



REA Update Green Gas Day 2025

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Contents

- Biomethane & Biogas Sector
- Support Schemes Overview – RHI
- Support Schemes Overview – GGSS
- Renewable Transport Fuel Obligation (RTFO)
- Renewable Gas Guarantees of Origin (RGGOs)
- Emissions Trading Scheme
- BioCO₂ from Biomethane Upgrading
- Hydrogen Sector – Overview & Support Mechanisms
- Hydrogen Allocation Round 1 (HAR1)
- Hydrogen Allocation Round 2 (HAR2)

Biomethane & Biogas Sector

- ▶ Current biomethane injection capacity (2025): ~8 TWh/year
- ▶ Operational biomethane-to-grid plants: ~141
- ▶ Total biogas production (including non-upgraded): ~33 TWh/year

Support Schemes Overview — Non-Domestic Renewable Heat Incentive (RHI)

- ▶ Operational: 2011–2021
- ▶ 140 biomethane projects accredited (some never became fully operational but could still operate up to around 2027)
- ▶ 7.4 TWh injected by March 2019
- ▶ 32% of RHI payments, delivering 50% of carbon savings
- ▶ Lifetime carbon savings: 46.1 MtCO₂e

Support Schemes Overview — Green Gas Support Scheme (GGSS)

- ▶ Operational: 2021–2028
- ▶ Tariff rates (2025):
 - ▶ Tier 1: 6.86p/kWh (up to 60 GWh/year)
 - ▶ Tier 2: 4.26p/kWh (next 40 GWh)
 - ▶ Tier 3: 3.98p/kWh (100–250 GWh)
- ▶ Expected impact:
 - ▶ Green gas for ~250,000 homes
 - ▶ 10.7 MtCO₂e lifetime carbon savings

Renewable Transport Fuel Obligation (RTFO)

- ▶ Supports: Biofuels, biomethane, renewable hydrogen
- ▶ In 2022, ~200 million litres equivalent of biomethane supplied (primarily for HGVs and buses, ~2 TWh)
- ▶ 2030 target: 19.474% of transport fuel to be low-carbon
- ▶ Expected demand ≈ 46 billion litres per year
- ▶ 19.6% of 46 billion litres ≈ ~9 billion litres of renewable fuel required annually by 2030
- ▶ Current biomethane production (~8 TWh/year) could meet ≈8.9% of the 2030 RTFO target (~9 billion litres of renewable fuel)
- ▶ Projected biomethane production (~50 TWh/year by 2030) could meet ≈55.6% of the RTFO target

Renewable Gas Guarantees of Origin (RGGOs)

- ▶ 1 RGGO worth around £2–£5 per MWh
- ▶ Used for corporate ESG reporting and Scope 1 emissions offsetting
- ▶ 4.3 TWh of RGGOs were issued during 2024
- ▶ 3.4 TWh of RGGOs were retired or cancelled
- ▶ Breakdown of RGGO use by consumer category:
 - ▶ Transport: Continued uptake, especially HGV fleets and logistics
 - ▶ Domestic: Growing share via green gas tariffs from energy suppliers
 - ▶ Non-Domestic: NGOs, SMEs, and I&C users
- ▶ Used for corporate sustainability reporting and carbon accounting
- ▶ GHG Protocol has an ambiguous position allowing auditors/reporting orgs to decide how to report it

Emissions Trading Scheme

- ▶ Integration of EU and UK ETS could incorporate biomethane
- ▶ Waiting for UK ETS Authority to allocate resources to develop the policy
- ▶ Waste/EfW will be able to participate in the UK ETS from around 2028

BioCO₂ from Biomethane Upgrading

- ▶ Biogenic CO₂ is increasingly captured and reused in:
 - ▶ Food & beverage carbonation
 - ▶ Greenhouse enrichment
 - ▶ Industrial Uses
 - ▶ Emerging uses: e-fuels, BECCS, synthetic fuels
 - ▶ CCS Market potential – however NPT CO₂ focus was on large Biomass/EfW
- ▶ UK in 2024 imported circa 265000 tonnes of Biogenic CO₂
- ▶ Biogenic CO₂ in UK between Bioethanol; Biomethane may be approaching 40% of market

Hydrogen Sector — Targets & Support Mechanisms

- ▶ 2025 Target: 1 GW of low-carbon hydrogen (blue & green)
- ▶ 2030 Target: 10 GW (4 GW blue, 6 GW green)
- ▶ Over 100 hydrogen projects in development
- ▶ Support mechanisms:
 - ▶ Hydrogen Production Business Model (HPBM)
 - ▶ Net Zero Hydrogen Fund (£240M)
 - ▶ Hydrogen Allocation Rounds (HAR1–HAR4)

Hydrogen Allocation Round 1 (HAR1)

- ▶ 11 successful projects selected
- ▶ Total capacity awarded: 125 MW of electrolytic hydrogen
- ▶ Expected operational date: From 2025 onward
- ▶ Funding & costs:
 - ▶ Revenue support: Over £2 billion via HPBM over 15 years
 - ▶ Capital grants: £90 million from the Net Zero Hydrogen Fund
 - ▶ Private investment: £413 million expected from project developers
 - ▶ Strike price: Weighted average of £241/MWh (~£9.49/kg H₂)
- ▶ Project highlights:
 - ▶ 8 regions across England, Scotland, and Wales
 - ▶ Applications: industrial decarbonisation, transport, energy storage
 - ▶ Examples: Bradford (24.5 MW), Barrow (21 MW), Cromarty (10.6 MW), Tees (5.2 MW)

Hydrogen Allocation Round 2 (HAR2) & Use Cases

- ▶ 27 projects shortlisted (not yet awarded)
- ▶ Total proposed capacity: 765 MW (target 875 MW)
- ▶ Projects undergoing due diligence and cost assessment
- ▶ Final awards expected in early 2026
- ▶ Expected investment: Over £1 billion in private capital
- ▶ Operational timelines: 2026–2029
- ▶ Use cases: power generation; glass and brick manufacturing; SAF; public transport and industrial clusters