

Recognising the Value of Sustainable Biomethane

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A specialist business consultancy with over 20 years of bioeconomy experience



Providing clients with a strategic view of feedstock, technology, policy and market development across the bioeconomy.

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Sustainable Biomethane

🌱 The production and utilisation of *sustainable biomethane* is supported by:

- Renewable Heat Incentive (RHI)
- Green Gas Support Scheme (GGSS)
- Renewable Transport Fuels Obligation (RTFO)

(2) A participant who produces biomethane for injection must produce for injection only sustainable biomethane.

“sustainable biomethane” means biomethane which, save for ingredients which are added as part of the biomethane production process—

- (a) is made wholly from feedstock which is waste;
- (b) meets the greenhouse gas criteria and is made wholly from feedstock which is solid biomass which meets the land criteria; or
- (c) consists of a combination of any of the biomethane listed in paragraphs (a) and (b);



Greenhouse Gas criteria

RHI

- (1) Solid biomass, biogas or biomethane meets the greenhouse gas criteria if the lifecycle greenhouse gas emissions associated with each consignment of that solid biomass, biogas or biomethane are **less than or equal to 34.8g of CO₂ eq per MJ of biomethane injected.**

(10) For the purposes of this regulation—

GGSS

(a) biomethane produced from biogas meets the greenhouse gas criteria if the lifecycle greenhouse gas emissions associated with that biomethane are **less than or equal to 24g of CO₂ eq per megajoule of biomethane injected,** where lifecycle greenhouse gas emissions, expressed in grammes of CO₂ eq per megajoule from the production of the biomethane, are calculated using the actual value method or the default value method published by the Secretary of State.

RTFO

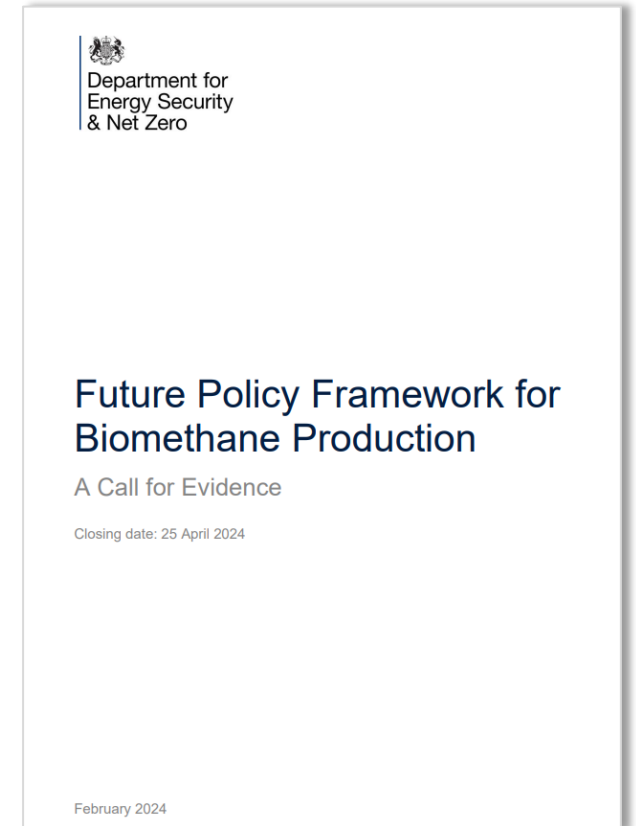
Fuel type	Installation start date	GHG emissions saving threshold	Maximum permitted carbon intensity
Biofuel	On or before 5 October 2015	55%	42.3
Biofuel	After 5 October 2015	65%	32.9
RFNBO	Any	65%	32.9
RCF	Any	See paragraph 8.6	-

Table 12 GHG emissions saving thresholds and maximum permitted carbon intensity



Changing the approach

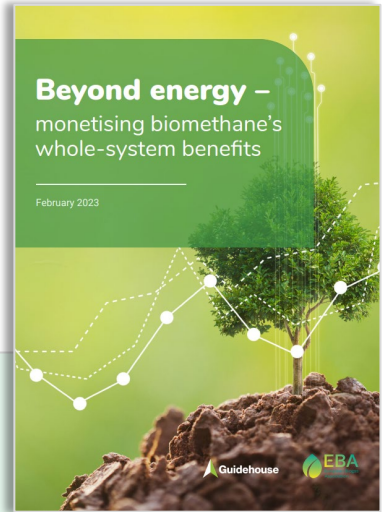
- Future framework for biomethane unknown, but direction of travel should be:
higher emissions saving = higher reward
- More inclusive approach
 - = more flexible support
 - = more scale appropriate development
- Biomethane is typically compared to other renewables solely on the value of the energy, making the “value for money” case less compelling than other renewables.
- Biomethane can deliver negative emissions, but also many other benefits which are not currently recognised or rewarded.
- So, what needs to change?



