Business Intelligence in the European Utilities Industry

Neither Performance nor Operational, But a Call for *Pervasive* Intelligence

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Do you have the right information to compete in the complex European utilities environment?

Delivering gas, water, and electricity to customers is increasingly complex, and European utility companies have new reasons to seriously reconsider their use of business intelligence (BI) tools across their enterprises.

Utilities are finding their business-as-usual approach continuously challenged. The recent economic crisis may have slowed the pace of competition in the European retail energy markets, but directives on emission reduction, energy efficiency, and renewable and distributed energy, as well as pressure on quality, security of supply, and cost reduction in regulated businesses, continue to place new demands on utilities. Market forces are driving utilities to reassess their BI needs in terms of domain of application, type, and number of users.

European utilities, for example, have become the target of evolving environmental legislation forcing them to adhere to CO2 emission standards, as defined under the European Union Emission Trading Scheme (ETS) and the European Union Climate Package. These standards are forcing utilities to measure, manage, and report their carbon emissions. Companies need to use business intelligence to understand how all of their activities contribute to their carbon footprint; make daily or, in some cases, real-time adjustments to operations; automate regulatory reporting; and use analytics to support carbon trading.

Market competition is forcing utilities to reduce their cost to serve, protect their margins, and at the same time improve customer satisfaction. This requires more sophisticated insight into and knowledge of customers — for instance, integrating customers' financial information from external sources.

Initiatives to deploy smart meters and transform existing distribution networks into smart grids are gradually being developed in a number of European countries. This is leading utilities to manage exponentially larger volumes of time-series of data coming from smart meters, grid sensors, and other intelligent devices. The key here is the ability to turn this data into actionable information for utility grid operators, retail energy providers, consumers, and other key stakeholders.

Security of supply concerns have led to plans to integrate country and regional grids into a trans-European network. This raises the issue of data and information sharing among multiple entities. Utilities will be required to collaborate in real time, based on metrics such as energy prices, supply and demand forecasts, system congestion, and other indicators based on advanced analytics.

Pervasive BI Translates Into Tangible Business Benefits

Other examples could be made, but together these forces are moving utilities towards the need for pervasive business intelligence, which increases the number of business intelligence users within the enterprise, processes much larger volumes of data, moves decision cycle times closer to real time, and relies on more sophisticated analytics (e.g., predictive analysis, content analysis, process awareness).

IDC recently completed a study of pervasive BI based on a global survey of more than 1,500 companies. It analyzed what it means to have pervasive BI, where organizations need to invest their limited resources to have the greatest impact, and how organizations can make a business case for additional BI investment. What emerges from this study is that utilities, compared with other organizations, are not yet pervasive users of BI. Utilities have traditionally shown a good understanding of the value of effective modeling, planning, monitoring, analyzing, and reporting. Thus, despite the fact that they are strongly focused on business process improvement, and have formal performance management methodologies in place, the use of BI is still fragmented and not well coordinated within the organization. The survey clearly showed that there is room for improvement.

By expanding BI use outside the traditional narrow focus areas, such as finance, load research, customer insights, and energy trading, into operations utilities can optimize the performance of core business processes such as grid management, field workforce management, and meter-to-cash processes.

The adoption of advanced analytics in generation management enables more efficient plant operations and better long-term planning.

Overall, a pervasive adoption of BI ensures that more effective and informed decisions are taken at each level of the organization, enabling drilldown capabilities to understand how conclusions are reached. This helps experienced utilities managers, as well as less skilled resources.

Your Competitors are Taking Action — Are You?

The level of investment required in BI and the ROI differs case by case, but adoption is generally extremely appealing when applied to utilities' core processes. Effective BI investments can help utilities understand how their business is performing — from front-line employees to senior management — to enable better decisions, better actions, and efficient business processes.

IDC Energy Insights recommends that utilities:

- Consider building a business case for additional BI investment based on the need to increase operational intelligence with respect to generation, transmission, and distribution networks, and the need to cope with exponentially increasing data volumes resulting from the deployment of smart meters and other intelligent devices.
- Look at implementing BI solutions not just for management decision making, but also to provide all employees with the right information to effectively carry out their roles.
- Understand what end users need and deliver the right analytical tools and functionalities to the relevant group. In a changing environment, needs are also evolving.
- Pay attention to training users. One of the biggest barriers to pervasive BI implementation is the capability of users to understand the meaning of data and how the use of BI tools can improve their job.
- Invest in data quality and consistency. Bad data translates into useless or wrong information.

Smart utilities mean smart thinking. A company culture that recognizes the value of information-based decision making is the best way to realize the benefits of pervasive BI adoption.

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