**Written evidence submitted by the Anaerobic Digestion and Bioresources Association (ADBA) (PIB70)**

***About ADBA***

*The **Anaerobic Digestion and Bioresources Association** (ADBA) is the trade association for the UK anaerobic digestion (AD) and biogas industry. ADBA's vision is to see the full potential of the UK AD industry realised so it can help the UK achieve its emissions targets and other policy goals, creating a truly circular economy. www.adbioresources.org*

*ADBA would be delighted to provide further oral evidence to the committee on the issues discussed below.*

**Executive Summary**

This submission calls on the Planning and Infrastructure Bill Committee to introduce an amendment to the Planning Act 2008 that would bring the development of green gas infrastructure—including biomethane, biogas, and low-carbon hydrogen—within the scope of Nationally Significant Infrastructure Projects (NSIPs). Doing so is crucial to accelerate the UK's transition to net zero, enhance energy security, and unlock economic opportunities in the green economy.

**1. Background and Context**

The Planning Act 2008 was introduced to streamline the consenting process for major infrastructure projects in the UK. However, the Act's original framework predates many of the current climate and energy challenges and does not adequately reflect the role of emerging green energy technologies, particularly in the green gas sector.

Currently, green gas infrastructure is not uniformly treated as nationally significant, despite its increasing strategic importance currently providing 7.5TWh of the UK gas supply with the ability to reach over 30TWh by 2030 and potentially more than 100TWh before 2050 .

By including biomethane, biogas, and low carbon hydrogen projects under the NSIP regime, the UK can fully align its planning system with its net zero ambitions and ensure that vital low-carbon energy infrastructure is delivered efficiently and at scale.

**2. The Case for Including Green Gas Under the NSIP Regime**

2.1 Strategic Importance of Green Gas

- **Net Zero Compliance**: The Climate Change Committee has consistently identified biomethane and hydrogen as critical components of a decarbonised energy system.

- **Decarbonisation of Hard-to-Electrify Sectors**: Green gas offers viable solutions for sectors like heavy transport, industrial heat, and backup power, which cannot easily or quickly transition by other means. This can reduce the over build necessary in the electricity grid and intermittent renewable generation technologies.
- **Grid Balancing and Resilience**: Hydrogen and biomethane can be stored and dispatched when needed, offering flexibility to a renewables-heavy grid. It is also far cheaper and more practicable to move large volumes of energy through gas mains, as opposed to through un-built electricity infrastructure that is facing insurmountable public opposition.
- **Supporting jobs**: potential for more than 60,000 new direct and indirect jobs distributed across the UK, including in rural areas.

2.2 Energy Security and Domestic Production

- The war in Ukraine and subsequent energy crisis have underscored the need for diversified and domestic energy sources. Green gas significantly reduces dependency on imported fossil fuels while creating homegrown energy solutions.

2.3 Economic Growth

- The green gas sector supports regional economic development, particularly in rural areas. NSIP classification would reduce planning uncertainty, unlock upwards of £5bn of private investment by 2030, and continue to support existing and create new skilled jobs across the UK.

2.4 Support for the Circular Economy

- Anaerobic Digestion supports the ambition to create a fully circular economy, the concentrated nitrogen stream from the existing AD facilities in the UK can replace between 1/3 and 1/2 of UK fossil fertiliser demand. Recycling nutrients from unavoidable organic wastes and cover and rotational crops provides extra value to the rural economy at the same time as helping to manage the overall waste processing load of the UK.

2.5 Carbon Capture

- Cheapest and most efficient way to do atmospheric carbon removals. The total cost for removing one tonne of CO2 from the atmosphere as a part of biomethane production is a fraction of the cost of post combustion CCS. Prices for atmospheric CO2 removal as a part of the biomethane process can be as low as £10/tonne, independent of the value of the energy delivered to the economy. This is less than $1/10^{th}$ of the cost of the most optimistic values for direct air capture (DAC) the nearest equivalent technology.

**3. Planning Challenges Facing Green Gas Projects**

Many green gas developers face:

- **Lengthy and inconsistent local planning processes**: often local authorities lack the necessary expertise in these technologies. The appeals process also holds up sensible and well thought out plants from starting construction.
- **Delays that deter investors** inflate project costs and ultimately lead to a sector ready to move and increase its growth exponentially stranded as investors look for more certainty from government and planning authorities.

