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AstraZeneca advances UK clean heat and energy efficiencies with £100m commitment

15-year agreement with Future Biogas will provide 100 GWh of green gas (biomethane) annually, equivalent to meet the heat demands of over 8,000 homes

Initiative will provide additional renewable capacity to the national gas grid, representing the UK's first fully commercial biomethane system

Significant boost to energy efficiency at UK's largest medicines manufacturing site in Macclesfield, through upgrade of combined heat and power plant

Powering AstraZeneca's transition to net zero, the Company has agreed a 15-year partnership with Future Biogas to establish the UK's first unsubsidised industrial-scale supply of biomethane gas, and is investing in major energy efficiencies in its operations, totalling a commitment of £100m.

Energy from the biomethane facility will supply AstraZeneca's sites in Macclesfield, Cambridge, Luton and Speke with 100 gigawatt hours (GWh) per year, equivalent to the heat demands of over 8,000 homes.ⁱ Once operational in early 2025, the partnership will reduce emissions by an estimated 20,000 tonnes CO₂ equivalent (CO₂e), adding renewable energy capacity to the national gas grid.

The anaerobic digestion facility and long-term partnership with Future Biogas provide a blueprint for the commercial adoption of renewable gas in the UK. A competitive biomethane market can play a key role in the transition to net zero.ⁱⁱ

To support the transition to clean heat in the UK, energy efficiency improvements will be made at AstraZeneca's Macclesfield campus, the largest medicines development and manufacturing site in the UK. This includes a major refit of the site's combined heat and power plant (CHP) which will save a further 16,000 tonnes CO₂e per year, in addition to upgrading buildings and improving the footprint for the production and packing of medicines to enable further greenhouse gas (GHG) reductions. These efficiency projects will support the long-term sustainable operations of the Macclesfield campus, which delivers more than 90 million packs of medicines to more than 130 countries.

The transition to 100% renewable energy is a key element of AstraZeneca's flagship Ambition Zero Carbon programme, which is focused on delivering deep decarbonisation by halving the company's entire value chain footprint (Scopes 1 to 3) by 2030 and becoming science-based net zero by 2045 at the latest. AstraZeneca is on track to reduce GHG emissions from its global operations (Scope 1 and 2) by 98% by 2026.

Juliette White, Vice President, Global Sustainability & Safety, Health & Environment, at AstraZeneca, said: "Today's commitment of £100 million shows we are serious about

decarbonising the discovery, development and manufacture of medicines and securing a sustainable future for our sites across the UK and globally. In leading from the front on the commercial adoption of clean heat, we are innovating to expand the usage of renewable energy, contributing to the circular economy and accelerating our progress towards net zero.”

Philipp Lukas, CEO of Future Biogas, said: “AstraZeneca’s ground-breaking investment in green gas affirms its status as a global leader in the transition to net zero. The opportunity to combine unsubsidised biomethane production with regenerative farming benefits local farms and supports the growing focus on soil health and sustainable food production. Future Biogas expects this model to be adopted by many other innovative organisations with strong net zero ambitions.”

The site will utilise locally-grown crops as feedstock and support farms with sustainable land management practices, enabling the development of a circular agricultural economy. Bioenergy crops will be grown as part of diverse crop rotations and will follow regenerative agriculture practices, promoting nutrient cycling and improving soil health.

Renewable Gas Guarantee of Origin (RGGO) certificates will be transferred to AstraZeneca, to ensure there is no double counting of emissions savings.

The new plant will be fitted with bioenergy carbon capture and storage capability (BECCS) which has the potential to enable the carbon negative operation of the plant. AstraZeneca aims to sequester the carbon through the ‘Northern Lights’ project in Norway, a joint venture involving industry and supported by the Norwegian Government.

This latest commitment to renewable energy in the UK follows other innovative partnerships announced earlier this year. In the US, AstraZeneca is partnering with Vanguard Renewables to enable the delivery of biomethane to all its US sites by the end of 2026. The Company has also entered into an agreement with Statkraft, Europe’s largest renewable energy producer, to increase the supply of renewable electricity in Sweden.

Notes

Biogas and biomethaneⁱⁱⁱ

Biogas is produced by the fermentation of organic matter in anaerobic digestion tanks. Biomethane is biogas from which the by-product carbon dioxide has been removed, giving the biomethane the same properties as natural gas, and enabling it to be injected into the national gas grid. In Future Biogas' plants the feedstocks will have a zero or negative carbon footprint meaning the biomethane is 100% renewable energy, allowing a significant reduction in greenhouse gas emissions.

Energy crops grown for Future Biogas absorb carbon dioxide (CO₂) from the atmosphere during their growth. Once harvested and stored, the energy crops are fed into anaerobic digestion tanks where bacteria break down the organic matter in the absence of oxygen, releasing biogas. The residue is an organic fertiliser (digestate) which in conjunction with changes to the farming rotation helps accelerate soil carbon capture.

Bioenergy with Carbon Capture and Storage (BECCS)^{iv}

Bioenergy with carbon capture and storage (BECCS) is a carbon removal technique to remove carbon dioxide from the atmosphere. Biomass (organic material) is converted into heat, electricity, or liquid or gas fuels, and the carbon dioxide emissions from this bioenergy conversion are captured and stored in geological formations or embedded in long-lasting products. It does not utilise the injected CO₂ for enhanced oil recovery.

About Future Biogas

Future Biogas is at the forefront of the anaerobic digestion (AD) industry. The company is a highly experienced developer and operator of AD plants across the UK, and able to provide full-service capabilities of development, construction, operations, ongoing compliance and asset management, both to owned projects and to those of third parties. Future Biogas plants convert a wide range of feedstocks into clean, renewable energy, through a process of anaerobic digestion, which produces biogas. Biogas can either be used to generate green electricity or upgraded into biomethane and injected into the UK's national gas network.

For more information, please visit <https://www.futurebiogas.com>.*

About Northern Lights

Northern Lights is developing an open and flexible infrastructure to transport CO₂ from industrial emitters by ship to a receiving terminal in western Norway for intermediate storage, before being transported by pipeline for permanent storage in a geological reservoir 2,600 metres under the seabed. Operations are scheduled to start in 2024. The facilities are under construction and will enable Northern Lights to offer a safe and reliable shipping and storage service to industrial emitters from across Europe. With increased interest from industrial sectors in Europe, additional shipping and storage capacity will be developed as demand grows.

For more information, please visit <https://northernlightscs.com/>.*

About AstraZeneca

AstraZeneca is a global, science-led biopharmaceutical company that focuses on the discovery, development, and commercialisation of prescription medicines in Oncology, Rare Diseases, and BioPharmaceuticals, including Cardiovascular, Renal & Metabolism, and Respiratory & Immunology. AstraZeneca operates in over 100 countries and its medicines are used by millions of patients worldwide.

With a proud 100-year heritage in advancing UK science, today AstraZeneca is the UK's leading biopharmaceutical company. AstraZeneca is based in five different locations across the UK, with its global headquarters in Cambridge. In the UK, around 8,700 employees work in research and development, manufacturing, supply, sales, and marketing. We supply around 35 different medicines to the NHS.

For more information, please visit www.astrazeneca.co.uk and follow us on Twitter @AstraZenecaUK.

Contacts

For details on how to contact the Investor Relations Team, please click [here](#). For Media contacts, click [here](#).

References

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