

Introductions

REA

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Hydrogen UK Members

ARUP



Baker
McKenzie.

BAXI
HEATING



BOC
A Member of The Linde Group



Cadent
Your Gas Network

centrica



JM



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per

VIESSMANN



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RWE



kellas
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Who REA are...

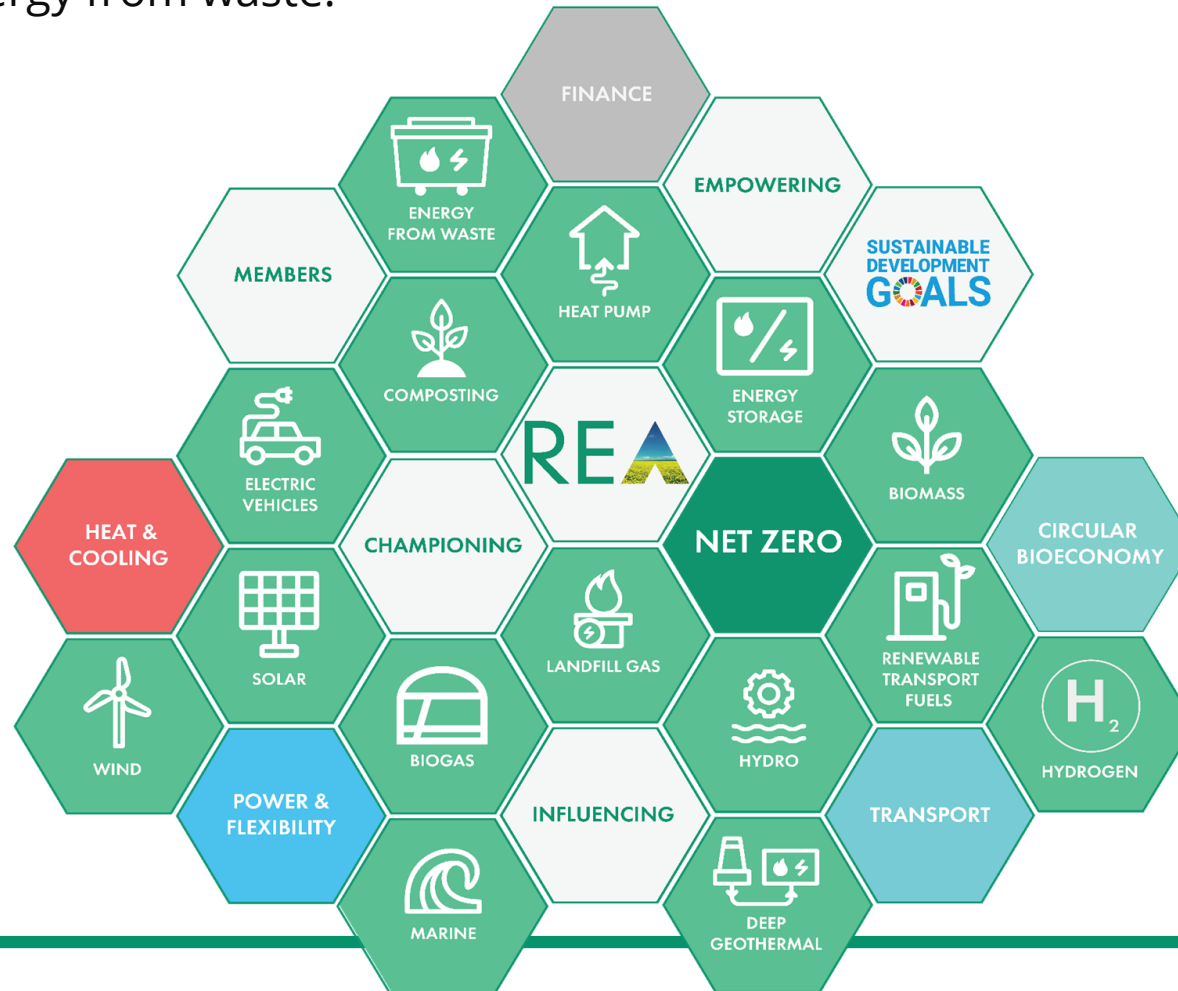


Guarantees of Origin

@REAssociation

We are the *largest* trade association for renewable energy and clean technologies in the UK.

