# HOT TRENDS FOR ENERGY MANAGEMENT IN 2015 JANUARY 2015





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#### January 2015

### **EXECUTIVE SUMMARY**

This report explores the key energy management trends that will impact commercial, home, industrial and utility sectors in 2015 and beyond. It builds on years of detailed Verdantix research into energy technologies, energy services and power utilities, including interviews we conducted with 500 energy managers in 2012 and 2013. The analysis finds that while energy management is now mature across some areas, executives and energy services practice leaders will be busy in 2015 working out how to take advantage of new customer segments, disruptive technologies and the integration of energy management in operating strategies.

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### REFERENCES

### **ORGANIZATIONS MENTIONED**

Bidegly, C3 Energy, Doral, E.ON, ecobee, EnerNOC, FirstFuel, Google, Honeywell, Matrix, Nest, Opower, Onzo, Pulse Energy, Retroficiency, Schneider Electric, SSE, Tata Steel, The Energy Solutions Group

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### HOT TRENDS FOR ENERGY MANAGEMENT IN 2015

To understand the key energy management trends that will impact commercial, home, industrial and utilities sectors in 2015, Verdantix assessed global regulations, innovation, competitive dynamics and corporate energy strategies. Verdantix forecasts that in 2015 and beyond:

- 1. Conquering the SME energy management market will become a major focus. Over the past three years, solution providers have been trying to open up the small and medium enterprise (SME) energy management market by launching more cost-effective solutions (see Verdantix SMEs Are The New Battle Ground For Energy Propositions). For example, in 2014 Schneider Electric launched SmartStruxure Lite, a wireless BMS designed for smaller-sized buildings, and E.ON launched an online energy saving tool for its UK SME customers. In 2015, Verdantix predicts that more solution providers will move into the SME energy management market with lower-cost solutions that are software-based or use wireless technologies. Our research finds utilities will be in a strong position to leverage their existing relationship with SMEs to provide basic energy services, such as personalized energy insights supported by software solutions from firms such as C3 Energy, FirstFuel, Opower and Pulse Energy (acquired by EnerNOC).
- 2. Energy management software firms will target partnerships with services firms. A growing number of energy management software providers have been honing in on the value of working with channel partners as they seek to grow their customer bases. While software vendors will continue to sell directly to large end consumers (such as large retailers or banks), they will increasingly look to work with partners (including energy consultants, facilities management firms and power utilities) who can integrate their software platforms in a broader suite of energy services offerings. This partnership model can help overcome some of the challenges in selling software to firms that have no internal facilities teams to respond to faults diagnosed with the software, which makes it harder to realize value from investment (see Verdantix Business Case For Building Energy Management Software).
- 3. **Data disaggregation will become a market disrupter.** Data disaggregation is a set of statistical approaches that can break down end-use energy consumption or appliance-level data from an aggregate energy data point. While this technique is still in its launch phase, it has been gaining market acceptance and proving value over the past few years. For example, FirstFuel and Retroficiency have been using disaggregation algorithms for virtual energy audits across commercial buildings, and Bidegly and Onzo have been using the technique for home energy efficiency messaging. Verdantix predicts that from 2015 a wider set of energy management software firms will form partnerships to boost their data disaggregation capabilities to compete with disaggregation startups that are also gunning for a share of the residential and building energy management market (see Verdantix FirstFuel A Smart Choice for Opower Partnership).
- 4. **Industrial firms will start to realize the benefits of flexibility.** In deregulated markets utility tariffs are often complicated. Where (and when) time-of-use pricing is introduced (such as in Australia and some US states), another level of complexity is added as

utilities use price signals to manage supply and demand. Verdantix research shows a greater awareness by firms that energy bills are not just driven by total consumption; peak demand and time-of-use also play a significant part. Witness Tata Steel incurring a £1 million (\$1.56 million) cost when it accidentally operated during a half-hour peak period in the United Kingdom in February 2014. Firms that can be flexible in terms of when and how much energy they are using will benefit from significantly lower energy bills. Demand response (DR) services are well known in some markets: for example, mineral processing firm Doral already receives around \$500,000 in DR payments annually from EnerNOC. Verdantix expects to see an increasing number of industrial firms investigate additional opportunities to smooth their load profiles and shift load from peak to off-peak times.

- 5. Awareness will grow over how energy management combines with operational excellence. In the industrial sector, the primary aim of most manufacturing facilities is to achieve optimal operational efficiency with site managers focusing on projects that boost productivity (see Verdantix Market Overview: Industrial Energy Management). Verdantix research shows that alongside this, there is increasing awareness by firms of how energy management strategies (such as load shedding or DR) can combine with operational excellence-based strategies. For example, Lisheen Mine a zinc producer in Ireland is using 6MW of back-up generation to provide power to the grid during times of grid strain under an energy curtailment plan managed by EnerNOC. Lisheen Mine has found that during dispatches, the mine earns more for curtailing energy than it would for continuing production.
- 6. **Home energy management solution providers will try to crack the Asian market.** In 2007, the first wave of home energy management (HEM) activity focused on the United States market, due to smart meter deployments and state energy efficiency targets for the utilities sector. Since 2013, HEM has been gaining traction across Europe with solution providers, such as C3 Energy and Opower, winning deals with power utilities in countries including Italy and the United Kingdom. From 2015, Verdantix forecasts that solution providers will look to open up opportunities in Asia as residential smart meter deployments a key enabler of HEM start to ramp up in Asia and wind down in the United States. Solution providers are likely to focus on areas such as Japan and South Korea where there are high residential energy prices and the governments have strong smart grid agendas (see Verdantix Home Energy Management Market Gears Up For Growth).
- 7. Smart thermostat success will bring home automation back to the fore. Over the past decade there has been much hype about the smart home, but this market has largely failed to gain traction beyond luxury instalments. One exception has been smart thermostats, which were a hot topic during 2014 with Google's acquisition of Nest for \$3.2 billion, and numerous product launches by firms, including ecobee and Honeywell, which were aimed at the mass market. While complex whole-home systems will remain in the high-end niche in 2015 (due to high prices and lack of interoperability), smart thermostats will be the standout product on the back of which suppliers will position different home energy management solutions, with benefits focused on convenience and home comfort.

8. Utilities will become the focus point for energy services. Over the past half-decade, firms from multiple sectors – such as engineering, facilities management and power utilities – have launched new energy services lines looking to capitalize on the big energy opportunity. In the United Kingdom, for example, there have been a number of high-profile acquisitions by power utilities as they look to differentiate themselves from competitors and move into new market segments. For example, in 2013 E.ON acquired Matrix – a UK-headquartered energy services firm – for between £85 million and £100 million (\$132 million - \$155 million), and in 2014 SSE acquired The Energy Solutions Group for £66 million (\$103 million) (see Verdantix Matrix Deal Fuels Competition In UK Energy Services Market). E.ON is also planning to spin off its fossil fuel and nuclear generation into a new firm, to focus on renewables, distribution networks and energy efficiency services. With many large deals already completed, Verdantix predicts 2015 will be a year when utilities put it all together and try to establish themselves as significant players in the energy services market.



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