

RESPONSE TO OFGEM CONSULTATION ON CMP264 AND CMP265 MINDED TO DECISION AND DRAFT IMPACT ASSESSMENT

The Anaerobic Digestion and Bioresources Association (ADBA) is the trade association that represents the range of interests and matters related to the anaerobic digestion of organic materials (AD) across the UK, including the collection of waste for use as feedstock. ADBA understands the complex range of skills required by developers of new AD plants, from feedstock management through technology to energy production, markets and resource to land.

The organisation has over 400 members from across the AD industry, including plant operators and developers, farmers, local authorities, waste management companies, supermarkets, food processors, energy and water companies, equipment manufacturers and suppliers, consultants, financiers and supporting service companies. Anaerobic digestion can make a significant contribution to renewable energy, climate change, and critical resource preservation targets, subject to the right policies being in place.

Why should the government invest in AD?

Following strong growth in recent years the UK's AD sector now has a capacity of over 700MW electrical-equivalent. This is more than double the capacity of the Uskmouth coal plant – enough power for more than 850,000 homes.

AD produces biogas which can be used to generate baseload electricity. It also offers flexibility, with plants able to dispatch electricity to meet high demand periods, provide low carbon heat or be upgraded and used as a transport fuel.

AD offers an excellent return on the government's investment. This return includes:

1. Energy security from domestic green electricity

Biogas is good for UK energy security. It is generated in the UK and supplies are constant and reliable. AD is delivering home grown green power to the electricity grid here and now. AD can contribute to energy security by delivering around 30% of either domestic electricity or gas demand.

2. Cost effective carbon abatement

AD has already reduced UK greenhouse gas emissions by nearly 1% annually. Supporting the technology further could reduce carbon emissions by 4%. Our calculations suggest that continuing to support the technology would reduce government expenditure by £755m from 2017 to 2040 in GHG abatement.

3. Economic productivity and global competitiveness

A sector already employing around 3,500 people, with the potential to employ over 30,000 more, many in rural areas and manufacturing jobs, is worth protecting. The UK is a world leader in biogas with UK companies exporting over £100m-worth of biogas-related expertise and equipment per year. Given its world-leading expertise, the UK AD industry has a real opportunity to be at the heart of the growing global biogas industry, worth £1 trillion.

4. Strengthening the rural economy

Recycling digestate back to the land boosts crop yields and improves Britain's soils, the poor quality of which is costing the UK £1bn a year according to a recent Parliamentary Office of Science and Technology estimate. Integrated into farming, AD also helps stabilise farming businesses, improving their ability to withstand fluctuations in global commodity markets.

5. Meeting recycling targets

The government will not be able to meet its recycling targets without mandatory separate food waste collections in England, which will require more food waste AD capacity to treat and recycle the resulting separated food waste.

Question 1. Do you agree with our problem definition and that the Transmission Network Use of System (TNUoS) Demand Residual (TDR) payments to sub-100MW Embedded Generation (“smaller EG”) are distorting dispatch, wholesale price, the capacity market (CM) and that they pose an increased cost to consumers?

Anaerobic digestion (AD) is by its nature distributed, but unlike many such technologies it provides a source of baseload power. National Grid’s 2016 Future Energy Scenarios ‘Consumer Power’ scenario forecasts local generation providing 49% of electricity to the UK by 2050. The energy market is already beginning to respond to such changes in technology – with energy storage, for example, providing opportunity for self-sufficient microgrids in some areas of the country. The rising Transmission Network Use of System (TNUoS) Demand Residual (TDR) reflects this change.

Regulatory response to such major changes to the nature of the UK’s power generation and supply requires a comprehensive, holistic response: the accelerated process proposed in this minded to decision cannot provide this.

We do not believe that the evidence put forward by Ofgem establishes sufficiently that Embedded Generation distorts dispatch, wholesale price, and the capacity market (CM) or that it translates into increased costs for the consumer.

The minded to decision claims that “TDR payments to smaller EG are distorting other markets, including the Capacity Market (CM), wholesale and ancillary services markets.”¹ This is rightly a concern for Ofgem and we would welcome a comprehensive review of charging throughout the network, such as the Significant Code Review (SCR) being proposed in the Targeted Charging Review (TCR). Any review must be holistic and look, in particular, to potential disparities within the CM and between those generators in and those not in the CM, which – to date – is all AD generation, whose projects are excluded from the CM because they have received financial support through government renewable financial incentives.

An SCR would allow for a strategic response to the UK’s changing grid, a full assessment as to what charging arrangements are suitable for the long-term, and a system-wide understanding of impacts. Ofgem’s TCR removes the need for the CMP264 and CMP265 minded to decision. It would be a rushed effort to alter just one component of a complex and interrelated system.

Although Ofgem understand this issue to be urgent – and that waiting two years for a TCR to be undertaken “could mean at least two further years of escalating distortive payments” – the “c£600m” cost of this to consumers is not supported by sufficient and adequate evidence. Joining the minded to decision in the SCR would ensure that delivering customer value for money is achieved but that priorities of decarbonisation and security of supply are also given due consideration.

