

Response by Calor Gas Ltd to OFGEM's consultation, "Creating the right environment for demand-side response"

1. Ofgem has estimated that due to plant closures and the need to replace and upgrade the UK's electricity infrastructure, over the next decade the UK electricity sector could need around £110 billion of capital investment. This consultation seeks to articulate the challenges which face utilising demand side response (DSR) to mitigate or delay some of these investment costs, which will ultimately be passed through to customers' bills.
2. As OFGEM will be aware, we commissioned Ernst and Young to investigate the cost of reinforcing the National Grid to cope with the deployment of heat pumps on various scales as a low carbon technology. We have already communicated the results from this report (2013) that on a high heat pump deployment scenario the extra network costs would be £390 per heat pump on a GB-wide basis, but considerably more in rural areas - £1,490 by 2050.
3. The modelling in the report considered the amount of 20p/kWh as compensation to customers for DSR to be not cost effective, and instead a lower price of 5p/kWh was used. Whilst this did produce a reduction in cumulative network costs (from £4.5bn to £3.1bn by 2030 in GB as a whole), it was significant that DSR offered far lower savings in rural areas. This is attributed to the lower number of connections per feeder in rural areas so any local DSR system less load will be shifted for the same capital expenditure on enablers. In rural areas network costs are reduced by only £50m or 6% from £0.8bn reference case of low heat deployment by 2030. **In short, DSR can considerably reduce the costs of network reinforcement in Great Britain as a whole, but it has a much smaller effect in rural areas.**