

Government Response to the Consultation on the Grandfathering Policy of Support for Dedicated Biomass, Anaerobic Digestion and Energy from Waste Under the Renewables Obligation

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Executive Summary

1. On 31 March 2010 the Secretary of State for the Department of Energy and Climate Change (DECC) launched a consultation on the grandfathering policy for dedicated biomass, anaerobic digestion (AD) and energy from waste (EfW) under the Renewables Obligation (RO) for England and Wales. The consultation also covered grandfathering policy for advanced conversion technologies (ACT), energy crops and bioliquids.
2. The consultation arose following representations from industry, and discussions with banks and equity investors suggesting that, without grandfathering, biomass deployment would not come forward as investors lacked revenue certainty.
3. Given both the narrow and technical nature of the proposed changes, as well as the need for a swift resolution to provide investor certainty, the consultation period lasted eight weeks and closed on 28 May 2010. We received 97 responses. Based on the evidence and views gathered we have decided to adopt the following policy:
4. **To grandfather RO support for the following technologies at the rate applicable at point of accreditation:**

Anaerobic Digestion and Energy From Waste:

Following widespread support for our proposal, we will amend our policy so that we have a policy to grandfather support for AD and EfW with CHP. We consider the fuel supply chain is mature enough to deliver long term fuel supply contracts, reducing potential fuel price variability risk.

Dedicated Biomass:

We proposed a policy to grandfather support only for the non fuel costs. However, respondents raised concerns that the proposed split would not work in practice as there is no single biomass index on which to base the fuel element. Respondents argued that banks and lenders would discount the fuel element to zero. Some respondents further argued that biomass generators are best placed to mitigate and hedge fuel price risk. We have therefore decided to adopt a policy to grandfather support for dedicated biomass. It is important to make clear, that, in adopting this policy, existing generators **would not be up-banded** should the support levels for new dedicated biomass plant go up at future banding reviews. For bioliquids see below.

Advanced Conversion Technologies

In the consultation we suggested that there was insufficient evidence to grandfather advanced conversion technologies, and we sought evidence on the matter. On the basis of the evidence and unanimous views we received, it was clear ACT needed to be grandfathered to be able to compete fairly for fuel against other grandfathered technologies such as EfW, and to ensure investment in developing these emerging technologies is maintained. For bioliquids see below.

5. NOT grandfathering the following:

Bioliquids:

As proposed, we have decided not to adopt a policy to grandfather bioliquids at this stage. We want to consider support for bioliquids within the forthcoming RO banding review, based on further analysis to be done on their costs and the best strategic use of bioliquids across the electricity, heat and transport sectors. In light of the strong views expressed in the consultation on the desirability of using bioliquids from wastes and advanced conversion technologies, given their efficiency and the benefits of diverting waste from landfill, we will continue to consider how best to support these technologies.

Energy Crop Uplift

As proposed, we have decided not to adopt a policy to grandfather the energy crop uplift. We did not receive any evidence that long term 15-20 year contracts for energy crops could be delivered. This, coupled with the high volatility of energy crops prices and the fact that the energy crop uplift is intended to be a temporary measure, are the main reasons why we have decided not to change our policy on grandfathering the energy crop uplift.

6. Implementation

Further details of how these decisions will be implemented through changes to the RO will be considered in the context of the banding review which will start in Autumn 2010 and which will result in changes to the RO to implement them. In particular, in view of the fact that stations are not currently accredited only for a particular technology, it is currently possible for stations to switch between different processes in relation to different periods. In relation to ACT, this can arise regularly from month to month. We will need to consider how grandfathering will operate in this context, for example the date and level at which the banding will be treated as fixed.

