



IEA Bioenergy
Technology Collaboration Programme



UK Update

Patricia Thornley (Aston) & Sam Cooper (Bath)

Virtual meeting, 18 November 2020

The IEA Bioenergy Technology Collaboration Programme (TCP) is organised under the auspices of the International Energy Agency (IEA) but is functionally and legally autonomous. Views, findings and publications of the IEA Bioenergy TCP do not necessarily represent the views or policies of the IEA Secretariat or its individual member countries.

Technology Collaboration Programme

by **iea**

UK Government Response to Committee on Climate Change published November 2020

- Commitment to develop a **biomass strategy** for the UK
- Will be cross-governmental effort led by department for Business, Energy and Industrial Strategy
- To be developed 2020-2022

Academic BECCS-hydrogen demonstrator

Proposal submitted. Under review. Decisions early 2021

UK Government issued call for demonstration innovation projects that are industry-led including BECCS
(<https://www.gov.uk/government/publications/direct-air-capture-and-other-greenhouse-gas-removal-technologies-competition>)

Kew - Demonstrator

Have been commissioning plant with tests on waste wood, RDF and other feedstocks)

Update given at Supergen Bioenergy hub annual assembly 17 November 2020 - available online by end November at www.supergen-bioenergy.net

Useful analysis of costs and GHG balance for biohydrogen:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873885/kew-zero-carbon-bulk-hydrogen-supply.pdf

Advanced Biofuel Solutions Ltd (ABSL)

Swindon site

- Commercial demonstrator
- 20-25 GWh/yr of bioSNG
- Cost of £38M
- Construction complete
- Cold commissioning at moment. Lots of snags but resolving them. e.g. conveyors and handling online.
- Hot commissioning in January 2021
- Planning to be processing waste Feb / March 2021.



Reference demonstration plant, Swindon commencing commissioning



absl
advanced biofuel solutions ltd

ABSL Swindon site continued...

Lots of updates via linked in account

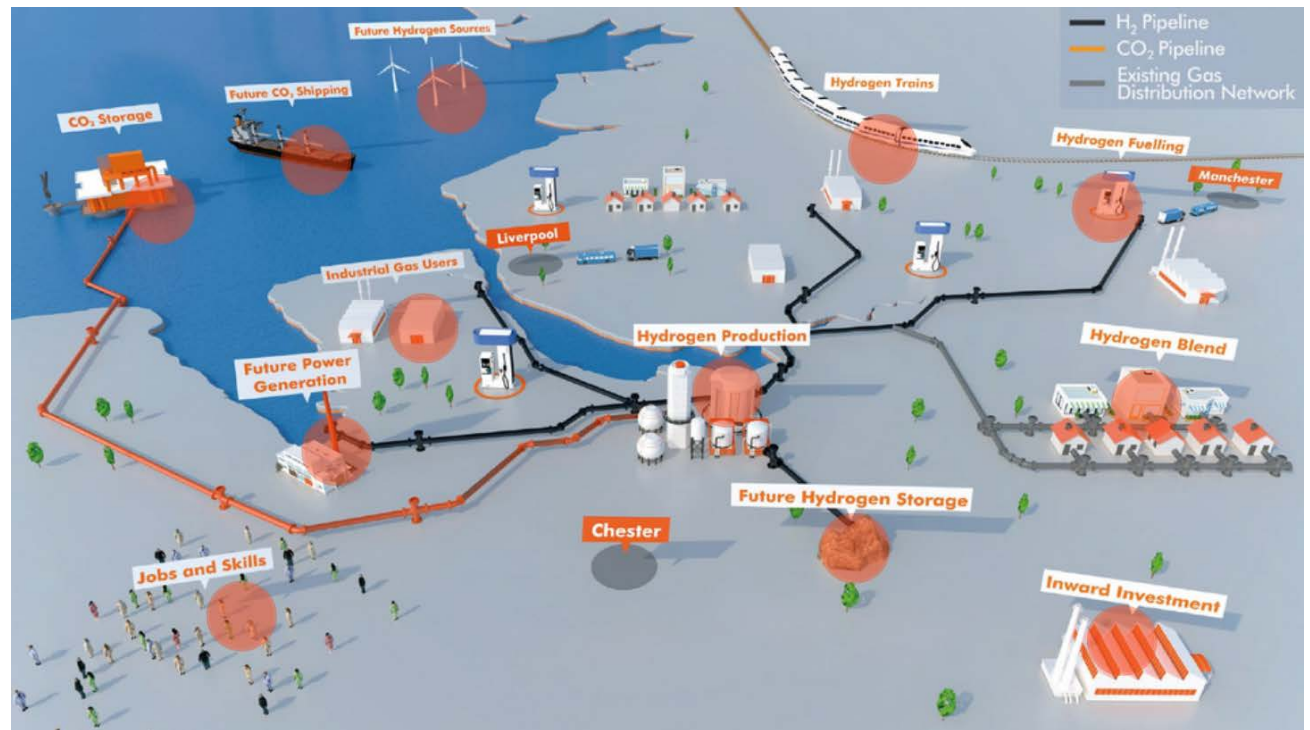
<https://www.linkedin.com/company/advanced-biofuel-solutions-ltd/>



This photo gives a good view of the completed plant. The carbon dioxide scrubbers are in the foreground, followed by the flare, wet scrubbers and waste heat boilers. The carbon dioxide liquefaction plant and storage vessels are visible at the back of the site. The roof extension we installed to accommodate the gasifier and plasma converter can be seen to the right.

Project Bright

- Some similar technologies to ABSL Swindon plant
- Larger scale - 320GWh/yr bio-SNG
- Located near centre of HyNet project - CCS infrastructure should be available ~2025



CoGen

Hooton (Cheshire, UK)

Cold commissioning as of Nov 2020

- 270ktpa municipal solid waste
- 24 MWe
- Kobelco gasifier



Other four sites (Dartmoor, Welland, Birmingham, Ince) using Nexterra / Outotec gasifiers with waste wood, still in operation

Other sites - UK

Some progress:

- Energy Works Hull offline as of Sept 2020 after fire.
 - was operating - 28MWe/10MWth
- Amey Milton Keynes site still in operation
- Viridor Glasgow site opened August 2020 (200ktpa / 15MWe Energos gasifier)
- Hoddesdon (90ktpa RDF / 10MWe) started operating January 2020 (EPC and operation through Bouygues Energy and Services).
- Barr Killoch Energy Recovery Park Planned - 85ktpa RDF, 25MWth / 12MWe (East Ayreshire) . Looks like dual gasifier units direct coupled to steam generator.

(in all cases, information from internet rather than first hand)

Patricia Thornley & Sam
Cooper

p.thornley@aston.ac.uk

en8sc@bath.ac.uk



IEA Bioenergy

Technology Collaboration Programme

www.ieabioenergy.com