These barriers conflict with the government's strategic ambitions as outlined in the **British Energy Security Strategy** and the **Net Zero Strategy**.

**4. Proposed Legislative Amendment**

We propose that the Planning and Infrastructure Bill amend the Planning Act 2008 to include:

- **Biomethane and biogas production plants**
- **Hydrogen production, storage, and distribution infrastructure**
- **Associated infrastructure (e.g. pipelines, grid connections, compression, and upgrading facilities)**

A new category for **"Low Carbon Gas Infrastructure"** should be added to the list of NSIP projects in **Section 14 and Subsection 1** of the **2008 Act**. Clear thresholds (e.g., output capacity, pipeline length) can be defined to ensure that only strategically significant projects qualify.

Further to this, we propose that this would come in after a cooling-off period of at least 12 months allowing government to consult with the sector and align itself with the needs and requirements of the sector and of communities and areas where sites are planned.

This consultation should look to provide a best practice framework guidance and charter for developers to ease potential local concerns and to ensure its role in the UKs energy matrix.

**5. Alignment with Existing Policy**

This amendment is aligned with:

- **Plan for Change: Milestones for mission-led government**
- **Net Zero Strategy (2021)**
- **British Energy Security Strategy (2022)**
- **Hydrogen Strategy (2021)**

- **Green Gas Support Scheme**
- The UK's obligations under the **Climate Change Act 2008**

By integrating green gas into the NSIP regime, the planning system will better reflect the energy system the UK is building toward—flexible, low-carbon, and secure.

**6. Conclusion**

This is a timely opportunity to modernise the planning framework and ensure that green gas infrastructure is given the status, certainty, and support it needs. Including green gas within the NSIP framework will help the UK meet its climate targets, strengthen energy security, and attract the investment required to scale up the green economy.

We urge the Committee to recommend this amendment as part of the Planning and Infrastructure Bill.

Annex A:

*Amendment Text*

**Amendment to section 10 of the Planning Act 2008**

**Implementation date: To take effect from the first day of January 2027**

In section 10 after subsection 3 insert:

“(4) With regard to renewable gas facilities to be considered for Nationally Significant Infrastructure Project status the secretary of state must be satisfied that developers are committed to the implementation of the ‘renewable gas producers charter’ to be set out in a relevant national policy statement”

**Amendment to Section 14 of the Planning Act 2008**

**Implementation date: To take effect from the first day of January 2027**

In subsection (1), after paragraph (d), insert:

"(da) development relating to renewable gas facilities."

**Definition of Renewable Gas Facilities**

Insert a new subsection in Section 16a in part 3 after Section 16 (Electric Lines) to define renewable gas facilities:

"(1) In this section, 'renewable gas facilities' means facilities for the production, purification, storage, compression, liquefaction or injection and ancillary necessary infrastructure of gas derived from renewable sources, including but not limited to biomethane, renewable hydrogen and substitute natural gas.

(2) The condition is that—

(a) the production flow rate of the facilities is expected to be at least 1900

standard cubic metres per hour

(3)'Purification' Means the process of removing impurities or contaminants from gas derived from renewable resources to ensure it meets specific standards. Purification is essential to make the gas safe for use and to improve its quality and efficiency.

(4)'Storage' means storing the purified or raw gas safely and securely until it is needed. This may be an above ground or underground storage solution. Storage solutions are critical for managing supply and demand, particularly for renewable gases which might be produced intermittently and for interseasonal balancing of energy demand and generation.

(5)'Compression' Means the process of increasing the pressure of the gas to reduce its volume and facilitate transportation or storage. Compression is necessary for efficient distribution and use of the gas.

(6)'Liquefaction' Means converting the gas into a liquid state by cooling it to extremely low temperatures or pressurising, cooling and condensing. Liquefaction is required for reducing the volume significantly, making it easier and more cost-effective to transport over long distances using road, rail or water vessel tankers.

(7)'Injection' means the process of introducing the purified gas into a pipeline or distribution system for delivery to end-users or other storage location. Injection ensures that the renewable gas can be used in existing gas networks and infrastructure.

