Emerging Markets Smart Grid: Outlook 2017

BRICS
Central & Eastern Europe
Eurasia
Latin America
Middle East & North Africa
South Asia
Southeast Asia
Sub-Saharan Africa

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Emerging Markets Smart Grid: Outlook 2017

Northeast Group’s Emerging Markets Smart Grid: Outlook 2017 is the sixth edition of its annual emerging markets smart grid overview. This study looks ahead over the next decade to project where smart grid infrastructure investment will occur in developing countries. To-date, most smart grid investment has been concentrated in developed countries. This mainly includes countries in North America, Western Europe, and East Asia. These markets represent over 75% of the current installed base of smart meters and many of the pioneering distribution automation, analytics, home energy management, and other smart grid initiatives. But many countries in the rest of the developing world are positioning themselves to quickly catch up. The 50 countries in this study have all begun to explore smart grid deployments, and in many cases have advanced regulatory frameworks and extensive pilot projects in place. With GDP growth rates more than double those in the developed world (5.1% per year from 2017 – 2021), these 50 countries will have the funds available to undertake significant grid modernizations.

Emerging market countries can reap immediate benefits from smart grid infrastructure investment. Many of these countries suffer from rampant non-technical losses – mostly due to electricity theft – that cost in aggregate $64.7 billion dollars each year in lost or unbilled revenue. Furthermore, all of the countries in this study face high rates of electricity demand growth, straining existing infrastructure, and worsening what are in many cases already unreliable electric grids.

The findings from this study show that 40% of the countries are already ready for significant investment in smart grid infrastructure. This means that they not only have well-developed regulatory frameworks, but also have the underlying market conditions (through high T&D loss rates, high electricity prices, and enough high-income residents) to justify smart meter deployments. Other smart grid initiatives will follow smart metering, with distribution automation the second largest overall segment ($51bn from
In addition to regulatory frameworks and T&D loss rates, further key criteria for assessing smart grid potential include existing industry structures, current electricity prices (and whether or not they are subsidized), financing mechanisms, the potential for operational benefits, and other efficiencies. Of the 50 countries, almost all of the Central & Eastern European (CEE) countries studied meet these criteria, while some countries in Latin America, Middle East & North Africa, and Southeast Asia do as well. Meanwhile, the other countries in this study show the potential to progress quickly over the course of the coming decade.

Perhaps most significantly, 21 of the 50 countries in this study have some form of smart meter target. In the cases of CEE countries such as Estonia, this is already leading to large-scale deployments and full smart meter penetration can be expected in the near term. In other countries, the targets serve as guides or only mandate deployments to high-consumption residents. In all cases though, these targets are pushing regulators to adopt complimentary regulations that will drive the smart grid market. Additionally, smart meter pilots have already begun in many of the other countries where there are not yet targets. As a result, the overall smart meter penetration rate for the 50 countries in this study is expected to reach 74% by 2027.

Key questions answered in this study:

- What are the key themes for the global smart grid market in 2017?
- How will new LPWAN standards affect emerging market deployments?
- Which tenders are expected for 2017 and which tenders are stalling?
- What smart grid activity took place in emerging markets in 2016 and what is expected for 2017?
- Who were the leading international vendors in emerging markets? What is their market share in emerging markets? Who are the most important local vendors?
- What is the forecast market for AMI, distribution automation, wide area measurement, home energy management, and IT in each emerging market region?
- How do emerging markets compare with developed countries in forecast deployments?
- Which countries were most active in developing smart grid-related policies and which countries took a step back?
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- Table: Industry structure;
- Table: Regulatory framework;
- Chart: Regional smart meter potential;
- Chart: Regional electricity consumption per capita (kWh);
- Chart: Regional electricity prices (cents per kWh);
- Chart: Regional T&D losses (%).

Therefore, this study includes an additional 128 unique charts and tables in addition to those cited above.
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