Introduction

7. This paper details the government response to the consultation on the grandfathering policy of support for Dedicated Biomass, Anaerobic Digestion and Energy from Waste under the Renewables Obligation (RO) for England and Wales.
8. Sustainably-produced biomass electricity has a significant role to play in our renewable energy mix. Electricity from biomass is important to the renewable energy target because:
 - It brings **security of supply** benefits. It is dispatchable – the level of generation can be adjusted to meet consumer demand – and one of the few renewable electricity sources that is not intermittent, so balancing more variable sources of energy such as wind.
 - Large scale dedicated biomass has the **potential to deliver significant levels of renewable electricity** by 2020. Under the Renewable Energy Strategy central scenario, published in July 2009, it was estimated that electricity from biomass (including biogas and wastes) would comprise around 20% of all renewable generation needed to meet the renewable energy target.
 - Electricity from **dedicated biomass is cheaper than some other large scale electricity sources**. If biomass generation needed to meet the renewable energy target were displaced by more expensive technologies, there would be an additional overall cost to the renewable energy target.
 - Newer technologies such as **AD** are still relatively costly, but they deliver other objectives, such as a productive use for wastes.
9. When the RO was first introduced in 2002, it was intended to be technology neutral. This meant all types of renewable technologies received a set level of support at 1 ROC per MWh, which resulted in a narrow range of technologies being deployed.
10. The technology neutral system did not encourage deployment of emerging technologies, and so banding was introduced in 2009 to provide differentiated support. A summary of how the banded RO works can be found at Annex A.
11. The levels of support for respective bands are reviewed at scheduled Banding Reviews, as set out in legislation. This provides flexibility to review support levels where necessary, ensuring consumer value is maintained. The factors which the Secretary of State must consider when reviewing the banding provisions are clearly stated in primary legislation (Section 32D (4) of the Electricity Act 1989) and can be found at Annex B.
12. Typically, most renewable technologies have large upfront capital costs, with minimal ongoing operational and maintenance costs. As such, once constructed these generating stations do not benefit from sectoral innovation that can lead to increased efficiency and reduced build costs. Therefore, alongside the move to banding, we introduced the concept of grandfathering the level of support for existing generators.

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- 13.** Grandfathering is the policy intention to maintain a fixed level of support for the full lifetime of a generating station's eligibility for the RO, from the point of accreditation. In 2008, following consultation on banding and grandfathering, grandfathering was introduced for all technologies except those with a fuel cost or income. This was because we recognised the need for flexibility to amend support levels should fuel prices change. In particular:
- a) Generators entering the market in different years could receive different levels of support, yet would compete for the same fuel stock, thereby potentially distorting the market (as one would be able to pay more than the other).
 - b) Equally, if fuel prices went down, existing generators would be over-compensated at the cost to the consumer.
- 14.** Since the introduction of banding and the increase in support for biomass in 2009, there has been a marked increase in planning applications for biomass plant. The biomass industry suggests there is approximately 5GW of biomass plant in the planning and pre-build pipeline. However, relatively few projects have reached construction stage
- 15.** Developers suggested that the lack of plant being built was due to lenders and equity providers withholding investment due to a lack of grandfathering. However, not all industry felt without grandfathering there would be hiatus in biomass deployment.
- 16.** We reviewed our current policy on not grandfathering dedicated biomass, anaerobic digestion and energy from waste plant. We worked with industry and the finance community and concluded that a greater degree of revenue certainty was needed to bring biomass forward, and issued a series of proposals and questions for public consultation (list of questions can be found at Annex C).

Summary of Responses

17. In total, we received 97 responses to the consultation, with around half coming from energy companies and large utility providers. Individuals made up the next largest group of respondents, accounting for 20% of responses.
18. The remaining 30% was made up of a mixture of trade associations, investment and advisory groups, non-departmental public bodies (NDPBs) and non-governmental organisations (NGOs).

Anaerobic Digestion and Energy from Waste

19. We proposed to adopt a policy to grandfather support for Anaerobic Digestion (AD) and Energy from Waste with CHP (EfW). There was almost unanimous support for this proposal among those responding to our proposals, although some respondents stated a preference for the potential to be upbanded in future as well.

Dedicated Biomass

20. We proposed to adopt a policy to grandfather the support associated with non fuel costs. Views were split over this proposal; however there was a limited response to the call for evidence on fuel and non-fuel costs. Just over a quarter of respondents gave some evidence, with only about half of these providing in-depth costs analysis.
21. A handful of respondents preferred to meet to discuss their capital and variable costs, rather than submit detailed costs and income data in response to the consultation.