(8) When considering applications for renewable gas facilities, the Secretary of State shall have regard to—

(a) the sustainability and environmental impact of the gas production process;

(b) the potential contribution of the facilities to national energy goals;

(c) the compatibility of the development with existing infrastructure."

Annex B:

*Explanatory Memorandum*

Biomethane & renewable hydrogen are net zero gases and will be essential to delivering dispatchable electricity and practical industrial heat decarbonisation for the UK.

This amendment seeks to recognize the importance of strategic scale renewable gas projects, including but not limited to biomethane and renewable hydrogen. This will allow them to be considered under the existing infrastructure planning process, thereby facilitating their development under the streamlined Development Consent Order processes available for nationally significant infrastructure projects (NSIP).

By integrating renewable gas facilities into the Planning Act 2008, it aligns the legislation with broader energy and environmental policies, supporting the transition to sustainable energy solutions.

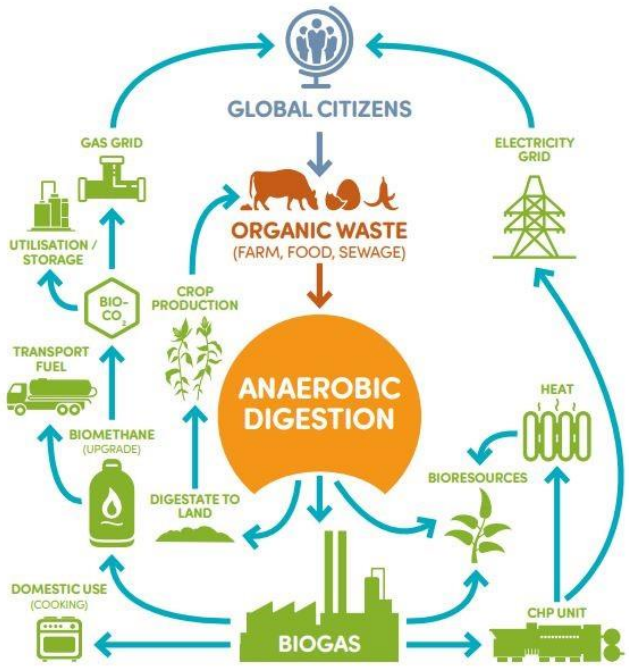
Annex C:

*About the AD industry*

- *There are currently 756 AD plants operational in the UK*
- *The entire industry digests approximately 36 million tonnes of organic wastes each year – organic material that would otherwise emit greenhouse gases including highly potent methane, if left untreated in landfill.*
- *An estimated 21TWh of biogas is produced each year by the AD industry – this green gas is either used to generate electricity and heat via a combined heat and power (CHP) unit or upgraded to biomethane and injected directly into the national gas grid.*
- *The industry currently delivers savings of 1% off the UK's greenhouse gas emissions every year.*
- *An estimated 4,800 people are currently employed in the AD and biogas industry in the UK.*
- *Overall the industry grew by 5 per cent last year as the closure of older, smaller plants was outweighed by big-scale units feeding into the gas grid.*
- *Fully deployed, by 2030, the UK AD and biogas industry expected to:*
  - *create 30,000 direct and 30,000 indirect jobs.*
  - *save the UK 27 million tonnes of CO2 equivalent = taking 1/3rd of all cars off the road, by 2030.*
  - *heat 6.8 million UK homes with the 8 billion m3 of biomethane generated*

*<u>How AD works</u>*

*Anaerobic digestion (AD) is the natural breakdown of organic matter when deprived of oxygen in a container called digester. The process produces biogas and a residue called digestate - a stable, nutrient-rich substance can be used as a biofertiliser which helps restores soil health.*


GLOBAL CITIZENS
GAS GRID
ELECTRICITY GRID
ORGANIC WASTE
(FARM, FOOD, SEWAGE)
UTILISATION / STORAGE
BIO-CO2
CROP PRODUCTION
TRANSPORT FUEL
ANAEROBIC DIGESTION
HEAT
BIOMETHANE
(UPGRADE)
BIORESOURCES
DIGESTATE TO LAND
DOMESTIC USE
(COOKING)
BIOGAS
CHP UNIT