £5 million)[10]

Policy Option	Low	Central	High
'Do Nothing'	£55m	£110m-£195m	£250m
Option 2: Capping	£5m		£10m
Option 1: Re-banding	Up to £5m	£10m-£20m	£25m

22. In Table 3 below we have estimated how the additional LCF spend of the 'Do Nothing' scenario (see Table 2) would affect the bills of average electricity consumers.

Table 3 – Estimated average annual additional impact on electricity bills from 2018/19 of doing nothing (2011/12 prices)[11]

Type of energy consumer[12]	Low estimate	Central estimate	High estimate
Average impact across all households (dual fuel)	£1	£1 - £2	£3
Business user with small electricity consumption	£50	£100 - £170	£220
Business user with medium electricity consumption	£2,000	£4,050 - £7,200	£9,200
Energy intensive industrial user	£18,600	£37,400 - £66,700	£85,100

[9] Additional to LCF forecasts published in March 2017
[10] The inclusion of low, central and high scenarios reflects uncertainty in these forecasts. See Annex C for assumptions used for each scenario.
[11] See Annex C for Table 3 assumptions
[12] An illustrative Business User with Small Electricity Consumption is assumed to consume 260MWh of electricity per year. An illustrative Business User with Medium Electricity Consumption is assumed to consume 11,000MWh of electricity per year. An illustrative Energy Intensive Industrial User (EII) has an assumed electricity consumption of 100,000MWh per year but EII consumption varies significantly.

'Do Nothing'

23. If there is no intervention we estimate that a significant amount of generation deployed under the co-firing band in recent LCF forecasts will redeploy under the biomass conversion band under the RO.

24. Increased biomass conversion and co-firing deployment scenarios for 2018/19 equate to additional spend under the LCF of £110m - £195m in 2018/19 for biomass conversions and co-firing units (see Table 2 above, central estimate). This additional spend would continue each year to 2027, when RO support for biomass conversion and co-firing will end. This could result in additional costs on average household consumer bills of £1 - £2 per annum from 2018/19.

25. 'Do Nothing' is the reference case against which interventions are assessed.

Option A: Generator cap

26. The consultation process will further explore the potential effects of the proposed generator cap on deployment behaviour of relevant generators. In the interim, we have assumed generation stays consistent with 'Do Nothing', but that costs of this generation to the LCF are less.

27. Assuming generation is unaffected, setting an annual cap of 105,000 ROCs on the number of ROCs that can be issued to each biomass conversion or co-firing station in respect of generation at its non-grandfathered units could result in additional LCF spend of around £5m. This option offers certainty about maximum potential additional spend attributed to biomass conversions and co-firers, as support is limited by a fixed cap.

28. A cap on the number of ROCs that can be issued for biomass conversion and co-firing would also provide certainty to setting the Obligation. Setting the Obligation requires Government to predict the number of ROCs to be issued to renewable generators in the upcoming obligation year. It is important that this is done as accurately as possible; setting the Obligation too high could lead to an excessive cost being placed on consumer bills, while setting the Obligation too low would lead to an oversupply of ROCs. This could cause a drop in ROC value and a lower buy-out fund, with insufficient funds to pay Ofgem's administration costs, as happened for the first time in 2016.

Option B: Re-banding of support levels

29. The consultation process will further explore the potential effects of re-banding at 0.1 ROCs/MWh on the deployment behaviour of relevant generators. In the interim, it is assumed generation stays consistent with the 'Do Nothing' scenario if re-banding at 0.1 ROCs/MWh, but that costs of this generation to the LCF are less.

30. Assuming generation is unaffected compared to the 'Do Nothing' scenario, re-banding at 0.1 ROCs/MWh for non-grandfathered generators could result in additional LCF spend of £10m-£20m in the central generation scenario, or up to £25m in the high generation scenario (see Table 2 above). This option reduces the risk of additional LCF spend from 2018/19 in comparison to 'Do Nothing'.

Non-monetised Impacts

31. The impacts on RO support costs above do not include several wider impacts, some of which could not be estimated – at this stage – without further evidence on the expected behaviour of

generators following implementation of Option A or Option B. These will be explored further through the consultation process:

- Administrative costs to Ofgem: Implementing a generator cap and providing guidance to generators may lead to some one-off familiarisation costs.

- Decarbonisation and air quality: This relates to the risk that non-grandfathered biomass conversion and co-firing units could choose to burn coal instead of biomass if Option A or Option B is adopted and support for biomass conversion and co-firing is restricted under the RO. Again, the consultation could offer further insight.

- Impact on businesses: In the consultation we have set out questions around wider impacts on the affected businesses. Evidence received will be taken into account in the final stage Impact Assessment. The policy options presented here will limit support under the RO for the businesses affected, however their ability to access revenues from the wholesale market and other electricity services will be unaffected.