Bioliqids

22. There were a significant number of responses to our proposal not to adopt a policy to grandfather bioliqids. Approximately 20% of the 97 responses were specifically on this issue. Responses were polarised, with strong views expressed both for and against the proposal, although very little hard data was submitted to back up the arguments.
23. Support for the proposal typically came from individuals and NGOs on sustainability grounds. There was a reasonable degree of support also from some energy companies who felt that bioliqids were better used in the transport sector.
24. This was countered by strong views against the proposals from many energy companies, arguing that the high conversion efficiencies and greenhouse gas (GHG) savings that can be achieved from bioliqids, and bio-liquid CHP plants in particular, should not be ignored. A number of respondents stressed the benefits of using waste bioliqids to generate energy. Respondents also pointed out that many bioliqids used in power generation cannot be used in the transport sector.

Anaerobic Digestion (AD) and Energy from Waste (EfW)

Proposal:

25. For AD and EfW we sought views on the following proposals:

*AD plants tend to be small scale, using locally sourced feedstock, often at low or even negative cost. These small, often on farm, AD generators should be less sensitive to changes to support levels for future entrants to the market and less likely to be competing for the same fuel. Under the feed-in-tariff (FIT) scheme, due to launch on 1 April, support is to be maintained for the length of the tariff for all technologies (including AD). We therefore propose to bring the RO in line with FIT support with a policy to grandfather AD plants accredited by 31 March 2013 at the current ROC level, i.e. **2 ROCs per MWh**. We propose that any generators accrediting from 1 April 2013 should be grandfathered at the rate applicable following the outcome of the 2010–2013 Banding Review.*

***Standard energy from waste with CHP** plants are more likely to secure long term, up to 20 year, fuel contracts as part of PFI deals with local authorities. These contracts are structured to make it costly to terminate early, thus providing a degree of certainty of costs/income for both the Local Authority and the EfW generator. We therefore also propose a policy to grandfather support for EfW generators at the current ROC level, **1 ROC per MWh**, provided they are accredited by 31 March 2013. As with AD, we propose that any generators accrediting from 1 April 2013 should be grandfathered at the rate applicable following the outcome of the 2010–2013 Banding Review.*

Responses:

General Trends:

26. There was almost unanimous support for our proposal to adopt a policy to grandfather AD and EfW plant accredited by 31 March 2013 at current levels in line with most other renewable technologies.
27. There was widespread acceptance that these technologies had more mature (and secure) fuel supply chains than dedicated biomass and were more likely to be able to secure long term fuel supply contracts for their feedstocks.
28. In the case of EfW, respondents suggested 20 years fuel supply contracts could be achieved by setting up PFI (Private Finance Initiative) or PPP (Public Private Partnership), particularly in relation to municipal solid waste (MSW).
29. There was widespread agreement that these long-term fixed contracts mitigated the market distortion risk posed by grandfathering in a variable fuel market, as generators will be able to contract for their fuel supply from the outset for the entire period they are eligible in the RO.

30. There was also a strong support for the proposal as it will greater align policy on the Renewables Obligation with the small-scale Feed-In Tariff, where the policy is to grandfather support for AD.

Large Scale AD:

31. However, several energy companies felt that for large scale AD, long term fuel contracts were not easy to attain, as the level of feedstocks required could not be sourced locally and thus needed to be transported from elsewhere on an ongoing basis.

32. These freighted AD fuel supply contracts are administered on a short term basis (around 5-7 years) and thus they favoured a similar approach to that proposed for dedicated biomass (splitting the ROC into grandfathering for fixed capital costs and a floating ROC element for variable fuel costs).

Economic Data:

33. Some respondents gave costs and revenues data on the non-fuel element of AD and EfW, which highlighted that costs varied considerably due to size and type of plant, operating efficiencies and ability to gain long-term fuel contracts. Furthermore, there was an indication that due to the relatively few numbers of AD and EfW plant actually in operation, representative economic data would be difficult to achieve.

Decision:

34. Considering the widespread support for our proposal, **we will adopt a policy of grandfathering AD and EfW with CHP plant at the rate applicable at point of accreditation**, as proposed in the consultation. Together with industry, we believe the fuel supply chain is robust and mature enough to deliver long term fuel supply contracts that facilitate grandfathering, and thus bring forward pipeline development.

