June 2021

Bioresources cost allocation – Energy generation and odour control (consultation)

Ofwat

About this document

This document sets out our proposals for how the revenues and/or cost savings arising from energy generation within the bioresources control should be allocated across price controls going forwards. We also request stakeholders' views on the need to issue guidance on the allocation of odour control costs.

Responding to this consultation

We would welcome any comments on this document. Please email them to connor.ryan@ofwat.gov.uk

The closing date for this consultation is Monday 2nd August 2021 at 5pm.

We will publish responses to this consultation on our website at www.ofwat.gov.uk, unless you indicate that you would like your response to remain unpublished. Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with access to information legislation – primarily the Freedom of Information Act 2000 (FoIA), the General Data Protection Regulation 2016, the Data Protection Act 2018, and the Environmental Information Regulations 2004. For further information on how we process personal data please see our privacy policy.

If you would like the information that you provide to be treated as confidential, please be aware that under the FoIA there is a statutory Code of practice which deals, among other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on Ofwat.

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1. Introduction

As part of our Review of the Bioresources market and associated work, we are aiming to address cost allocation differences between companies that affect the bioresources price control. Inaccuracies or inconsistencies in the way that companies allocate costs and/or revenues to the bioresources control can have detrimental effects on the transparent development of the market. As part of this work, we published decisions on improving the allocation of sludge liquor costs in April 2021 and are consulting on proposed guidance for the allocation of overhead costs, including for bioresources, alongside this consultation.

This document is a consultation on proposed guidance on the allocation of the costs and revenues associated with the generation of renewable energy between bioresources and other price controls, predominately wastewater network plus.

Energy generation is worth a significant amount to the bioresources control in either revenue or an avoided cost (i.e. the cost that the bioresources business unit would incur to buy energy were it not able to generate this energy itself). Over the 2020-25 period, £366m[1] of revenue is expected to be generated through the sale of the by-products of the sludge treatment process. Sales of energy make up the majority of this. This is in comparison to the approximate £3bn[2] revenue that companies are allowed to collect from customers for bioresources services in the same period.

Given the scale of revenues or avoided costs from renewable energy generation, inconsistencies in how these are allocated across price controls can create issues for market development and our regulation. It can make bioresources costs difficult to compare across companies, for example. If allocated costs are too low, this could hinder the development of the market and make it more difficult for third parties to compete. In PR19, we were also unable to set a separate efficiency challenge and instead set a common efficiency challenge across wholesale wastewater, due to concerns over variation in allocation approaches. This made it difficult to identify the potential efficiencies that might be achievable specifically in bioresources activities.

To help inform the guidance we will provide on this issue, we have commissioned Jacobs to explore how companies are currently undertaking this allocation and to propose recommendations on how it could be improved.

We are now consulting on proposals for companies to account for bioresources costs and revenues from energy generation, based on Jacobs' findings. In summary, we propose that:

- Energy generated and consumed within the bioresources control should be treated as an avoided cost;
- Energy exported from bioresources to other price controls should be considered a sale and therefore have revenue to bioresources associated with it;

[1] This estimate is based on the PR19 business plan data tables.
[2] This estimate is based on our PR19 final determinations, published in December 2019.

- Companies should aim to measure at least 80% of their bioresources energy consumption across their portfolio; and
- The price paid by other controls to bioresources should be benchmarked against the price that the bioresources business unit would receive, were it to export the energy to the grid.

We consider that these proposals strike a balance between facilitating consistent data, without imposing disproportionate cost on companies.

We propose to include our final decisions on this matter within the 2021-22 Regulatory Accounting Guidelines (RAGs) later in the year. Stakeholders should note that the proposals in this document refer specifically to the issue of cost allocation across incumbent wastewater companies' price controls. Transactions between appointee and non-appointee or associate businesses are governed by the guidance set out in Regulatory Accounting Guideline 5.

We are publishing Jacobs' reports on this topic, as well as on the allocation of overheads to bioresources alongside this consultation. We are taking the issue of overheads forward in a separate consultation as it applies not just to bioresources. This has been published alongside this consultation.

We are requesting stakeholder views on the need to also issue guidance on the allocation of odour control costs across price controls. This was raised as part of our market review work and is covered in section 4.

The rest of this document is structured as follows:

- Section 2 details companies' current practice and our proposals for further guidance related to energy.
- Section 3 provides more detail on the issue of odour control costs and requests further information from stakeholders.
- Section 4 contains our specific consultation questions.

The closing date for this consultation is Monday 2nd August 2021 at 5pm. Please email any responses to connor.ryan@ofwat.gov.uk.

2. Energy generation - current practice and our proposals

When generating energy from treating sludge, companies have a choice over how to use this energy. The options include using this energy for activities within the regulated business' bioresources control, using it for activities in other price controls (most likely to be wastewater network plus due to wastewater treatment sites often being highly integrated with bioresources sites), or to export it to the national grid or to a non-appointed associate company or third party. In practice, many companies use a combination of these options, with transfers of this energy from the bioresources control to the wastewater network plus control common.