Summary and preferred option

32. Options A or B are preferred for meeting the policy objective, as 'Do Nothing' could lead to additional spend under the RO of around £110m to £195m per annum, central estimate. Evidence gathered in the consultation stage will help identify whether Option A, Option B, or any alternative option proposed is preferable.

Annex A: Current RO bands for biomass conversion and co-firing projects

Table A1: Current RO bands for biomass conversion and co-firing projects

Band	Description[13]	Support (ROC/MWh)
Low-range co-firing of biomass (excluding bioliquids)	Less than 50% regular biomass or energy crops co-fired in a unit	0.5
Mid-range co-firing of biomass (excluding bioliquids)	50% - less than 85% regular biomass or energy crops co-fired in a unit	0.6
High-range co-firing of biomass (excluding bioliquids)	85% - less than 100% regular biomass or energy crops co-fired in a unit	0.9
Biomass conversion	Electricity generated from 100% regular biomass, energy crops or regular bioliquids by a unit of a relevant fossil fuel station[14]	1.0
Low-range co-firing with CHP[15] (excluding bioliquids)	Less than 50% regular biomass or energy crops co-fired in a unit of a qualifying CHP generating station	1.0
Mid-range co-firing with CHP[15] (excluding bioliquids)	50% - less than 85% regular biomass or energy crops co-fired in a unit of a qualifying CHP generating station	1.1
High-range co-firing with CHP[15] (excluding bioliquids)	85% - less than 100% regular biomass or energy crops co-fired in a unit of a qualifying CHP generating station	1.4
Conversion with CHP[15]	Electricity generated from 100% regular biomass, energy crops or regular bioliquids by a unit of a relevant fossil fuel CHP station	1.5

[13] In each case up to 10% fossil fuel can be used in a unit for permitted ancillary purposes without affecting the eligibility of that unit for the band.

[14] As defined in Schedule 5 of the Renewables Obligation Order 2015.

[15] For capacity accredited in or after 2015/16, these support levels are only available in circumstances where support under the Renewable Heat Incentive is not available. See article 35 of the Renewables Obligation Order 2015.

Annex B: Methodology for setting the banding provisions

Having decided that there is justification to carry out a banding review, the Secretary of State must have regard to the matters set out in section 32D(4) of the Electricity Act 1989 before making banding provisions. For an explanation of how we have considered all of these matters in setting the bands that we now propose, see the accompanying consultation document.[16]

The re-banding aims to minimise additional spend on non-grandfathered biomass conversions and co-firers compared to the spend forecast in the LCF projections published in March 2017.

Table B1 below suggests that the support level for non-grandfathered biomass conversions and co-firers would need to be set at between 0.008 and 0.03 ROCs/MWh in order to minimise additional RO expenditure on supporting these technologies.

We propose to set the support level at 0.1 ROCs/MWh so as to enable generators to continue to receive some support while still limiting additional costs to consumers.

Table B1: Support levels needed to keep expenditure in line with forecasts published in March 2017

	Forecast for 2018/19 published in March 2017	Generation scenarios[17]		
		Low	Central	High
(A) Generation associated with non-grandfathered biomass conversions and co-firers per year, MWh (rounded to nearest 1000)	96,000	1,572,000	3,048,000	5,907,000
(B) Price per ROC[18]	£42.56	£42.56	£42.56	£42.56
(C) Support level, ROCs per MWh	0.5[19]	0.03	0.0158	0.008
(A x B x C) Annual RO expenditure on non-grandfathered biomass conversions and co-firers (2011/12 prices)	£2m	£2m	£2m	£2m

[16] https://www.gov.uk/government/consultations/controlling-the-costs-of-biomass-conversion-and-co-firing-under-the-renewables-obligation

[17] The use of low, central and high generation scenarios reflects uncertainty in these forecasts. See Annex C for the assumptions used for each scenario.

[18] Buy-out price of £38.69 (2011/12) with 10% headroom applied, see: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-buy-out-price-and-mutualisation-ceilings-2017-18

[19] This is the current support level for low-range co-firing. The LCF forecasts published in March 2017 assumed that all generation from non-grandfathered biomass conversions and co-firing units would be under the low-range co-firing band.

Annex C: Generation assumptions

In Tables 2, 3 and B1, the following assumptions are made in relation to generation levels:

- **High:** This assumes high deployment of additional biomass conversion units, with a load factor of 82.2%. This is based on historical load factor data of existing biomass conversions in Great Britain.

- **Central:** This assumes additional biomass conversion deployment with a load factor of 46.5% - 82.2%. Based on BEIS commercial estimates, the lower end of this range assumes deployment for around six months of the year, while the higher end assumes a load factor based on historical data from existing biomass conversions.

- **Low:** This assumes additional biomass conversion deployment with a load factor of 23.25%. This assumes plants would be running over the winter peak period only (e.g. January to March). This is derived by talking half the load factor equivalent to running for around six months of the year above (46.5%).