35. For larger scale AD where longer term fuel contracts may not be so available we did not favour splitting the ROC into grandfathering fixed capital costs and a floating ROC element for variable fuel costs. AD plant use a wide range of feedstocks, which means that it would be difficult to find an index that would reflect the changing costs in the market. A fixed/floating ROC option would be complex. We also did not favour separating the AD band between large scale and smaller scale AD as that would add further complexity to the RO and increase the administration burden, and therefore cost to consumers.

36. Assessment of the costs and benefits of this decision are given in the accompanying Impact Assessment. The impact of this decision is uncertain, but the cost and benefit assessment assumed that the policy to grandfather support for AD and wastes on accreditation could increase the amount of AD supported under the RO by 2013 by up to 0.1 GW.

Dedicated Biomass

Proposal:

37. We recognised that dedicated biomass faces significant market distortion risks due to a relatively immature fuel supply chain, which might not deliver fixed long term fuel contracts.
38. We invited responses on a proposal to grandfather the support associated with the non-fuel costs, whilst keeping support for fuel costs variable, amended at the regular, scheduled banding reviews if necessary. We called for evidence on where this split should be:

Unlike other renewables generators, biomass generators have an ongoing fuel cost. Industry have informed us that they are unable to fix this fuel cost for the full 20 years of the RO support. Therefore, grandfathering their total support (which takes into account both the capital and fuel costs) for 20 years at current levels could result in future market distortion if bands were changed for new entrants. It was precisely for this reason that we did not grandfather support for biomass on the introduction of banding in April 2009.

*Like other technologies, **dedicated biomass** developers should, however, be able to fix the non fuel costs for the upfront build of the project. We are therefore proposing a policy to grandfather the proportion associated with non fuel cost for dedicated biomass, but not to grandfather the element of support which helps pay for the ongoing fuel costs. This brings the biomass grandfathering policy more closely in line with our policy for other renewables under the RO, and aims to protect existing generators from having support reduced due to a breakthrough in technology which reduces the upfront capital cost for new generators.*

Responses:

General Trends:

39. We received over 70 responses on this proposal. The responses were the most varied in the consultation with no clear consensus.
40. Respondents made clear that without some sort of revenue certainty very little of the 5GW that industry estimate is in the pipeline would actually come forward. Developers provided evidence showing that banks and lenders were unwilling to finance biomass projects without revenue certainty, and the only dedicated biomass projects likely to come forward were from the large utility providers who could develop on balance sheet.
41. There was also a general understanding that grandfathering with up-banding (an option considered in the grandfathering review) exposes the consumer to downside risk should fuel prices drop in the future. Despite being the ideal option for most energy companies, only 11 respondents recommended it as the way forward – with a number of other respondents acknowledging that it offers poor value to the consumer.

Proposed Option: Split fixed capital and variable fuel ROC

42. The majority of responses suggested that, while in theory a split grandfathered and free-floating ROC made sense, in practice it would be extremely difficult to administer and implement.
43. Respondents argued this was due to uncertainty as to how the floating fuel element would be calculated. In particular, respondents raised the issue of a lack of a single, established biomass price index and highlighted the diversity of feedstocks, which make it difficult to calculate a single price for biomass.
44. Respondents also believed that banks and lenders would discount the variable fuel element of RO support, arguing that the government could potentially reduce the free floating fuel element to zero in a subsequent banding review.
45. Many respondents suggested the greater the grandfathered element of a split ROC, the more likely deployment was to come forward. Building on this, some respondents stipulated that if the grandfathered element was set to current levels (1.5 ROCs), banks were likely to lend irrespective of the ambiguities of the free floating fuel element. However, this assumes that the current RO band solely supports the non-fuel costs, which is not the case.

Methodologies for determining fuel support:

46. For the reasons cited above, most respondents felt that neither of the two proposed methodologies were sufficient for determining fuel support.
47. There were also views on how DECC could/should distinguish between fuel and non-fuel costs. Some of the larger energy companies and utilities have suggested they are moving upstream, acquiring land and equipment to produce their own fuel in an attempt to bolster their fuel supply chains, and thus would regard their acquisition of fuel as capital expenditure. This would not be the case for generators buying in their fuel rather than moving upstream.
48. Many respondents said that the proposed split ROC option could work if the calculation used to determine the variable element was made clearer and more transparent. Some companies proposed their own fuel methodologies; others said they were happy to work with DECC to produce a robust and transparent fuel methodology that could be practical.

