

Market view

Spread the gain

Distributed generation is a threat to traditional utilities, but also an opportunity, say Berthold Hannes and Matt Abbott.

Solar panels, small windfarms, combined heat and power plants – these are all increasingly popular ways for homes and businesses to generate their own power. They signal technological progress as they become commonplace in Europe and North America, but utilities may be forgiven for watching their rise with mixed feelings.

After all, some of their most profitable customers will use less power from the grid and instead use their own. These customers will still depend on the central grid for their emergency, peak or night-time needs, so utilities will have to maintain costly grid and power generating capabilities even as revenues from consumption decline.

The rise of distributed energy systems, which tap these small generation sources and distribute electricity through low-voltage networks, owes much to the high costs of power, environmental concerns and regulatory pressures.

In Germany, the rise of energy prices by 60 per cent over the past decade has created a strong incentive to produce your own power and heat. In the UK, the Renewable Heat Incentive (RHI) pays private generators for the heat they produce, creating attractive economics for running small boilers (less than 200kWh) with biomass fuel rather than oil. In the US, environmental concerns and financial incentives have encouraged distributed generation.

Given these pressures and the investment that customers are making in their own systems, it seems unlikely that the tide will turn back on this trend anytime soon. So how can utilities play a role in these new models?

We see three main opportunities for utilities in direct energy: helping customers generate their own energy; managing end-user demand for energy; and controlling the distribution and consumption of energy within a distributed network. For some of these opportunities, they will need to develop new capabilities. For others, they may already have the skills internally but will need to develop sales and marketing models to deliver them to customers.

Rooftop solar photovoltaic panels, small

combined heat and power plants, and small wind parks are three popular sources of distributed energy. Utilities should explore offering services that include planning, building, installing and operating these systems for customers, as well as financing and risk management.

Industrial and commercial clients will need help monitoring and reducing their power consumption. Utilities can help them make their buildings more energy efficient, build more efficient heating and cooling systems, and raise their efficiency.

Many utilities already have the capability to steer energy usage, given their experience managing their own grids and networks. In this new model, they manage a distributed energy network in real time via a control centre that monitors generation from various sources and distributes it according to demand. By analysing the data over time, the energy controller can predict usage and balance loads to reduce overall investment in generation.

To make a go of these new businesses, utilities have to boost their capabilities in a few areas. Their current skills managing large, centralised power systems should help them extend to the adjacent opportunity managing smaller networks of distributed energy systems.

They will also need to begin to take “no regret” decisions that will put them in a better position to make the most of new opportunities. Foremost among these is improving customer loyalty and getting to know customers’ needs and preferences better.

They will also need to explore new business opportunities as contractors who provide building and demand management services. Acquisitions, partnerships and joint ventures are likely to be the quickest and most efficient way to do this.

Distributed energy is being pursued as a goal in many countries. The sooner utilities identify the opportunities inherent in this growing movement, the more likely they are to capture the profits available to them.

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Market view

Out in the field

Chris Holder and Adam Gillert provide a checklist for energy suppliers outsourcing their field operations.

Energy supplier field forces will be replacing tens of millions of old meters on customer premises in the next several years. As a result, field force management has become a hot topic, with many suppliers looking to rationalise their current contractual relationships or looking for external solutions. A poorly thought-through or executed field force strategy is likely to impact heavily on performance.

Here, we set out illustrative examples of issues that need to be taken into account by any energy company seeking to contract successfully with a third party contractor for field force operations.

1. Know what you want

Before preparing a robust request for tender, you need to understand:

- What is required.
- the skills needed – the rollout of smart meters, for example, will be one of the most significant consumer engagement activities energy suppliers have ever undertaken, so they may place a particular emphasis on softer consumer skills as well as purely technical ability;
- the levels of service required – including identifying which elements of the service are most important for measurement and to which aspects remedies should apply;
- the scope of the field force activities to be passed over to the new contractor and whether it is appropriate to retain a part of an existing field force for certain business critical functions.

• What remedies are appropriate if the contractor fails to meet its obligations.

