

Delta's Decentralised Energy Outlook **AUGUST 2009**

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Delta Finds Renewables and Decentralised Energy Could Save the UK £12.6 Billion per Year

Leading up to the UK government's recent annual budget announcement, Delta produced a report for the UK Renewable Energy Association that quantifies the benefits for the country's balance of payments of a wider uptake of renewable energy and energy efficiency.

The analysis assessed the fuel import savings arising from energy efficiency and renewable energy if the UK were to meet the targets proposed in the Government's Renewable Energy Strategy. This macro-level approach suggests that the benefit to the UK could be up to £12.6 billion (€14.6 billion, US\$20.8 billion) per year, depending on future fuel prices.

The UK's [Guardian newspaper](#) provided a glimpse of the Delta report on the 21st of April. The full report is available on the website of the [Renewable Energy Association](#).

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How Are European Utilities Preparing Themselves to Flourish in a Low-Carbon Future?

New Delta / Accenture Multi-Client Study:

- **How are European utilities positioning themselves for a carbon-constrained future?**
- **What transformational changes will utilities have to undergo to succeed?**
- **How well prepared is your utility relative to your competitors?**

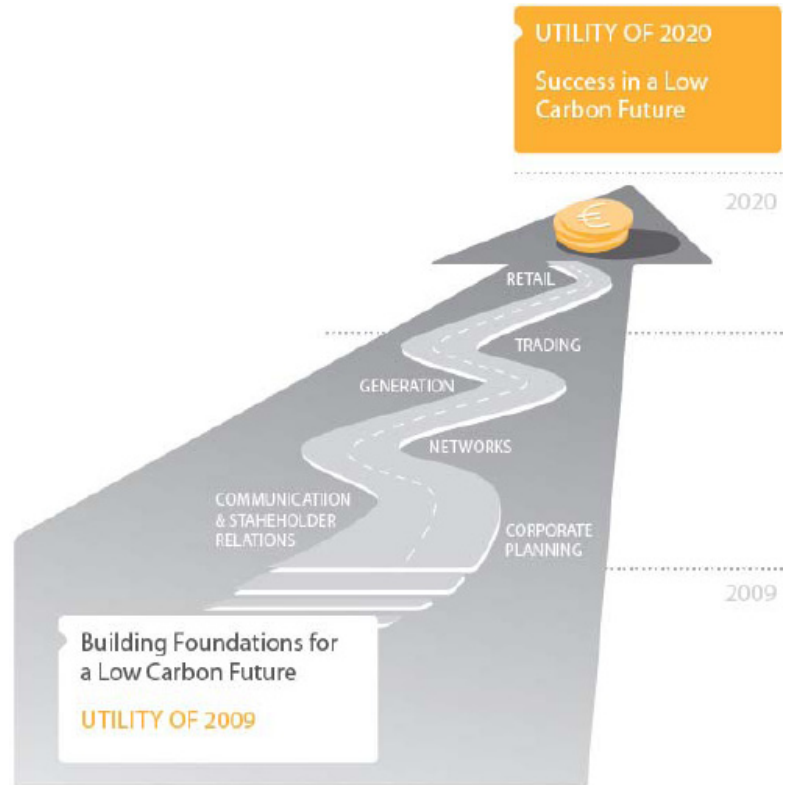
Utility business models are going to change dramatically in the next decade, driven by strong climate policies, new technologies and changing customer demand. Winning utilities in 2020 will be those which are already building the foundations today to prepare for this low-carbon future, and developing strategies that will exploit new value and navigate threats.

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How Are European Utilities Preparing Themselves to Flourish in a Low-Carbon Future?: continued

To help companies understand the challenges, and how their strategies to cope with these compare to their competitors, Delta has partnered with Accenture to take forward a new multi-client study, **“Seizing Opportunities, Managing Threats: Utility Strategies for a Low-Carbon Future”**, comprising around 20 European utilities. The study analyses and compares utility low-carbon strategies, assessing their overall preparedness to build value in a low-carbon future.

Right: Transformation of a utility, 2009-2020: Utilities will have to transform their business across the entire value chain if they are to succeed in a low carbon future.



The free *Points of View* report for all participating utilities will address key questions, including:

- **Where are utilities ahead of the curve, and where are they behind?**
- **Are a handful of utilities leading the way?**
- **Why are there large variations in the type and extent of utility preparation for success in a low carbon future?**

An *in-depth, tailored report* will also be available, which analyses each utility's unique position relative to the rest of the European utility sector. How does your utility compare to your competitors?

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Utility Engagement with Electric Vehicles (EVs) Is Ramping Up Across Europe

2009 will see at least 5 of the top 10 European utilities introducing pilot projects across Europe for vehicle charging on the street. More projects will kick-off in 2010 as vehicle availability improves and utility research into EVs moves forward. The table below, taken from Delta's Electric Vehicles Service Annual Report, picks out how some of the European utilities are engaging with EVs.