Alternative Option: Grandfathering with Up-banding

49. There was general acknowledgement that this option offers poor value to the consumer.
50. The 11 respondents who recommended it argued that their projections show fuel prices rising in the near to mid-term future. They argue that this option does not actually offer poor value for money, as the risk of fuel prices dropping is nominal.
51. Some of the respondents also suggested this option offers greater value for money to the consumer than the proposed split option as it is less susceptible to gaming. They suggested under the split ROC option some large generators could have control of both upstream fuel supply and downstream generation, and therefore be able to skew the costs. Therefore, they argued that upbanding would offer greater value for money than a split fixed and floating system.

Alternative Option: Grandfathering at point of accreditation

52. There was general agreement that grandfathering at the band given on accreditation (as is the case with other renewable technologies) had the potential to result in market failure due to the immature fuel supply chain for dedicated biomass.
53. However, most generators suggested that they would rather attempt to mitigate the fuel price variability risk and the prospect of being out competed for fuel, rather than be subject to the proposed free-floating fuel option as it currently stands. This is because companies suggest they can hedge against fuel price, but not regulatory risk.

Alternative Option: No change to current policy

54. Around one fifth of respondents argued that there should be no change to current policy – i.e. we should not introduce grandfathering for dedicated biomass. Support for the current policy came almost exclusively from Non-Governmental Organisation (NGOs) and individuals, although some large utilities also supported this option.
55. For some NGOs and individuals, the reasons for support were based on the view that any type of grandfathering would give increased support to biomass at the expense of consumers, and that biomass in general was deemed to be unsustainable. Their argument was that by not grandfathering we would reduce deployment of biomass which, in their view, would be a good outcome.
56. One NGO also argued that there was no evidence that a reasonable amount of biomass would not come forward under the existing system.
57. Several NGOs questioned the wider bioenergy sector, suggesting the notion of gaining aggregate carbon savings from burning biomass does not have scientific consensus, so we should not incentivise any more than we do.
58. Some large utilities also supported the existing policy, stating that they have already planned and financed multi-million pound projects on the basis biomass was not grandfathered. These respondents were exclusively large utilities, able to finance on balance sheet.

Potential Choice of Options:

59. A few respondents, including certain trade associations, suggested giving developers a choice between the various options outlined above may be the best way forward. They suggested this would help address the considerable diversity in the dedicated biomass industry, ranging from the size of respective projects to the varied abilities to acquire project finance.

Decision:

60. The consultation put forward four options. There was widespread concern amongst respondents that DECC's proposed option of splitting the capital and fuel elements of the ROC would not work in practice due to the diverse array of feedstock and the lack of a single biomass index on which to base the fuel element.

61. Respondents argued banks and lenders would discount the fuel element to zero, and treat the ROC level as effectively only the capital element.
62. There was also general consensus that grandfathering with up-banding offered very poor value to the consumer and thus was not a feasible option. This leaves two options: no grandfathering (i.e. a business as usual scenario) and grandfathering at rate applicable at point of accreditation, as with most other renewable technologies.
63. We are concerned (given the comments by industry) that if policy remains as it is there will be a hiatus in biomass deployment, as seen over the last eight months since the lack of grandfathering was raised as an issue. Under this scenario, we expect deployment to be limited to the 100MW already in construction. For this reason we did not favour the no grandfathering option.
64. Offering each generating station the option to be covered by grandfathering would increase the complexity and administrative cost of the RO. A choice element may also exacerbate the fuel price variability risk, with generators under different support mechanisms competing for the same fuel.
65. For these reasons, we have decided not to offer a choice between options. The remaining option is to grandfather at the rate applicable at point of accreditation. We remain concerned about the prospect of grandfathering support where a significant proportion of costs are for fuel, which varies over time. There is potential for over compensation should fuel prices fall significantly. There is also potential for market distortion should fuel prices rise in future years and new generators are given a higher ROC level at a future banding review. However, respondents have made a case that this is a risk the industry can, and should, mitigate themselves.
66. **We have decided to adopt a policy to grandfather dedicated biomass at the rate applicable at point of accreditation.** A significant number of generators have assured us they can mitigate the fuel price risk posed by grandfathering, and the decision to grandfather dedicated biomass has been taken on this basis. The cost and benefit assessment of this decision is given in the accompanying impact assessment. See the next chapter for our policy on bioliquids.
67. We must make very clear that through the introduction of the grandfathering policy, **generators have taken ownership of the fuel price risk, and existing generators would not be up-banded should the support levels for new dedicated biomass plant go up at future banding reviews.**

Bioliquids

Proposal:

68. We proposed not to grandfather bioliquids, as it is not yet clear whether incentivising bioliquids for electricity generation is the best way to help us achieve our wider energy targets, due to their potential to help meet renewable heat and transport targets.