When companies sell the energy generated in bioresources to those outside the regulated business, RAG 2 states that the cost savings and income expressed as negative opex associated with this should be recorded in the bioresources control, rather than wastewater network plus. However, RAG 2 provides no specific guidance on how revenues or cost savings should be treated when companies export this energy between controls. There may therefore be undue variation in how companies account for these revenues/cost savings. This in turn makes an accurate comparison of bioresources cost efficiency more difficult and was a factor in us choosing to not set a bioresources specific efficiency challenge at PR19.

For the avoidance of doubt, the work set out in this consultation is focused on internal transfers of this energy within the regulated business and the subsequent allocation of revenues/costs. Where there is a transfer to an unregulated part of the same Group as the regulated business, then the price paid is governed by our transfer pricing rules set out in RAG 5.

To improve comparability between companies' bioresources activities, we consider we need to give guidance to companies in how to allocate revenues/costs arising from the generation of energy within the bioresources control. Greater consistency in how companies allocate these costs and revenues will support market development and enable a more accurate assessment of bioresources cost efficiency going forward.

Jacobs have explored the variation in how companies are allocating energy revenues/cost savings between the bioresources and wastewater network plus controls. We summarise the key points of their findings in the subsections below. Full details of their findings can be found in the report published alongside this consultation.

We are proposing to update RAG 2 guidance in three areas; accounting, measurement and pricing for energy use and transfers. We propose to include this guidance as part of the 2021-22 RAGs to facilitate this data being taken into account in PR24.

We are considering asking companies to report certain APR lines within table 8C on the basis of both this updated guidance and the approach that they have used prior to this. This will allow us to understand the impact of these changes in guidance. This is included as a consultation question in section 4.

Our proposals regarding accounting and measurement of energy use and transfers reflect the recommendations made by Jacobs in their report. Further detail on these proposals is set out in sections 1.4.3 and 1.5.3 of the Jacobs report.

2.1 Accounting for energy use and transfers

2.1.1 Current practice

Jacobs identify variation in how companies account for the transfer of energy between price controls. Some companies use energy within the bioresources control first, before exporting the remainder to wastewater network plus. Other companies allocate all the energy produced in bioresources (minus external sales) between bioresources and wastewater network plus, based on the relative energy consumption levels of the two controls. As wastewater network plus is a much larger user of energy than bioresources, this approach may lead to the operating costs of the wastewater network plus control being disproportionately reduced and, conversely, the operating costs of the bioresources control being increased relative to the true cost levels.

The report also sets out that companies account for the transfer of energy between controls in different ways. In some companies, the transfer of energy from bioresources to wastewater network plus is treated as a sale and purchase respectively, whereas in other companies wastewater network plus treats this as a saving, reducing its energy costs with no transaction associated with it. This difference in approach is likely to affect how relatively efficient companies appear to each other in both controls.

Jacobs estimate that these variations could have an average impact of up to approximately £7 million per company per year on each control, dependent on the methodology used. Based on our PR19 final determinations, allowed revenue in bioresources is approximately £60 million per year per company, making this a significant distortion.

2.1.2 Our proposals

We propose that energy generated and consumed within the bioresources control should be treated as an avoided cost. Energy exported from bioresources to other controls should be considered a sale and therefore have revenue in bioresources associated with it. This is

consistent with the guidance in section 2.31 of RAG 2. Standardising this allocation will make it easier to compare the operating costs of bioresources between companies. This arrangement also closely resembles the situation that would arise were an independent third party bioresources operator to enter the market, with energy generated sold to a wastewater business or a third party. For the same reasons, we also propose that incentive payments associated with the generation of renewable energy in bioresources are allocated to bioresources. In addition, to maximise accuracy, energy generation should be accounted for at site level and then aggregated, rather than at portfolio level.

Further details of Jacobs' recommendations on accounting for energy can be found in section 1.4.3 of its report. We accept these recommendations and include these within this consultation.

2.2 Measurement of energy use and transfers

2.2.1 Current practice

Jacobs explored how companies are measuring the use and generation of energy within bioresources and the flow of energy to other controls. They find some variation in how this is undertaken. Broadly, companies are taking two approaches; either estimating energy consumption or measuring this through sub-metering. The report shows that there is variation between companies in how much of consumption is measured, with some companies measuring between 80-100% and others only 0-20%.

Estimating consumption is not as accurate as measurement, and the difference in approaches being taken by companies is likely to make comparison of company efficiency in the affected controls more difficult. Jacobs estimate that variation in measurement could result in a possible impact of up to £3m per year for an average company.

