

Bioresources workshop

June 2020

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- Introduction
- Energy in bioresources
- Imported sludge liquors treatment
- Transport data
- Any other bioresources data reporting issues

- PR19 has marked a significant change in the economic regulation of water companies' bioresources business. We have introduced a **separate price control** for bioresources services using a volumetric **average revenue control**.
- Our PR19 final determinations published in Dec 2019 delivered that framework. Despite significant progress being made on ensuring **consistent treatment of bioresources** across the sector during in-depth discussions in the W2020 sludge working group, we believe that there are some areas where we can still improve APR data reporting.
- The main purpose of today's session is to **explore these areas** in more detail. Consistent treatment of bioresources is essential to promote comparability of companies and a **level-playing field with third-parties** entering the bioresources market.
- We have put forward three topics where we believe a discussion whether APR reporting is fit for purpose is essential. We are open to discussing any other areas where you think we can improve bioresources data reporting as part of the ongoing RAGs consultation.

- The bioresources business unit of water companies' businesses is generating **energy-related income** through various routes:
  - Biogas derived through anaerobic digestion
  - Electricity through CHP utilisation of the biogas
  - Residual heat lowering energy costs
  - Renewable energy subsidies
- With the introduction of a separate bioresources control in PR19, recharges to the WWN+ business using **appropriate transfer prices** is essential. However, the current RAGs only contain two lines in table 4E (Power opex and Income treated as negative expenditure). This results in **excessive aggregation** through netting off a multitude of different flows that makes a robust assessment of the quality of data challenging.
- The renewable energy subsidy framework also continues to evolve on an ongoing basis in line with government policy to decarbonise the UK economy. That makes it hard to future-proof income line definitions. At the same time, renewable energy subsidies are a **significant cost efficiency driver**.

	Electricity	Heat	Total	Electricity	Heat	Total	RAG 4 reference
	MW	MW	MW	£m	£m	£m	
<b>Energy</b>							
Energy generated by and used in bioresources control	I	I	C	I	I	C	8C.1
Energy generated by bioresources and used in network plus control	I	I	C	I	I	C	8C.2
Energy generated by bioresources and exported to the grid or third party	I	I	C	I	I	C	8C.3
Energy bought from grid and used in bioresources control	I	I	C	I	I	C	8C.4

- Should we collect more granular information on energy and value flows within the appointed business from WWN+ to bioresources as in table 8C?
- Should we collect more granular information on the various renewable energy subsidies that companies claim to identify how water companies benefit from UK's and their own **net zero** carbon emissions ambitions?

- As per [RAG 4.08](#), where liquors have been partially treated and are returned for final treatment at a sewage treatment plant, the activity **sits within WWN+** but the underlying expenditure is **borne by the bioresources** business unit. This excludes standalone sludge liquor treatment plants which are part of **sludge treatment**.
- There are two issues related to this:
  - Clarifying that the totex related to the imported sludge liquor treatment in the RAGs should be allocated to the bioresources control totex from 2020-21; and
  - Identifying, agreeing and setting a consistent charging methodology across the industry to ensure comparability.
- Evidence from our analysis of APR table 4E suggests that companies have underallocated opex and capex to sludge liquor treatment costs relative to the underlying treatment volume (in tonnes of BOD) when comparing to the **sewage treatment and disposal** business unit. There is also a wide range of approaches to calculating recharges as identified in APR tables commentary.
- W2020 envisaged engagement on the pricing of sludge liquor treatment using a **modified Mogden formula**. We welcome engagement on this now to ensure a consistent approach to pricing across the industry into 2020-25.

	Units	
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Bioresources liquors treated by network plus		
Flow of liquor or partially treated liquor returned from bioresources to network plus	MI/d	l
BOD load of liquor or partially treated liquor returned from bioresources to network plus	kg/d	l
Ammonia load of liquor or partially treated liquor returned from bioresources to network plus	kg/d	l
Recharge to Bioresources by network plus for costs of handling and treating bioresources liquors	£m	l

8C.5
8C.6
8C.7
8C.8

- Should we collect more granular information on imported sludge liquor treatment as in table 8C to calculate implicit charging methodologies across the industry?
- Should we set a **consistent recharging methodology based on the Modified Mogden formula** across the industry to value imported sludge liquors consistently to avoid distortions of the bioresources market?

- Transport volume data in the RAGs is currently expressed in terms of:
  - Total volume hauled in cubic meters (m<sup>3</sup>) in table 4E;
  - total measure of intersiting work in transport operations in cubic meters (m<sup>3</sup><sub>1</sub>\*km<sub>1</sub> + m<sup>3</sup><sub>2</sub>\*km<sub>2</sub> + ... + m<sup>3</sup><sub>N</sub>\*km<sub>N</sub>) where each product represents the volume of sludge transported in m<sup>3</sup> and the amount transported in table 8A; and
  - total measure of intersiting work in both transport and disposal operations TDS (TDS<sub>1</sub>\*km<sub>1</sub> + TDS<sub>2</sub>\*km<sub>2</sub> + ... + TDS<sub>N</sub>\*km<sub>N</sub>) where each product represents the volume disposed in TDS and the amount transported in table 8A.

Note that this **excludes empty tankers/trucks** work by design since empty loads do not add up to the total work measures. We note that as per [RAG 4.08](#)'s definition of the sludge transport service, *“transport within the sludge treatment plant or between sludge treatment plants is not included in this service, which is instead an activity of the ‘sludge treatment’ service.”*. This identifies a need for further disaggregation in reporting.

We support the additional inclusion of some **simpler transport distance metrics** to effectively monitor average distances travelled, while distinguishing between distances travelled with some/empty load.



# Transport data – additional suggested table and questions

	Units		RAG 4 reference
Total distance travelled in transport operations with a load (sewerage works to sludge treatment sites)	km/ year	I	n/a
Total distance travelled in treatment operations with a load (intersiting across sludge treatment sites)	km/ year	I	n/a
Total distance travelled in sludge disposal operations with a load (sludge treatment sites to final disposal)	km/ year	I	n/a
Total distance travelled in all sludge operations with a load	km/ year	C	n/a
Total distance travelled in transport operations with an empty load (sewerage works to sludge treatment sites)	km/ year	I	n/a
Total distance travelled in treatment operations with an empty load (intersiting across sludge treatment sites)	km/ year	I	n/a
Total distance travelled in sludge disposal operations with an empty load (sludge treatment sites to final disposal)	km/ year	I	n/a
Total distance travelled in all sludge operations with an empty load	km/ year	C	n/a

Should we collect more granular information on transport distances as in the table above?