69. We invited views on following proposal not to change our policy for bioliquids:

*We are not currently proposing to grandfather support for generators using **bioliquids**, as there is a question as to whether putting bioliquids into electricity is the best way of helping us to achieve our renewable energy targets (given their potential use for heat and transport). Our policy remains for flexibility to amend support levels for bioliquids at future banding reviews for both new and existing generators.*

Responses:

General Trends:

70. Responses to the proposal not to grandfather bioliquids were polarised. Around a fifth of responses to the consultation only addressed this issue.

71. There was strong support for the proposal not to grandfather the RO for bioliquids from individuals, NGOs and some energy companies, and strong disagreement particularly from smaller to mid-sized energy companies producing biofuels or looking to develop bioliquid electricity generation, particularly CHP projects.

Support for the proposal:

72. NGOs and 17 individuals were strongly against grandfathering bioliquids on sustainability grounds. There was particular concern regarding the sustainability of tropical bio-fuels such as palm oil and jatropha, with respondents worried that their growth for fuel is indirectly displacing land that would otherwise have been used for food production.

73. Approximately one in six respondents were also concerned that indirect land use change caused by the growth of bioliquids crops is also resulting in the displacement of indigenous populations in Africa and Asia.

74. Many individual respondents were also concerned by reduced air quality in areas where bioliquid plants are located. Particular concern was raised about Nitrogen Oxide emissions.

75. The NGOs and several energy companies also supported the principle of ensuring that bioliquids are available for transport use, and not diverted into electricity production at scale. Respondents agreed that there are a wide array of feedstocks that could be used in the power sector, whereas in the transport sector in particular, bioliquids are one of few

options. In terms of promoting the best use of biomass, they argued that it would be better for bioliquids not to be grandfathered in the RO.

76. Some NGOs also questioned the aggregate carbon savings of bioenergy, and these arguments were made particularly strongly in relation to bioliquids.

Responses against the proposal:

77. Energy companies, particularly small to mid-sized firms, were, in general, against the proposals. They argued that not all bioliquids could be used in the transport sector, in particular tall oil and used cooking oil, and stressed the benefits of generating energy from waste oils rather than, for example, sending them to landfill. Many respondents felt without grandfathered support bioliquids deployment would not come forward.

78. Other respondents suggested DECC was taking a too sectoral view on renewables support, and should in fact be considering feedstocks and technologies that offer the greatest carbon savings rather than any other factor.

79. This argument was made particularly in relation to bioliquids CHP, which various industry respondents suggest could achieve plant efficiencies of up to 80-90%. In real terms, this equates to abating more than twice the unit of fuel than if the raw feedstock is used in the transport sector. Respondents also argued that bioliquids CHP offers good value for money to the consumer.

80. In addition, many in industry felt small-mid scale bioliquids CHP should be supported as it was one of the key ways in which green house gas saving targets in the built environment could be met.

Decision:

81. We consider that we still lack sufficient research and analysis on the implications for the RO of grandfathering bioliquids and on the best strategic use of bioliquids across the electricity, heat and transport sectors, in order to inform the relative levels of incentives before decisions are taken on whether to change current policy for bioliquids. **Therefore, as proposed, we have decided not to adopt a policy to grandfather technologies using bioliquids at this stage.**

82. We recognise that certain bioliquids cannot be used in transport, and that some bioliquids offer very high conversion efficiencies and GHG savings when used in electricity generation. We are sympathetic to the use of bioliquids produced from advanced conversion technologies and also from wastes that could otherwise go to landfill, and recognise that these have the potential to contribute to our energy targets.

