

Developed in partnership with

nationalgrid

 **Progressive energy**

 **Advanced Plasma Power**

cng services ltd

 **WALES&WEST UTILITIES**

DEVELOPING ADVANCED FUELS FOR LOW CARBON HEAT AND TRANSPORT BIOSNG - DEMONSTRATION PLANT



PROJECT SUMMARY AND STATUS

The project partners are building a commercial plant to demonstrate the technical and economic viability of producing green gas through the gasification of household waste. The plant will process 10,000 tonnes per annum of refuse derived fuel and waste wood to produce 22GWh per annum of grid quality natural gas, enough to heat 1,500 homes or power 75 heavy good vehicles.

The demonstration facility will be constructed at APP's premises in Swindon, UK. Refuse derived fuel will be supplied by Public Power Solutions, who produce the fuel from waste collected from Swindon households. The green gas produced by the facility will be injected into the Wales & West network and be used in a local Compressed Natural Gas filling station operated by Howard Tenens.

The process design of the plant is complete and construction will start in the second half of 2016. The facility is expected to start production of gas in the second half of 2017.

Funding for the facility is provided by the project partners and support from the Department for Transport Advanced Biofuels Competition and the Network Innovation Competition which is run by Ofgem. In total the cost of the project is around £23m.

The project will combine Advanced Plasma Power's Gasplasma® technology, which produces a high quality, tar-free syngas from biomass feedstocks, with Amec Foster Wheeler's Vesta technology, which converts the syngas to green natural gas. This innovative combination of two developed technologies will deliver a plant that is the first in the world to produce green gas from household waste.



PROJECT IMPACT

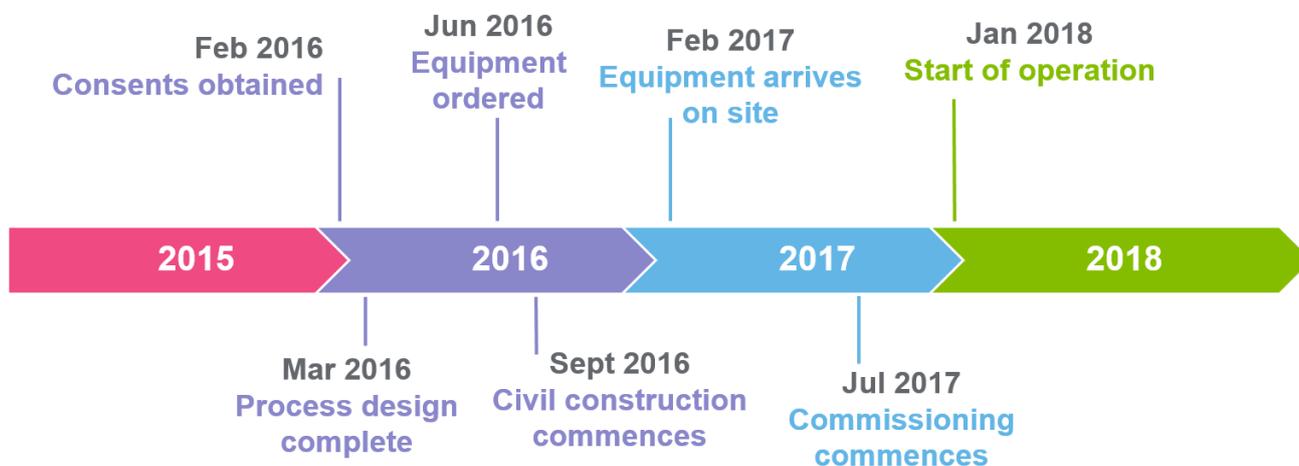
Successful operation of the facility will build confidence in thermal green gas production enabling construction of larger scale plants. Overall, the technology has the potential to produce 100TWh of gas from sustainable UK feedstocks, enough to meet one third of expected 2050 domestic heat demand or to power all of the UK's HGV fleet.

The use of waste as a feedstock allows green gas to be produced at far lower costs than other, high cost biomass such as crops or wood residues. Once the technology matures, it is expected that it will be able to deliver green gas at a similar cost to fossil natural gas, helping to reduce the UK's heating and transport costs.



The waste from a city the size of Coventry could produce enough green gas to fuel 1,500 heavy good vehicles or heat a quarter of the city's homes.

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