TABLE 1: Utility EV engagement can be grouped into 6 main areas

Actions	Examples
Installing charging infrastructure and trialling EVs	EDP, RWE, DONG
Forming official partnerships with car manufacturers	EDF, Iberdrola, ENEL
Exploring charging and billing strategies and testing communication technologies	Endesa, E.ON UK, EDF
Investigating standardisation of charging infrastructure	RWE, EDF, Endesa
Analysing battery ownership and leasing strategies - developing financial and technical feasibility models	Essent, Enexis
Conducting high-level research on vehicle-to-grid opportunities	EDP, SSE

Source: Delta Energy & Environment, 2009.

Understanding Customer Needs is a Priority for Utilities.

We see an increasing number of utilities investing time and resources in researching EVs, with the focus on understanding customers and installing charging infrastructure. Utilities recognise the many opportunities that EVs offer, but their first step is to understand how and when customers will charge their vehicles. This message was confirmed at the recent Electric Vehicle Symposium, EVS24 in Norway – the most important EV event in the calendar.

For a summary of the key messages from the EVS24 event, [click here](#).

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[Utility Engagement with Electric Vehicles \(EVs\) Is Ramping Up Across Europe: continued](#)

Technology Strategy Board: Utilities Involved in Eight Projects to Roll Out more than 300 EVs in the UK in 2010.

Trials of electric vehicles are becoming more widespread in Europe. For example, the UK Technology Strategy Board (TSB) announced the results of its Ultra Low-Carbon Vehicle Demonstrator competition on 23 June 2009. This awarded £25 million (€29 million, US\$41 million) to a total of 8 electric vehicle projects across the UK. The objective is to roll out more than 300 EVs in the UK by 2010. Utilities involved in the successful projects include EDF Energy, E.ON UK, Scottish Power and Scottish & Southern Energy.

For further information and insight into our EV research and [Delta's Electric Vehicle Service](#), please contact Stephen Harkin (+44 (0) 131 625 1005 or stephen.harkin@delta-ee.com).

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Recent Delta Research Contracts: for the US Electric Power Research Institute (EPRI), CEATI (Canada) and Electricité De France (EDF)

The DE sector remains lively despite the global economic slowdown. Delta has recently been commissioned to provide its DE analysis and insight to the US Electric Power Research Institute (EPRI) and CEATI, a Canadian-based utility research association. French utility EDF has also requested Delta's expertise on energy markets in Europe.

Delta's *Micro-CHP Benchmarking Study* for EPRI will be published under its Distributed Generation Programme. The report will help them decide on whether, when and how to engage with micro-CHP as it emerges from field trials onto the market. It includes a benchmark of micro-CHP status and prospects compared to US market requirements.

For CEATI, Delta is helping participating utilities (primarily Canadian) understand how distributed generation is emerging, providing them with valuable insight as they develop their distributed generation strategies. The report provides a new assessment of a range of DE technologies - including a full economic, market and best practice evaluation.

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Delta Advises the International Energy Agency on Best Practice Policies for Combined Heat and Power

The International Energy Agency (IEA) has recently published a best-practice guide for policy makers to support Combined Heat and Power (CHP). The report, "[Cogeneration and District Energy: Sustainable energy technologies for today...and tomorrow](#)", produced for the IEA by Delta Energy and Environment, identifies proven policy solutions that governments have used to advance CHP. This practical 'how to' guide recommends that government 'champions' are in some cases even more important than financial incentives. The report is part of the IEA CHP / DHC Collaborative, feeding into the Climate negotiations within the G8.

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US Government Funding Pushes Electricity Storage into the Spotlight

The buzz around the Electricity Storage Association conference was the recently announced funding for storage demonstration projects in President Obama's stimulus package. Through this and the tax incentives likely to be granted for storage, the technology looks set to play a central role in the US Smart Grid strategy.

Two very different applications for energy storage received the most attention:

- The first sees storage applied at the **residential scale**. American Electric Power is to trial its Community Energy Storage programme this summer, connecting distributed storage units (50 kWh electric vehicle batteries) to transformers serving a few houses or small commercial loads.
- At the other end of the spectrum, **large Compressed Air Energy Storage** (CAES) is back in the spotlight, after almost 20 years of stalled development. As the US prepares for huge amounts of wind capacity to connect to the grid, CAES is seen as a viable way of integrating this, and reducing the transmission capacity required to deliver this power to load centres.

For further information, please download [Delta's Conference Highlights](#) and presentation on [Can Electricity Storage Gain a Foothold in Europe?](#) or contact Cian McLeavey-Reville (+44 (0) 131 625 3332 or cian.reville@delta-ee.com).

For more information on our recent work and full client list, visit www.delta-ee.com.

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