

LEADING SCIENTISTS PROPOSE SMARTER LOW CARBON FUTURE



PRESS RELEASE

2 March 2010

A report launched today highlights critical challenges in the current 'all-electric' approach to decarbonisation of the UK energy system as this would increase our dependence on the electricity system to unprecedented levels

A ground breaking report by leading energy scientists in the UK highlights problems and risks in orthodox vision to achieving a low-carbon energy system. An important finding is that an efficient and 'integrated' approach could reduce electricity demand by 13%, help manage power flows and relieve critical pressure on the future electricity system. Heat recovery from power generation and investment in heat networks could be central to a more efficient and resilient energy system.

Most scenarios for a 2050 energy system anticipate that electricity will increasingly be used to meet energy needs for transport and heating. The report outlines that such a transition could result in a doubling of peak electricity demand. Realising this 'all-electric' scenario is in turn dependent on a number of critical outcomes, all which must be met to achieve carbon abatement targets:

- Investment in new, low-carbon power stations at unprecedented growth rates
- Expansion of electricity network capacity to meet higher system peak demand
- Insulation to a very high standard of much of the UK building stock, and significant change in consumer behaviour

The report finds that any route to a low carbon future brings major challenges. A system that makes greater use of cogeneration and district heating can however mitigate many of the more demanding aspects of the 'all-electric' approach. Used in combination with biomass and CCS technology for fossil fuels, cogeneration and district heating infrastructure have a key role to play up to 2050 and beyond. The integrated approach proposed in the UK report, assumes an energy system where CHP and DH, used in combination with a decarbonised electricity grid, delivering the following benefits (as compared to a leading 'all-electric' scenario):

- Energy losses from power generation reduced by 8 MTOE, equivalent to almost half the final energy demand from households in 2050
- A more flexible energy system overall, with reduced peaks in electricity demand and greater capacity to store surplus electricity in the form of heat
- Reduced electricity demand – a 13% reduction as compared to the benchmark 'all-electric' approach
- A reduction in the new investment required in electricity networks

The European association for the promotion of cogeneration

Avenue des Arts 3-4-5 · B-1210 Brussels · Belgium

Tel: +32 2 772 82 90 · Fax: +32 2 772 50 44 · Email: info@cogeneurope.eu · Website: www.cogeneurope.eu

- A reduction in the demand for coal fired generation by 33% (saving 13 MTOE), displacing the need to build 4 to 7 coal fired power stations, each equivalent in size to the some of the largest plant of this type currently operating in the UK today
- Lower primary energy consumption – a 5% cut, reducing dependence on imported fossil fuels
- A reduction in overall energy losses from power generation of 30%
- Greater diversity in heat supply – including waste heat and bioenergy sources

The report was commissioned by the Combined Heat and Power Association (CHPA). Speaking at the launch of the report, Graham Meeks, Director of the CHPA commented: “Diversity is the key to maintaining affordability and security of our energy supplies as we transition to a low-carbon economy. The report highlights the enormous risks we face in focusing on electricity to meet our demands for energy services. But it also demonstrates that more robust, dynamic and efficient pathways are open to us, recovering the waste heat from power generation, to create a more integrated and resilient energy system.”

For more information:

See [link](#) for full PDF copy of report.

See [link](#) for standalone copy of the executive summary.

See [link](#) for CHPA summary of report findings.

END

For more information please contact:

Dr Fiona Riddoch, Managing Director
 Tel: +32 2 772 8290
 Fax: + 32 2 772 5044
 Email: fiona.riddoch@cogeneurope.eu

Stefan Craenen, Communications Manager
 Tel: +32 2 772 82 90
 Fax: + 32 2 772 50 44
 Email: stefan.craenen@cogeneurope.eu

About cogeneration:

Cogeneration (also known as CHP or Combined Heat and Power) is the simultaneous production of heat and electricity. 11% of Europe’s electricity and heat requirements today are produced using this proven energy efficiency technology. Cogeneration units can be found in different sizes and applications: industry, households and tertiary sector and spans applications with capacities ranging from below 1kw to hundreds of Megawatts. It is a highly efficient energy solution that delivers substantial reductions in CO2 emissions and can be a large contributor to delivering the targets of the Kyoto Protocol on climate change for Europe. In EU Member States where cogeneration has been seriously supported as in Denmark their electricity supply system operates at 65% efficiency overall compared to the current EU average of an unacceptable 33% efficiency overall. Cogeneration substantially contributes to reaching strategic climate and energy goals, such as security of supply, energy efficiency and reduction of emissions.

About COGEN Europe:

COGEN Europe is Europe’s umbrella organisation representing the interests of the cogeneration industry, users of the technology and promoting its benefits in the EU and the wider Europe. The association is backed by the key players in the industry including gas and electricity companies, ESCOs, equipment suppliers, consultancies, national promotion organisations, financial and other service companies. More information can be found on www.cogeneurope.eu

The European association for the promotion of cogeneration

Avenue des Arts 3-4-5 · B-1210 Brussels · Belgium

Tel: +32 2 772 82 90 · Fax: +32 2 772 50 44 · Email: info@cogeneurope.eu · Website: www.cogeneurope.eu