AD: A challenging year, an exciting future

By 2050, it is expected that the UK will have reached net-zero carbon emissions. Since the introduction of the Climate Change Act, the UK has made considerable progress towards emission reduction, and a lot of this progress has come from the decarbonisation of the electricity we use. In order to reach net-zero, the scope for decarbonisation will have to expand, in particular in the heat sector.

Power from anaerobic digestion (AD) facilities goes some way towards the UK's decarbonisation efforts and the advantages are multifaceted. Heating in the UK takes up a vast amount of energy, and low-carbon heating options expected to be part of the solution include biogas upgraded to biomethane for grid injection. In addition to this greening of the gas grid, processing of biodegradable wastes helps to decarbonise the waste sector and encourage a circular economy.

A slow start to the year

Currently there are 579 operational AD plants in the UK, with 331 AD projects under development. Between April 2019 and April 2020, only 7 new plants commissioned, despite 47 plants being under construction in April 2019, but this isn't a fair reflection of the where the industry is at. A lot of the slow start to 2020 can be attributed to poor weather conditions and the Covid-19 pandemic, which has meant many AD facilities have not reached or finalised the commissioning phase when expected. In addition, food waste collections were halted temporarily and the hospitality sector was forced to shut down when the pandemic hit earlier in the year, and as a result a lack of feedstock has been issue for some AD facilities.

The Renewable Heat Incentive (RHI) was introduced to encourage decarbonisation of the heat sector by making payments to the owner of a low-carbon heat installation. The RHI is due to close in 2021 and 2022 for the non-domestic and domestic RHI respectively. In addition, the Feed-In-Tariff (FIT) scheme which supported small-scale renewable electricity generation closed for new applications in April 2019. This imminent closing of the RHI and the recent closure of the FIT scheme is causing some concern for both investors and developers, with time constraints only exacerbated by the ongoing impacts of the pandemic. Only a small proportion of those projects that did apply for pre-accreditation on the FIT scheme prior to it closing were able to convert to full accreditation by the deadline, but those that didn't were granted a grace period of 12 months – as such there will be a bout of commissioning activity to come.

Towards a growing industry

Looking to the future, new support mechanisms for biomethane injection facilities are essential for continued growth in the sector. In the Spring Budget earlier this year, the Chancellor announced a £10 million budget allocation for net-zero policies and programmes, which includes a Green Gas Support Scheme (GGSS) for biomethane from AD only, funded by a green gas levy – a much needed announcement for the industry. This has recently been consulted on as part of the wider Future Support for Low Carbon Heat consultation and a Government response setting out the way forward is expected early next year. To this end, BEIS are currently gathering up to date evidence on the costs associated with deploying and running AD facilities. Cost data held by BEIS currently is largely from 2014, therefore updating cost data will help to ensure that future tariffs and support mechanisms are being set and structured appropriately. This is a project that NNFCC is currently involved in, see https://www.surveymonkey.co.uk/r/D9Y7MPS for more information, and details on how to contribute if you are an AD developer, operator or investor.

Aside from the temporary setbacks this year, feedstock use has seen consistent growth across all types in the past year or so. In addition, the UK government has committed to rolling out separate household and business food waste collections by 2023, which could see food waste collection increase by 1.35 million tonnes by 2029, providing access to a growing feedstock source for AD sites.

Market movements

Highlighting the potential of the industry, there has been a buzz of M&A (merger and acquisition) activity within the sector over the last 18 months, again despite the slow start to this year. AD and biogas sites prove popular investment opportunities, helped along by long-term guaranteed tariffs and financial support packages which have enhanced the value of AD plants.

A renewed interest from investors is invaluable for the growth of the sector. Consolidation efforts – the buying up of several plants to operate as a group instead of individually – give the industry more buying power and a more credible reputation for the future. Recently there has been a number of investors picking up distressed assets or consolidating investments, with a view to strengthening the industry and growing strategically. In addition, the clarity on the continuation of financial support from the UK government in the form of the Green Gas Support Scheme and potential support being discussed beyond 2025 suggests that AD and biogas are long-term healthy investment options. This makes AD in the UK an exciting and attractive prospect once again.

Recently announced, Eco Verde Energy (EVE) have taken over the Attleborough, Ellough and Holton AD plants, with the acquisition effective from 01 December this year. EVE are undertaking an expansion project at Attleborough to allow it to produce biogas for the grid as well as electricity.

Macquarie, one of the largest infrastructure investors in the world acquired BioCow (now Adapt Biogas) last year, , as well as their Murrow AD facility in Cambridgeshire. This was the UK's first plant to inject gas into the National Transmission System (NTS), commissioning in July this year, offering significant expansion potential and an opportunity to work alongside other local facilities to provide a stable offtake in the future.

John Laing Environmental Assets Group (JLEN) has a portfolio of 8 AD projects all under RHI and FIT schemes, the most recent addition being the acquisition of the Biogas Meden site. Bio Capital – a group of investors, have embarked on an acquisition strategy which was started with the buyout of Energen Biogas plant, the largest AD plant in Scotland.

NNFCC's role

For the sector to continue expanding, business stability and access to financial support is key.

NNFCC has a good knowledge and understanding of how AD plants operate and AD market activity in the UK. We continuously track the market and monitor developments. Over time, we have built up a network of connections working within the industry and we work routinely with clients to ensure business continuity and compliance with policy measures. Our previous experience and expertise allows us to connect our clients with millions of pounds worth of investment funding, helping realise the commercial potential of the developing bioeconomy.

We also have a good understanding of what investors look for in projects, be it new or poorly performing plants or operational assets. As such, we can help to remove some of the risk for investors who may wish to expand their portfolio.

We are able to use our network to facilitate introductions between developers, operators and investors, help to strengthen existing projects or identify and facilitate synergies between various

sectors. Our previous experiences mean we have a thorough understanding of policies and incentives, so in any business deals we can advise both parties on how best to structure or execute the deal, to retain or secure benefit from the financial support schemes going forward. This is part of a 'matchmaking' service that we offer at NNFCC.

We also have a Biogas and Biomethane Carbon Calculator, used widely for reporting GHG emissions in line with support scheme requirements. It is a user-friendly excel-based platform which can be used for calculating the carbon intensity of fuel, supply chain steps and energy outputs. Many AD operators find this tool useful for reporting to Ofgem, for maintaining compliance with subsidy payments. NNFCC staff are also expert in understanding the regulatory requirements for sustainability reporting, liaising with Ofgem and undertaking routine reporting for AD facilities, which is something that should not be underestimated for risk of compromising a major revenue stream on such a significant investment.

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