83. If we are to distinguish between different types of bioliquids in the RO, we will need to consider how to make this work in practice, and establish definitions to draw a clear line between those bioliquids that are grandfathered and those that are not. **We will do further work to consider how best to support these technologies through our renewables incentives.**

Advanced Conversion Technologies

Proposal:

84. The consultation explained that we considered there was insufficient evidence for us to come to a view on whether to make changes to the current policy not to grandfather advanced conversion technologies (ACT), such as gasification and pyrolysis. We therefore used the consultation document to call for evidence and views on how best to treat ACT.

Responses:

85. Whilst relatively little hard data was submitted, all 25 respondents who answered the relevant question believed some sort of fixed, grandfathered level of support was needed to bring forward ACT.

86. The majority of respondents felt advanced thermal technologies should be treated the same as the proposal for AD and EfW – grandfathered at the band received on accreditation. Two main factors were cited:

- The technologies are very new and few have reached operational stage. Thus, full grandfathered support is needed to bring plant into operation, as capital costs are high as developers seek to recover research and development costs.
- The typical fuel sources used in advanced thermal technologies tend to be derived from gate-fee intake, and so would be in direct competition with EfW. Hence, support across these technologies would need to be consistent to ensure fairness and parity in the competition for fuel.

Decision:

87. On the basis of the evidence and unanimous views we received, **we have decided to adopt a policy to grandfather ACT at current rates.** For bioliquids see the previous chapter.

88. This will mean ACT can compete fairly for fuel against other grandfathered technologies such as EfW and should also ensure investment in developing these important emerging technologies is maintained.

Energy Crop Uplift

Proposal:

89. The consultation proposed the ½ ROC energy crop uplift should not be grandfathered, as the energy crop uplift was introduced as an intermediary measure to help support and develop the energy crop fuel supply chain. It is hoped that, once the supply chain has developed, this support can be reduced or removed.

Responses:

90. We received 35 responses on the energy crop uplift. The majority felt grandfathering was needed to develop the energy crop supply chain. Some respondents suggested that despite industry assuming the uplift was grandfathered the energy crop supply chain has not developed; therefore, they felt not only should support for energy crops be grandfathered, but that it should be increased.

91. A handful of respondents shared DECC's concern over grandfathering an uplift subject to fuel price variability and volatility. However, there was almost unanimous agreement among respondents to this section that the current types of support were not sufficient in delivering energy crops and the associated supply chain, and that other types of support mechanisms such as capital grants should also be considered

Decision:

92. The scope of the consultation was only to consider whether or not to grandfather support, not to determine the level of support needed. The level of support for the energy crop uplift after 1 April 2013 will be determined at the scheduled banding review, alongside support levels for all other technologies.

93. The purpose of the energy crop uplift remains to help develop the energy crop fuel supply chain. Unlike contracts for regular biomass, we did not receive any evidence that long term 15-20 year contracts for energy crops could be delivered. Grandfathering the energy crop uplift now at ½ ROC would mean that existing generators would be ineligible for increased support should the energy crop uplift be increased, and therefore would be at a significant disadvantage to new generators. Conversely, if energy crop prices decrease, we would want to be able to reduce the energy crop uplift so as to avoid over-compensation. **We have therefore decided not to adopt a policy to grandfather the energy crop uplift.**

Annex A: How the RO Works

- The RO works by placing an obligation on licensed electricity suppliers to source a specified and annually increasing proportion of their sales from renewable sources, or pay a penalty.
- The level of the obligation is 9.7% for the 2009/10 obligation period, and will rise to 11.1% for 2010/11.
- Generators are issued with Renewables Obligation Certificates (ROCs) for every megawatt hour (MWh) of eligible renewable electricity they generate. As of 1 April 2009, when we introduced 'banding', different technologies receive different numbers of ROCs per MWh. This reflects differences between technologies including the cost of generation and potential for large-scale deployment, and provides increased support to technologies that are less well-developed or further from the market.
- Generators sell their ROCs to suppliers or traders which allows them to receive a premium in addition to the wholesale price of their electricity. ROCs can be sold with or without the electricity they represent.
- Suppliers satisfy their obligation by presenting ROCs to Ofgem, who administer the scheme. Where they do not present sufficient ROCs they have to pay a penalty known as the buy-out price. This is set at £37.19/MWh for 2009/10 (and linked to RPI).
- This money is held by Ofgem in the buy-out fund until the end of the obligation period, when it is recycled to suppliers who presented ROCs on a pro-rata basis