2.2.2 Our proposals

We consider that companies should seek to meter energy consumed in the bioresources control and in the controls that energy is exported to. Measurement of consumption is crucial in ensuring that cost allocation and therefore cost comparisons between companies are as accurate as possible. This will assist companies by providing them with a more detailed operational understanding of their assets. Jacobs indicate that metering should not be an overly costly process for companies. In summary, we propose that:

- Companies should meter at least 80% of their bioresources energy consumption across their portfolio. This will help to ensure the accuracy of company cost

allocations, but avoids the need for companies to meter all assets where it is overly costly to do so.

- Companies are not required to meter or sub-meter assets with insignificant energy consumption or where metering data will not be useful in measuring energy consumption. However this should not prevent the above 80% figure being reached without good reason.
- Where permanent sub-metering is not practical, companies should use temporary metering. This should be done in line with the recommendations within Jacobs' report.

We consider that these proposals provide a fair balance between companies accurately determining consumption data, while avoiding disproportionate cost.

Further details of Jacobs' proposals on accounting for energy can be found in section 1.5.3 of its report. We accept these recommendations and include these within this consultation.

2.3 Pricing for energy use and transfers

2.3.1 Current practice

Jacobs find little variation in how companies are pricing the energy that is exported from bioresources to other price controls amongst the companies that treat the export as a sale. These companies are typically pricing by benchmarking against the cost for imported energy.

2.3.2 Our proposals

The use of the import price may be a reasonable approach. Its use means that the price paid for the energy is market tested and a number of companies are currently using this approach, suggesting that they may be operational advantages to its use. However, we consider the price that the bioresources control receives for exporting energy to the grid ('export price') to be better placed to support the development of the bioresources market.

The export price is likely to more closely resemble the price received by an independent bioresources operator in a competitive market (see Box 1). The import price will typically be higher than the export price as it includes transmission and retail costs. Consequently, if companies use the import prices to value transfers then this could distort cost reflectivity in the bioresources control, making it appear more efficient than it should be. This could make it more difficult for third parties to enter the market.

Box 1 – Pricing in a competitive market

Consider a hypothetical market where bioresources operators are independent of the wastewater network plus functions of companies. A bioresources operator would receive the export price from putting energy into the grid, whereas a wastewater company would be willing to pay up to the import price, as that is the price it would pay to the grid for energy. Where exactly within this range the price paid by a wastewater company for the energy generated by a bioresources operator would fall, would depend on the relative bargaining power of the two parties. However the bioresources operators are more likely to be price takers, due to the wastewater company's ability to enter the market and perform the bioresources operations themselves. This would be exacerbated if there were multiple independent bioresources operators competing in the market. The export price is therefore more comparable with the price that would be charged by third parties in a competitive market than the import price.

Due to this risk that use of the import price may make entry more difficult, we propose that companies use the export price when the bioresources control charges other price controls for energy it generates and the other controls consume. We consider use of the import price could be a reasonable approach however, and are conscious that there may be operational advantages to it. We therefore welcome views from stakeholders on the appropriateness of using the export price over the import price.

3. Odour control costs

In support of our review of the bioresources market, Jacobs prepared a separate report exploring the constraints on bioresources market development. Within this, they highlight the allocation of odour control costs across assets shared by price controls as a potential source of difference in company accounting. This may have a similar effect on cost comparisons of wastewater network plus and bioresources as the allocation of energy revenues/costs, albeit on a smaller scale. Jacobs suggest updating RAG 2 to specify that odour control costs should be allocated on the basis of airflow.

We are interested in stakeholders' views and evidence on the materiality of odour control costs and the impact on cost allocation, before making formal proposals in this area. In particular, we would be interested in hearing views on:

- How these costs are currently allocated;
- Whether stakeholders consider that companies are able to accurately allocate odour control costs across the bioresources and wastewater network plus controls under the current RAGs guidance;
- What is the estimated materiality of incorrect allocation of odour control costs?
- Would guidance specifying that odour control costs should be allocated across controls based on air volumes originating from different parts of a co-located wastewater treatment works/sludge treatment centre be appropriate to resolve this issue, and/or practical to implement?

4. Consultation questions

We would welcome your feedback on this consultation. In particular, we ask:

Q1: Do you agree with the substance of our proposals to provide specific guidance on how companies should allocate the revenues and/or avoided costs associated with the generation of energy in the bioresources control? Please comment on the proposals raised in sections 2.1, 2.2 and 2.3 separately where appropriate.

Q2: For 2021-22 we are considering asking companies to report on the basis of both this guidance and their existing approach, so that we can understand the impact that this has on the allocation of costs across controls. Would you agree with this approach? If not then how could we assess the impact of this in advance of the PR24 business plan submissions?

Q3: Do you have any comments regarding the significance of variation in odour control cost allocation across companies and the appropriateness/practicality of allocating these costs based on air volumes?

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Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA
Phone: 0121 644 7500

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Any enquiries regarding this publication should be sent to mailbox@ofwat.gov.uk.

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