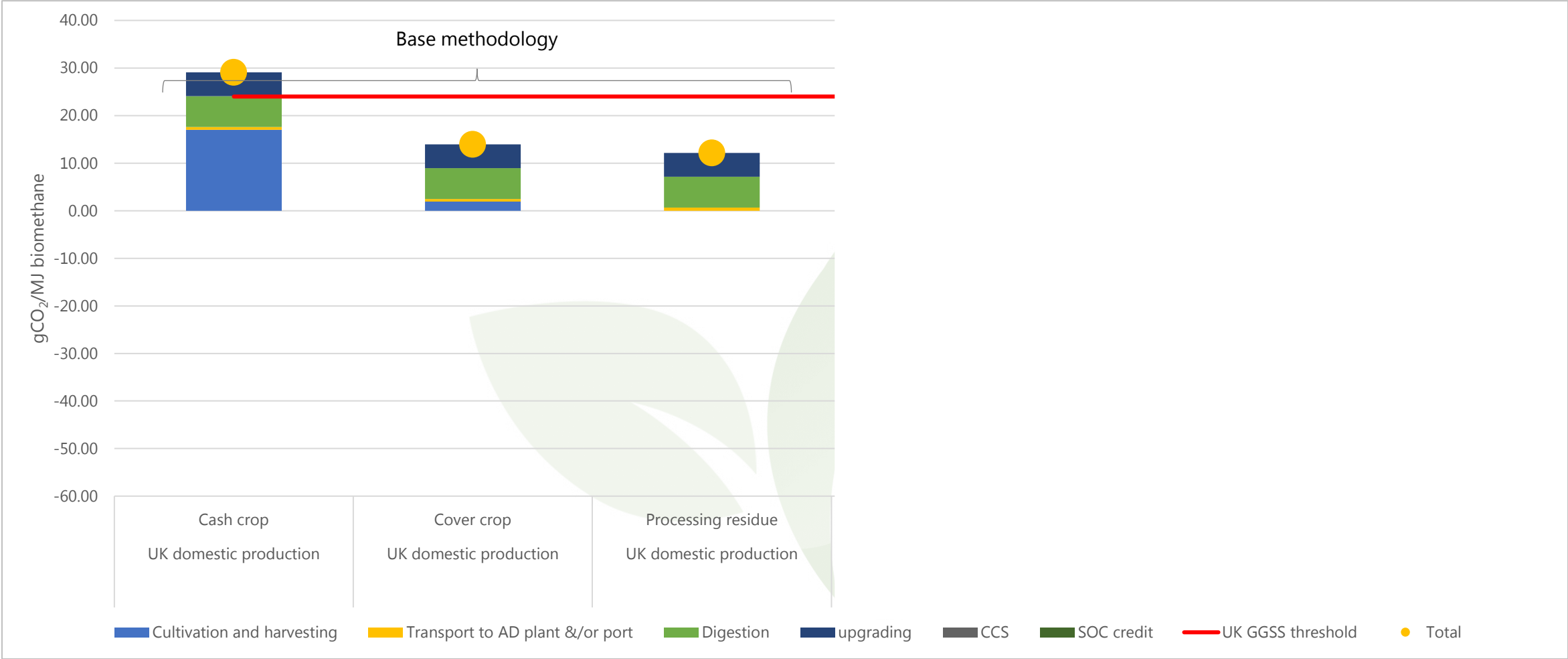
Option 1: Consider whole system benefits

Need to recognise and value benefits to:

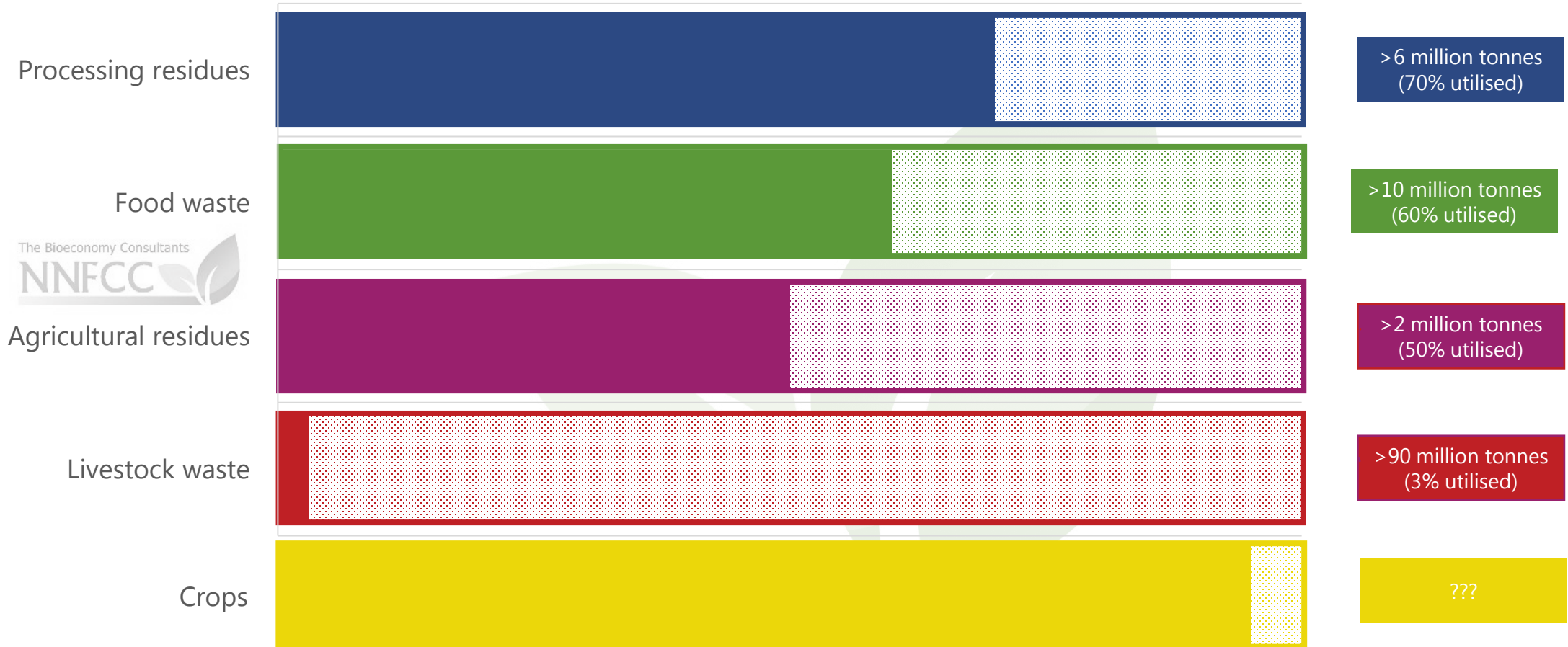
- Air
- Soil
- Water
- Waste
- Agriculture – livestock (fugitive emissions)
- Agriculture – arable (nutrients)
- Employment
- Economy
- CO₂
- Energy security – stability, dispatchability
- Net Zero



Option 2: Consider wider LCA approach



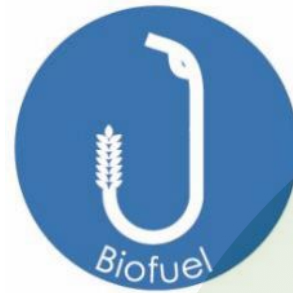
Feedstock Use vs. Availability



Conclusions

- ✔ Sustainable biomethane can make a significant contribution to the UK's energy system, delivering negative emissions in many cases.
- ✔ A more flexible policy framework is required, with greater recognition of the wider system benefits, to deliver continued improvements and more sustainable biomethane over time.
- ✔ Carbon intensity can be reduced, when rewarded.
- ✔ A broader LCA approach is essential, to accurately quantify the benefits and identify key areas for improvement – e.g. inputs, operation, outputs.
- ✔ Greater recognition of the wider benefits is essential, to allow a fair comparison between biomethane and other renewables.
- ✔ A clear and standardised accounting method should be adopted, for ease of comparison and monitoring.
- ✔ Improved communication and increased awareness of the benefits across related sectors.
- ✔ Should lead to more stability in other markets, incl. feedstock, certificates, CO₂, etc.

Thank you



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