

Evaluation of the potential for the improvement of the Residual Biogas Potential test and investigation of alternative test procedures for PAS110 biofertilisers

Tender Invitation Document (TID) – Q&A

1. *“To help identify any patterns with respect to failures and non-responses in RBP testing, we would like to access any REAL log that covers such occurrences. Would this be possible, and if so – would there be a charge from REAL to access this information?”*

Yes to both. In order to access the REAL BCS database data we require that you complete the Data Request Form [here](#). Note that any PAS110 test results data, including on RBP failures, is available from 1st January 2020 onwards only. There will be a fee associated with obtaining this data which will be dependent on the content of your request and in accordance with our [Data Sharing Policy](#). Though you will be required to pay a fee to access the data, you will be able to recover this cost through the Research Hub.

2. *“To help identify any patterns with respect to failures and non-responses in RBP testing, you have indicated that contact with laboratories and producers will be required. Will REAL put the successful applicant in touch with the laboratories and relevant producers, or will the applicants have to make their own arrangements?”*

Any data provided will be anonymised and as such the dataset will not make evident which producer or laboratory the data has been received from. REAL will contact the producer/laboratory on behalf of the submitter of the data request, to determine if the organisation(s) in question are happy to share such information.

3. *“To investigate the efficacy of using different inocula and propose a representative sampling approach, it would be useful to understand whether REAL uses a specific categorisation for certified digestates. For example: food waste / manure / crop only. Since the scheme certifies different digestate fractions, it would also be helpful if REAL could provide an indicative breakdown of the numbers of whole / separated liquor / separated fibre digestates within each category.”*

REAL uses a specific categorisation process for feedstocks. Each AD plant is categorised by these three feedstock types: 'Farm', 'Waste' and 'Other'. These feedstock categories are defined under the Scheme as below:

- Farm: over 50% agricultural feedstock e.g., manures and crops
- Waste: over 50% waste feedstock e.g., food waste
- Other: over 50% non-waste/agricultural feedstock e.g., distillery by-products

REAL further categorise the feedstock into: 'ABP' or 'Non-ABP', 'Agricultural', 'Commercial', 'Industrial', or 'Municipal', and 'Products', 'Co-products', 'Residues', or 'Wastes'. Please note these categories within one of our Certification Bodies' [Application Form](#).

In regard to the breakdown of the numbers within each of the main feedstock categories, these are 146 certified digestate fractions in Farm (11 separated fibre, 131 separated liquor and 4 whole digestate), 98 in Waste (10 separated fibre, 26 separated liquor and 62 whole digestate), and 8 in Other (4 separated fibre, 2 separated liquor and 2 whole digestate).

4. *“There is some ambiguity in the ITT with respect to exploring alternatives to the RBP. NIR testing is cited as a method that can be applied to digester feedstocks, while the associated text states that this element of the project “Will investigate procedures that are available to rapidly predict biogas potential by **detailed analysis of digested materials**” (our highlights). Could you please clarify the requirements?”*

Whilst the main focus of this project seeks to investigate potential improvements in the standard RBP procedures, the possibility of identifying alternative procedures should also be investigated.

Infrared spectroscopy is currently used by some AD producers prior to digestion to predict gas production of the input materials. The project seeks to investigate whether similar techniques may be used on the digested material to predict biogas potential as an alternative to the standard residual biogas procedures.

The initial phase might investigate a limited number of digestates from selected feedstocks. If successful this may offer a relatively rapid alternative to the current procedures, but considerable comparative testing would be required. Initially, the comparisons would simply be a first step in 'proof of concept'.

5. *“The validity and applicability of Near Infrared (NIR) technology can be determined through literature review and/or laboratory experimentation. Do REAL require that any model be validated experimentally?”*

Please refer to the above answer, which covers this query. If the 'proof of concept' is successful, further sampling and analysis will be necessary, though this is beyond the scope of the project in question.