

## UK

## Ray Eaton

Department of Energy & Climate Change (DECC)

## UPDATE ON MEMBER'S ENERGY FRAMEWORK

## UK ENERGY POLICY

Two measures to implement the arrangements for Electricity Market Reform (EMR) have been put in place—Contracts for Difference and the Capacity Mechanism. A Contract for Difference (CfD) is a private law contract between a low carbon electricity generator and the Low Carbon Contracts Company (LCCC), a government-owned company. A generator party to a CfD is paid the difference between the 'strike price'—a price for electricity reflecting the cost of investing in a particular low carbon technology—and the 'reference price'—a measure of the average market price for electricity in the GB market. It gives greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, whilst protecting consumers from paying for higher support costs when electricity prices are high. CfDs are allocated by auction. The Capacity Mechanism (the second measure) aims to provide energy security by providing a payment additional to electricity revenues for reliable sources of capacity. It is allocated by auction and is open to existing and new generators, demand side response (DSR) operators, and storage operators. The results of the first Capacity Mechanism auction were announced on 12 December 2014, and the results of the first auction for CfDs were to be announced on 26 February 2015.

## HYDROGEN PROGRAMMES AND INITIATIVES

## HYDROGEN FOR TRANSPORT

The UK Government recognises that hydrogen fuel cell vehicles (FCEVs), together with battery electric and plug-in hybrid vehicles, have the potential to play a significant role in a lower carbon automotive future. Hence in autumn 2014, up to £11 million of funding was made available to support the roll-out of FCEVs in the UK. As part of this support, a grant scheme will be launched in February 2015 to provide capital funding from Government to help establish an early network of hydrogen refuelling stations (HRS) by the end of 2016. The scheme was open to bids for both new HRS and for the refurbishment of existing HRS. On 27 March, Ministers announced that 7 new hydrogen projects would go ahead, with a £6.6 million investment which would see the establishment of an initial network of 12 HRS. This includes new stations in Brentford and Croydon and a new mobile station that will be used across the south of England, as well as upgrades to existing hydrogen demonstrator stations.

## HYDROGEN AND HEAT

The Department of Energy and Climate Change (DECC) has appointed a contractor to undertake a desk study and site work to investigate and compare four technology options for replacing the use of natural gas in an actual UK town of around 10–15,000

## VITAL STATISTICS

## EU Member

## Population:

64.1 million (Office for National Statistics, June 2014)

## GDP/capita:

36,333 USD (Office for National Statistics, June 2014)

### Primary Energy Demand – 213.9 million tonnes of oil equivalent

## Production

|                      |        |      |
|----------------------|--------|------|
| Coal                 | 8,025  | 3.75 |
| Primary Oils         | 44,468 | 20.8 |
| Natural Gas          | 36,523 | 17.1 |
| Renewables and Waste | 6,683  | 3.12 |
| Primary Electricity  | 1,241  | 0.58 |

### Imports – 68.5% of primary energy demand

|                      |        |      |
|----------------------|--------|------|
| Coal                 | 32,122 | 15.0 |
| Primary Oils         | 64,675 | 30.2 |
| Natural Gas          | 46,011 | 21.5 |
| Renewables and Waste | 2,167  | 1.01 |

### Primary Electricity

1,508 0.71

### Exports – 22.1% of primary energy demand

|                      |        |      |
|----------------------|--------|------|
| Coal                 | 447    | 0.21 |
| Primary Oils         | 37,009 | 17.3 |
| Natural Gas          | 9,429  | 4.41 |
| Renewables and Waste | 247    | 0.12 |
| Primary Electricity  | 267    | 0.12 |

(Digest of United Kingdom Energy Statistics 2014)



population. The options to be investigated are hydrogen, hybrid heat pumps, electric heat pumps and heat networks. These will be compared for their installed and operating costs within the boundaries of the town (i.e. distribution level) along with the legal/regulatory and environmental barriers. A final report is required to be delivered by September 2015.

### GREEN HYDROGEN STANDARD

DECC has established a working group with industry to help define a standard for Green Hydrogen, which in this context means low-carbon hydrogen. A call for evidence will be issued in February 2015. The responses will be collated and used to prepare a set of proposals for consideration, which will be subject to a further public consultation later in 2015.

### HYDROGEN'S VALUE IN THE ENERGY SYSTEM (HYVE)

HYVE is a three-year project which has been commissioned by the H2FC Supergen consortium. This project will assess the potential value of hydrogen to the UK as part of a transition to a low carbon economy. In particular, it will examine the use of hydrogen for load balancing in an electricity system with a high penetration of renewable electricity, and it will examine the value of hydrogen as a transport fuel and as a fuel for zero-carbon heat generation. It is being undertaken by the UCL Energy Institute with support from the Universities of Reading and Edinburgh.

[www.hyve.org.uk](http://www.hyve.org.uk)