- the usual approach is to combine other contractual rights with a service credit regime to ensure that if the energy company is not receiving a service at the level that it is paying for (but the level of under-performance is not severe enough to merit a claim in damages or termination), the energy company can discount the price it would otherwise have had to pay;
- some sort of additional reward for over-performance against service levels might also be considered (but only if that results in genuine benefit to the energy company).

- What “good” looks like. The right requirements must be set and the contract is focused on the achievement of those specific requirements.

• Its existing cost base for the current work. For example, how much does it cost to install a meter or dig up a road? Does the cost vary depending upon when or where it is done?

2. Never forget the human side

Employment law imposes a number of statutory obligations that need to be considered well in advance, including in many circumstances a statutory right for existing staff to transfer to the new contractor on broadly the same terms and conditions of employment, as well as duties on the employer to inform and consult with representatives of the affected workforce.

Human resource issues need to be handled with care because ensuring a stable workforce up to and following the outsourcing of a business function can be crucial to the success of the project as well as to maintaining the trust of existing employees.

3. Plan for transition

It is vital that there is no confusion as to who should be doing what. The initial handover period (including any necessary knowledge transfer) requires special attention; the parties will not get a second chance to ensure that the initial transition is performed successfully.

4. Be ready for change

In the interests of certainty it is usually best to agree fixed prices for future services, to the extent possible.

Unit based pricing which attaches to discrete elements of a “job” should be fixed for the contractual duration. This will enable the energy company to have price certainty moving forward.

Where such certainty cannot be provided, a strict (and well-drafted) regime for dealing with change and providing for an agreed outcome is the recommended route. This will ensure some certainty for both parties as to what will happen as field force operations change and extra services are required or existing services dispensed with.

A poorly thought-through or executed arrangement is unlikely to meet the needs of either the energy company or the field force contractor. It will be especially important for energy suppliers to consider these issues as they prepare for the operational and competitive challenges of the next decade.

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EXPERT VIEW

ANDREW KEEVIL, ESRI UK

One view of the truth

Robust location information is essential to enable utilities to improve business performance. Andrew Keevil explains why.



Location information is critical to utility operations. Infrastructure-based network operators need to know where their assets, facilities and people are, often in real time. Retail businesses are primarily interested in customer location, but as smart metering is rolled out, asset location becomes increasingly important.

Property addresses are often unhelpful. Assets, people and facilities do not have a formal “address” and, where an address exists, it may be inaccurate, ambiguous or out-of-date. Location and address data typically exist in multiple formats, based in multiple databases across different departments of a business and all too often, the different sources are hard to reconcile.

This creates a fundamental problem. Lack of robustness in location information can lead to delays in decision making, and this can hinder a utility company from delivering the fast, efficient service essential for brand reputation and public safety. Crucially, it can lead to the loss of millions of pounds in unbilled revenue.

We commissioned a survey that revealed that utilities typically store location information across as many as ten different systems, with external data sourced from many more. “Shadow IT” and duplicated entries add further complexity, as does the address lifecycle itself. Any address can go through multiple stages in its lifetime and utilities must keep the data updated for service continuity.

To help tackle these challenges, forward-thinking utilities are creating a centralised hub of address information. By putting all location information into a single system, staff across the business can work more efficiently.

A single, accurate view of all location information can have far-reaching business benefits.

- more efficient, cost-effective operations;
- increased billed revenue;
- better customer service;
- enhanced emergency response;
- better incident investigation;
- better business intelligence.

One of the most powerful advantages of a single view of location is the ability to create new business insight from existing information. A new wave in location analytics tools, which simply plug-in to existing BI and CRM systems, promise to merge business and location information with the potential to radically improve corporate business intelligence. Patterns, trends and other previously unforeseen relationships can be revealed, and questions answered with a single query.

This all helps build confidence. Confidence in data means that it gets used, and if it gets used correctly it is maintained. Simply put, a 40%-plus improvement in master data quality can mean the difference between a top 20% and bottom 30% performance. To find out more, please read our white paper at www.esriuk.com/locationmanagementwp or contact akeevil@esriuk.com.

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