

## Will Micro-Generation Market Growth Impact Utility Profits?

Analysis by Delta indicates that profit per customer for a UK vertically integrated utility may fall by £50 to £100 per customer following installation of a Stirling engine micro-CHP.

This amounts to £40-80 million per year if Stirling engines capture 10% of the UK boiler market over a period of 5 years. The figure will be considerably larger for fuel cell micro-CHP.

This Delta Research Brief looks at what we believe is a potentially critical challenge for all energy supply companies: utility profitability in relation to micro-generation. It applies to many major electricity markets — not just the UK.

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By 2020, **utility profits** may well be significantly influenced by the **success** of their engagement with **micro-generation** and wider **decentralised energy** (DE).

Based on current **utility strategies**, there will be some clear winners and losers. DE is a threat to current utility business models, potentially reducing profit levels. But opportunities exist to **grow profit** by taking stakes in the **DE value chain**.

**Micro-generation** is currently a dot on the landscape to the vast majority of utilities. But if markets grow, as they certainly have the potential to do, utility profits will fall — *if* they stick to their current business models. One study predicts that micro-generation could supply 30 to 40% of all the UK's electricity by 2050. Uncertainty around the time-scales and market share is large, but the take-away is clear: **micro-generation could be far too big to ignore**.

**Micro-CHP sales** in Japan already number in the tens of thousands of units a year, and photovoltaic installations in Germany now push 1 GW a year. These figures have largely been reached over periods of just a few years, showing **rapid growth** is possible — given the right products and a **supportive regulatory and policy environment**.

Delta's **micro-generation financial model** shows that **UK utility profit will fall** by £50 to £100 for a vertically integrated utility when a customer installs a **Stirling engine micro-CHP**. Evaluating the impacts of micro-generation market growth on utility profits is complex, with variations from market to market and technology to technology. The picture is not so bleak, however, for utilities that take positions in the DE value chain and work to exploit these opportunities. These utilities may be able to actually **increase**

profit and build value.

The difference in profitability between those that bury their heads in the sand and those that **embrace the micro-generation opportunity** may be small today, but if nascent markets grow into large or mass markets, they may be **significant tomorrow**.

*Figure 1: Differing Utility Micro-Generation Strategies*



Some utilities are already spreading their tentacles into the micro-generation space, whereas others are ignoring this emerging sector.

A small number of utilities are slowly spreading their tentacles into the micro-generation business. Companies include E.ON UK, ENECO Energie (Netherlands), Osaka Gas (Japan) and EWE (Germany). Some of these are already starting to build value from **DE market growth** and shape the **regulatory framework** to their advantage. We see **opportunities** for distribution parts of the business to alter their charging structure, and retailers to **increase profit** by a number of means, such as benefiting from micro-CHP reducing peak demand, profit on equipment sale and maintenance, and deeper customer relationships.

Among the **proactive utilities**, there are some starkly different **strategies**:

- ◆ Some are rolling up their sleeves and getting their hands dirty developing product.
- ◆ Others are sticking to established, tried and tested technologies.
- ◆ Other differences exist in terms of market segments targeted and market channels being developed.

But we continue to see **little evidence** amongst many of these utilities of hard-headed analysis of the financial impacts of micro-generation, how to **grow profits**, and how to **build value** from engagement with micro-generation.

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*Today, Delta is working with utilities on micro-generation and DE to analyse:*

- ◆ **Impacts on profitability;**
  - ◆ **Effective strategy development and implementation.**
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Utilities that **ignore micro-generation** and do not fully understand the impact across the value chain **miss out** on two fronts. Not only do they miss out on possible short term opportunities to grow revenues and build value by developing a **micro-generation business**. They also fail to understand how significant micro-generation growth will affect their **profits**, and what **strategies** they should be adopting in response to this.

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