The present analysis presumes consumers will see savings and will benefit from the CMP264 and CMP65 proposals, but there is little evidence to support this. As part of a more expansive study of wider impacts we would support Ofgem in taking into consideration how the transmission network cost to the consumer will change. Costs are set to grow from £943 in 2007 to £3.7bn by 2021, but there has been no questioning to date as to the appropriateness of these new assets and their suitability for the electricity grid of the future.

Question 2. Do you agree that rising TDR payments to smaller EG is a problem which needs to be addressed?

We recognise that the Transmission Network Use of System (TNUoS) Demand Residual (TDR) has risen and that it is forecast to continue to rise, as Figure 1 in the consultation document suggests.

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https://www.ofgem.gov.uk/system/files/docs/2017/03/minded_to_decision_and_draft_impact_assessment_of_industrys_proposals.pdf 5.

However, part of this rise in costs is necessary and should not be regarded as a problem to be addressed but rather a price to be paid as the electricity grid modernises. Distributed generation removes reliance on the transmission network and negates the need for reinforcement and maintenance of the transmission system. Where distributed generation provides baseload power, transmission network operators (TNOs) save significant expenditure from a constant reduced use of the transmission network. They can predicate their network investment on distribution generation and can balance network supply and demand in a more cost-effective manner. The distributed generation benefit figure provided in the minded to decision of £2/kW is based on a 2014 National Grid estimate but there has been no analysis undertaken to support this figure.² We encourage Ofgem to assess fully the benefits delivered by distributed generation.

Question 3: Do you agree with our interpretation of the applicable CUSC objectives?

We would like to take this opportunity to raise concerns we have with the CUSC process itself, wherein the decision makers are comprised of those who initially proposed the CMP264 and CMP265 modifications.

The CUSC process is also unsatisfactory for changing network charging as industrial manufacturers and distributed generators, the majority of who are not members of the CUSC process, are not adequately represented.

Question 4. Do you agree with our assessment against the applicable CUSC objectives and statutory duties?

Please see our response to question 3, above.

Question 5: In our assessment against the objectives, do you believe there are any relevant assessments we have not taken into account?

The present minded to decision shows no consideration of the impact any reduction in embedded benefits would have on the revenue streams of distributed generators, at the individual plant level or collectively.

The proposals will have a particular impact on AD operators because the technology provides local baseload energy, so most receive triad benefits as an important part of their income stream. As the data included in table below shows triad levels depend on the individual PPA and location.

Evidence point	Capacity/Generation	Location	Value
10 plants in England	c. 100GWh per annum	Various	c. £6/MWh
Single AD plant	1.4MW	East England	£31,020 per annum
Single AD plant	1MW	SE England	£4.74/MWh
Single AD plant	1MW	SW England	c. £32,000 per annum
Single AD plant	700kW	SW England	c. £38,000 per annum

Variance in triad payments due to contractual arrangements has not been considered in this review and any resulting change to the charging arrangements for embedded benefits would accordingly not be fair. In addition, as we have discussed in our response, interrelated benefits, costs and revenues, have not been considered and if changes to networking charges are to be made they can only be taken into account through a Significant Code Review and impact assessment.

Generation of renewable electricity from AD plants contributes significantly to several government objectives: providing energy security, reducing imports, curbing carbon emissions and helping the UK meet its renewable energy

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<http://www.theade.co.uk/medialibrary/2016/05/16/09ca4432/A%20review%20of%20Embedded%20Generation%20Benefits%20in%20Great%20Britain.pdf>

and recycling targets. Reducing or removing the embedded benefit would put the continuing delivery of these benefits at risk.

Question 6: Do you agree with our assessment that, in this instance, grandfathering as set out in the WACMs would be unlikely to best facilitate the CUSC objectives when compared to the other options available to us?

We disagree that the CUSC objectives should be the sole determinants of WACM selection. Though we would support WACM4 over WACM3 the saving to consumers under WACM4 of £7.2bn between now and 2034 is premised on a number of different assumptions, each of which has not paid due consideration to AD:

- CM clearing price – as stated above AD projects have been excluded from the CM because of support received under renewable financial incentives.
- Annual wholesale price – we dispute this data and the presumption that prices will fall from 2027 highs.

Moreover, the savings to consumer take no account of the socialised cost of climate change adaption. This cost will rise the longer decarbonisation is postponed – the minded to decision will lead to a reduction of deployment and increased subsidy cost for renewable generation.³ Slow progress on ending carbon intensive generation has a high cost that will, ultimately, fall on consumers to pay.