Not-for-profit representing 550 + renewable energy and clean technology companies operating in over fourteen sectors, from green gas & hydrogen, and renewable fuels to solar, energy storage and electric vehicle charging, biomass and energy from waste.



REA Hydrogen membership



@REAssociation

- ITM Power
- AMP Clean Energy
- Supercritical Solution
- Centrica
- Vitol
- Octopus energy
- Airliquide
- Progressive Energy
- HiiROC
- Clarke Energy
- Cadent Gas
- Northern Gas Network
- Peel NRE
- Advanced Biofuels Solutions
- Bioenergy Infrastructure Group
- BayoTech
- Drax
- EQTech
- Enfinium
- Omni CT
- Future Earth Energy
- Kew Technology
- Plasco Conversion Technologies
- Suez Recycling & Recovery UK
- CNG Services
- GHD
- JCB
- Reynolds logistics
- Thyson Technology
- National Grid ESO
- Renewable Power Systems
- Ricardo Energy & Environment
- Intelligent Green Energy
- AFRY Management Consulting
- Fitchner Consulting Engineers
- Sweco
- CMS McKenna
- Vinson & Elkins
- BDB Pitmans
- Clarion Solicitors
- Savills
- Eversheds
- Burges Salmon
- Shakespeare Martineau
- Savills
- Enertecgreen
- Foresight Group
- Heat & Power Services
- Thames Water
- Severn Trent Green Power



Hydrogen Blending: Hydrogen Economy Facilitator

Demand Side Benefits

- ✓ On-boards the public, building consumer confidence in hydrogen
- ✓ Non-disruptive carbon savings within the hardest to abate sector
- ✓ Carbon savings equivalent to removing the domestic gas demand of Wales



Supply Side Benefits

- ✓ Reduces demand risk & LOCH
- ✓ Supports up to 5 GW of low-carbon production investment with lowest technology risk
- ✓ Provides a national demand – decoupling production from industrialised regions
- ✓ Natural synergy with electrolytic production due to the flexibility of blending

HBM Heads of Terms

- Presently blending hydrogen is less certain than other offtakers such as industry, power and transport
- This uncertainty has been translated into the HBM HoT as a lack of support, baked into the contract terms. The consequences of this are:
 1. Strong negative market sentiment concerning the importance of blending
 2. Producers will not contract for hydrogen blending, if not supported – resulting in no blending
 3. Producer-offtaker supply agreements will be long-term contracts, therefore very unlikely for any hydrogen capacity to be available via a ‘contract reopener’ even if blending becomes a desirable offtaker in the future
 4. Strong incentive for networks not to invest in hydrogen blending infrastructure, leading to a significant lead time if BEIS wish to blend later

Alternative Proposal

- The current proposal is too binary and will be very difficult to unwind once negative market inertia is established
- A more subtle and flexible solution exists that balances:
 1. The desire to promote hydrogen into non-blending offtakers
 2. Whilst also stimulating the blending market
- The proposed amendment is to:
 - Remove reference to hydrogen blending within the main contract
 - Define a tunable ‘blending materiality threshold’ within the eligibility criteria
 - Revenue support levels to be independent of offtaker

Blending Materiality Threshold

- A ‘blending materiality threshold’ would prescribe the maximum proportion of production that can be contracted for blending
- The advantages of this model are:
 1. **BEIS Control** - BEIS can unilaterally tune the materiality threshold based on regulatory/policy certainty and market status, instead of requiring bilateral agreement via contractual amendment
 2. **Flexibility** – The threshold could be a fixed percentage or linked to a market metric, providing flexibility for BEIS and greater risk management capacity for producers
 3. **Market Sentiment** - Maintains the current positive market inertia to make blending happen, creating justification for investment
- This amendment is widely supported by hydrogen market makers and stakeholders

Questions and Answers

Thank You