Annex B: Banding review criteria

Section 32D(4) of the Electricity Act 1989 (as amended by the Energy Act 2008)

Section 32D(4) of the Electricity Act 1989 (as amended by the Energy Act 2008) sets out those matters which the Secretary of State must have regard to before making a banding provision. These are:

- a. the costs (including capital costs) associated with generating electricity from each of the renewable sources or with transmitting or distributing electricity so generated (and including costs associated with the production or supply of heat: section 32D(5));
- b. the income of operators of generating stations in respect of electricity generated from each of those sources or associated with the generation of such electricity (including that connected with the acquisition of the renewable source, the supply of heat and the disposal of any generation by-product: section 32D(6));
- c. the effect of paragraph 19 of Schedule 6 to the Finance Act 2000 (c. 17) (supplies of electricity from renewable sources exempted from climate change levy) in relation to electricity generated from each of those sources;
- d. the desirability of securing the long term growth, and economic viability, of the industries associated with the generation of electricity from renewable sources;
- e. the likely effect of the proposed banding provision on the number of renewables obligation certificates issued by the Authority, and the impact this will have on the market for such certificates and on consumers;
- f. the potential contribution of electricity generated from each renewable source to the attainment of any target which relates to the generation of electricity or the production of energy and is imposed by, or results from or arises out of, a Community obligation.

Annex C: List of Questions

Q1: *What information can you provide on current biomass fuel contracts, feedstock sources and prices for dedicated biomass? How do you expect the market to develop longer term?*

Q2: *Do you agree that grandfathering at current levels for dedicated biomass could result in unfair competition if bands were changed for new entrants in a future banding review? Please provide your argument.*

Q3: *Could grandfathering AD and EfW cause similar market distortion? Do you agree that the risk is less for these technologies? Please provide your argument.*

Q4: *What are current AD and EfW feedstock prices or subsidies for disposal and what do you estimate these prices to be in the future? Are these arrangements driven by landfill gate fees? Do you agree that these feedstocks are less subject to price uncertainty than dedicated biomass plant?*

Q5: *What evidence is there that without grandfathering there would be a hiatus in investment for AD, EfW and dedicated biomass?*

Q6: *To what extent does grandfathering risk market distortion? Is there evidence to support the extent to which this distortion could affect future investment?*

Q7: *Do you agree that this option offers less value for money to the consumer, due to the lack of response to future fuel prices?*

Q8: *Please provide evidence of actual costs and revenues for dedicated biomass, AD and EfW plants, including evidence to demonstrate the proportion of these costs that is non fuel?*

Q9: *Which methodology for determining a support level for non fuel costs is the most appropriate, and why? Are there any other methods we should consider?*

Q10: *Is this an approach to the level of grandfathering that could work for AD and EfW plants?*

Q11: *What evidence can you provide to support whether this level of grandfathering could bring forward investment in dedicated biomass/AD/ EfW? What levels of deployment would you expect to see, and when would you expect generators to be accredited?*

Q12: *Do you agree that a lack of grandfathering will impact deployment levels for dedicated biomass, AD and EfW, and if so, to what extent?*

Q13: *Is there potential for other technologies to be deployed under the RO? If so, at what levels?*

Q14: *If there is no change to current policy, how easy would it be for proposed AD projects to switch their funding to FITs?*

Q15: *Do you agree that bioliquids should not be grandfathered, and why?*

Q16: Do you agree that this proposal offers the best balance between value for money, investor confidence and flexibility? If not, please give your reasons and state what alternative option you think would be more appropriate.

Q17: Do you agree that separate solutions are needed for AD and EfW and dedicated biomass? Please provide your argument.

Q18: Do you agree that this option would allow current investors to go ahead with their plans? What deployment levels would you expect and why?

Q19: What build times would you expect for AD, EfW and dedicated biomass generators?

Q20: How should support for advanced thermal technologies, such as advanced gasification and advanced pyrolysis, be treated? Should we grandfather the non fuel costs, or grandfather at current levels?

Please provide your argument.

Q21: Do you agree that the energy crop uplift should not be grandfathered?

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