Cambridgeshire County Council

Our ref: CCC/23/110/FUL
Date: 18 December 2023
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Place and Sustainability
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By email only

Re: Planning Application No: CCC/23/110/FUL

Farm-based anaerobic digestion renewable energy facility, construction of vehicular access/road to A1307, associated infrastructure and landscaping

Dear Helen,

Thank you for your letter regarding this planning application. I would like to make the following comments on behalf of the Climate Change and Energy Services team, in relation to the carbon impact of the proposal.

In Cambridgeshire and Peterborough Minerals and Waste Local Plan, Policy 1 (Sustainable Development and Climate Change) states that "*Proposals… must take account of climate change for the lifetime of the development… through measures to minimise greenhouse gas emissions…*", and that proposals should "*set out how this will be achieved… demonstrating how the location, design, site operation and transportation related to the development will help to reduce greenhouse gas emissions*".

This proposal is for an Anaerobic Digestion (AD) facility to create biogas to be injected into the mains gas grid.

From the information provided, the carbon impacts of the proposed development are likely to be as follows:

Aspect	Quantification of carbon emissions (+) or savings (-) in tonnes CO2e	Effect
Construction materials (embodied carbon)	Not quantified	Direct - adverse
Transport emissions (construction and operation)	Not quantified	Direct and indirect – minor adverse
Land use and land use change	Not quantified	Unknown
Energy (electricity and other fuels) used on site in operations	Not quantified	Unknown
Production of digestate to replace fossil-fuel based fertilisers for application to arable land	Not quantified	Indirect - Beneficial
Biomethane injected to the gas grid, replacing fossil gas. (60,000 MWh per year)	-9,250 avoided per year (from applicant's planning statement)	Indirect – Beneficial
Carbon dioxide collected for use in food industry or other uses (8,000 tonnes liquid CO_2 per year)	-8,000 captured per year	Indirect –neutral (since the CO_2 used e.g. for drinks manufacture, may be released later so would not be permanent)
Waste produced in construction or in operations	Not quantified	Direct – unknown (likely minor)

Note that the main beneficial effects of the proposed development (in terms of carbon emissions/savings) are indirect ones, because they do not occur from the development itself, but from the avoidance of fossil fuel use elsewhere. This means that the size of this benefit will decline in future years as the mains gas grid has a higher portion of green gas already, so there will be less fossil fuel usage to replace. The benefit will also only exist provided that the use of fossil gas is in fact reduced. If the green gas was to instead provide additional capacity and adding to the overall quantity of gas (either fossil or green) that is used, then it would not reduce fossil fuel use. Nonetheless, it seems likely that overall the addition of AD plants in general would provide a carbon benefit.

For this particular proposal, it is difficult to assess the overall carbon impact of the proposal, because there is no quantification or estimate of emissions from the construction phase of the project, and some other aspects are also not quantified or unknown (as indicated in the table above).

Lastly, I note that the application states that the proposed plant will use a combination of agricultural waste and energy crops as feedstock. The application mentions where the feedstock will be sourced from (local farms) and that at least half of the feedstock will be from agricultural wastes, with the remainder from energy crops grown specifically for that purpose.

Yours sincerely,

Sarah Wilkinson, Carbon and Energy Manager