Unlike the minded to decision a SCR would allow for a system wide re-evaluation of the benefits and financial difference provided by embedded generation to TNOs and, ultimately, to consumers. System wide impacts from the reduction of TDR that has not been considered include:

- Reduction of deployment and increased subsidy cost for renewable generation, as existing Contracts for Difference tariffs are now significantly undervalued;
- Increased energy costs of up to 19% for energy intensive manufacturers in the steel, paper, chemicals and food and drink sector, negating recent government efforts to reduce energy costs on these users, and leading to potential job losses;
- Harm to government's energy storage and demand side response ambitions by reducing value from these investments by £45/kW per year, which represents a significant proportion of projected revenue; and,
- Reduced electricity security, as more than 7.5 GW of distributed generation operates during peak demand periods - this should be considered in terms of its impact on winter supply margins.⁴

Question 7. Do you agree with our assessment that the value of the avoided GSP investment cost best facilitates the applicable CUSC objectives?

We disagree.

As we have said in our response to question 2, above, distributed generation removes reliance on the transmission network and negates the need for reinforcement and maintenance of the transmission system. We believe this value to be higher than the grid supply point infrastructure investment figure of 1.62p/kW presented in the minded to decision.⁵

³ Numerous economic studies have confirmed this, including The Stern Review on the Economics of Climate Change and the World Bank's Turn Down the Heat reports: http://unionsforenergydemocracy.org/wp-content/uploads/2015/08/sternreview_report_complete.pdf ii, and <https://openknowledge.worldbank.org/bitstream/handle/10986/20595/9781464804373.pdf?sequence=3&isAllowed=y> xvii.

⁴ ADBA has joined the Association for Decentralised Energy's open letter to Rt Hon Greg Clark MP to set out our concerns about the minded to decision and to express the unaccounted for system wide impacts to Ofgem and BEIS.

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Independent analysis suggests that contrary to the minded to position, grid 'sunk costs' vary when a long-term view is adopted.⁶ As the minded to decision recognises, Cornwall Energy's estimate the benefit to add £18.50/kW to this figure.⁷

Moreover, when a span of 15-45 years is taken into account to reflect the expected life of an embedded generator costs are seen to be variable and correspond to the avoidance of long term costs to the transmission network.⁸

It is unreasonable to regard 90% of the future investment in the electricity network as 'sunk costs' when i) the majority of this infrastructure is yet to begin being built, and ii) the future composition of the electricity grid is yet to be agreed upon with vastly different requirements depending on, for example, use of electricity in vehicles.

Only network-wide evaluation as part of a Significant Code Review would ensure that these wider impacts and their effect on one another can be properly understood and costs evaluated.

Question 8: Do you agree with our assessment of the impacts on security of supply?

We disagree.

If changes to embedded benefit are rushed into place through this minded to decision there is a risk that a proportion of the 20GW⁹ of distributed generation may close due to lost revenue, resulting in higher wholesale prices for UK electricity overall as lower cost renewables close or new projects fail to materialise. This will ultimately impact the consumer and raise energy bills, no reduce them. We would also expect to see higher volume of network losses as power is directed from further afield – the value of avoided losses as a result of local generation has not been assessed in the current review. These potential impacts and unintended consequences that may result should be assessed comprehensively through a SCR before any element of network charging change is made.

Ofgem appears to have made no consideration of the impact the proposals would have on the winter supply margin.

Questions 9-16.

No comments.

Question 17. Of the options available to us, do you agree that WACM4 best facilitates the applicable CUSC objectives?

We disagree.

We believe existing sites should be grandfathered TDR at its current level current with RPI, as is proposed by WACM20. Embedded benefits represent an important part of the income stream of AD operators. More widely,

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<http://www.theade.co.uk/medialibrary/2016/05/16/09ca4432/A%20review%20of%20Embedded%20Generation%20Benefits%20in%20Great%20Britain.pdf> 38.

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https://www.ofgem.gov.uk/system/files/docs/2017/03/minded_to_decision_and_draft_impact_assessment_of_industrys_proposals.pdf 62.

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<http://www.theade.co.uk/medialibrary/2016/05/16/09ca4432/A%20review%20of%20Embedded%20Generation%20Benefits%20in%20Great%20Britain.pdf> 26.

⁹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/467024/rpt-frontier-DECC_DSR_phase_2_report-rev3-PDF-021015.pdf 6.

retroactive changes in policy discourage future investment in so far as they create regulatory uncertainty which may detract from the investment case.

To this end, we support Ofgem's more recent consultation call for a SCR, for the reasons explained in our response to question 1, above.

Question 18. Do you believe that an implementation date of April 2018 best facilitates the applicable CUSC objectives?

If the TDR is to be reduced by 95% as Ofgem intend this must be phased in over three years to allow:

- Operators who stand to lose thousands of pounds of revenue each year time to prepare for these non-grandfathered changes; and,
- Opportunity for BEIS to support Ofgem in reviewing the entire charging regime comprehensively and adequately, in accordance with its regulatory role.

For these reasons we would support WACM4 over WACM3 where changes would be brought in immediately, without this necessary further work.

We thank Ofgem for the opportunity to comment on this importance proposed change to network charging arrangements.