



# CHP Potential in the Public Sector

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# **CHP** Applications

#### Buildings

- Hospitals space heating & cooling, hot water, sterilisation
- Universities space heating & cooling, hot water
- Commercial Buildings space heating & cooling, hot water

#### Community/District Heating

- Medium-scale community schemes (mixed public, commercial and residential buildings)
- City-wide DH Schemes (including industrial sites)







## **Current GQCHP Installation**

- The capacity of Good Quality CHP has risen from 4.4GW<sub>e</sub> in 2001 to 6GW<sub>e</sub> in 2011
- Representing 5% in renewable and about 7% of the current 90GW<sub>e</sub> total electricity generating capacity in the UK
- GQCHP capacity increased by nearly 3 per cent between 2011 and 2012 from 5,970 MW<sub>e</sub> to 6,136 MW<sub>e</sub>
- Renewable Fuel Input has risen from 4% of total fuel input in 2009 to 8% in 2012





## **GQCHP** Capacity Development



Source: Digest of UK Energy Statistics, DECC





#### **Service Sector Capacity Development**







## **Projections of CHP Capacity**

This study provides an overview of the development of both conventional (natural gas) and renewable fuel fired CHP markets in the UK to date, covering an evaluation of the technical, economic potentials between now and 2030 and how much of this is likely to be realised with current and planned policies.

**RICARDO-AEA** 

Projections of CHP capacity and use to 2030



Report for DECC Ricardo-AEA / R/ED50120 Issue Number 1.2 Date 20/03/2013





### **Good Quality CHP capacity projection**







## CHP Potential 2020 & 2030

- The technical potential of CHP was calculated at 29.4GW<sub>e</sub> in 2012 rising to 31.8GW<sub>e</sub> in 2020 and 33.8GW<sub>e</sub> in 2030
- The cost effective potential, based on a discount rate of 15% pretax over 10 years, was calculated at 18.1GW<sub>e</sub> (57% of technical potential) in 2020 rising to 20.1GW<sub>e</sub> (60% of technical potential) in 2030





## Service sector capacity projection







## Conclusion

- The potential for GQCHP will continue to grow despite rising carbon prices which will work increasingly against conventional CHP schemes beyond 2030
- Renewable CHP capacity is growing at a significant rate aided by the current Renewables Obligation (RO) policy which rewards Good Quality CHP over and above power-only generation for many technologies.
- This support for renewable CHP will be continued by the forthcoming CfD regime.