



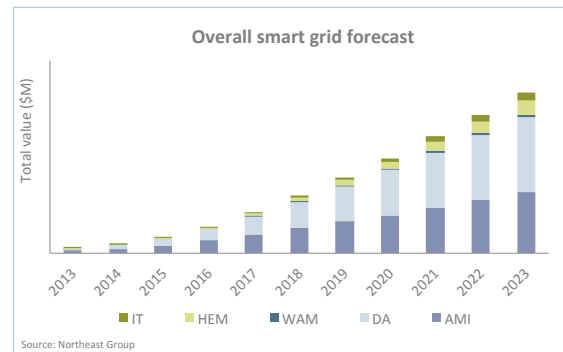
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South America Smart Grid: Market Forecast (2013 – 2023)

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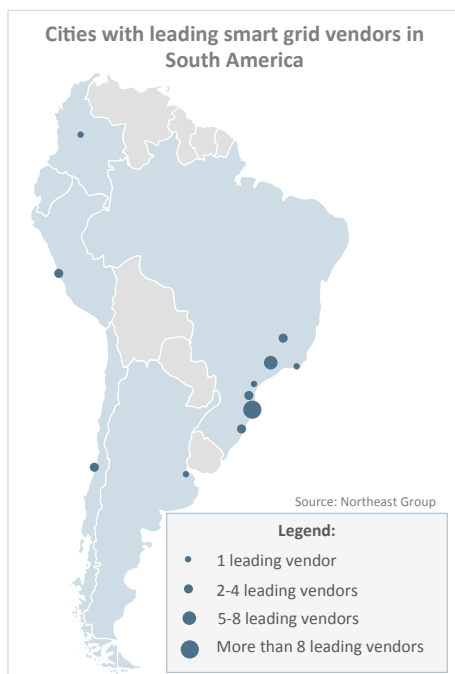
South America Smart Grid: Market Forecast (2013-2023)

South America is one of the most attractive emerging market regions for smart grid. It is comprised of countries with increasingly proactive regulatory frameworks and core business case indicators that point towards immediate benefits from smart grid. By 2023, the region's total smart grid market will cumulatively reach nearly \$50 billion. This includes investment in advanced metering infrastructure (AMI), distribution automation, wide area measurement (WAM), home energy management, and information technology.



This study covers all ten Latin countries in South America,¹ which share several key characteristics. They are fast growing economies with burgeoning middle classes, yet still have some of the highest electricity theft rates in the world. They have abundant renewable sources of power—particularly large hydropower—but their grids are struggling to meet rising demand. Further distributed renewable energy resources are also becoming increasingly attractive across the region. Lastly, they have governments eager to keep electricity prices low, but wary of increasing subsidies.

Throughout South America, smart grid is now viewed as a solution to many of the challenges the region is facing. Eight of the ten countries already have significant pilot projects in place, while half of the countries have begun to develop some form of smart grid roadmap. Brazil is leading the way with pilot projects dating back to the mid-2000s, over one million smart meters deployed and a number of smart city projects that are testing out a variety of smart grid applications. Furthermore, Brazil's government has set clear regulations for smart meter deployments and created incentives for residents to install small-scale solar PV along with smart meters. As the largest country in the region, Brazil will drive the market—its conditions are similar to most other South American countries and regional standardization is improving.



But Brazil is not alone in its smart grid development. Ecuador has set an even more ambitious timeline for smart grid deployments, while Colombia and Peru are in the process of finalizing smart grid roadmaps. Chile is developing its own smart city projects, Argentina is funding smart grid R&D, and even Paraguay is developing smart meter pilot projects. Beyond AMI, distribution automation is a focus for almost all South American utilities due to high outage rates, and several South American countries are also currently developing phasor measurement unit projects throughout the transmission grid.

The key driver of these initiatives is the unique near-term and long-

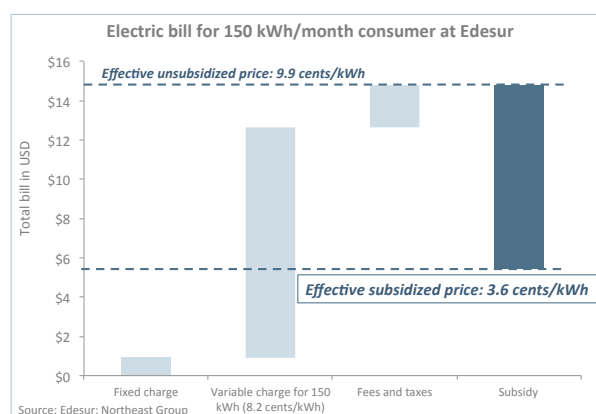
¹ The study covers Brazil, Chile, Colombia, Argentina, Ecuador, Peru, Paraguay, Uruguay, Venezuela and Bolivia. It does not include Guyana, Suriname, or French Guiana.

term benefits South American countries will receive from smart grid. Unlike some of the more developed emerging market countries, South American utilities will receive near-term savings from smart meter deployments by reducing non-technical losses. At 15.5%, the regional distribution loss rate is the highest in the world. But there are also important long-term benefits to smart grid that help win governmental support—rising middle classes mean that demand response programs will grow in importance and developing the region’s strong solar, wind, and small hydro resources will require smart grid to help manage the increased variability. Utilities can therefore make near-term deployments to help reduce losses, while laying the groundwork for long-term benefits.

Current smart grid activity remains in the early stages and there are some challenges to overcome. Most notably, in 2012 Brazil chose not to mandate smart meter deployments, deciding its target would be non-binding. There have also been delays due to the high cost of smart meters and other smart grid infrastructure when compared to South America’s comparatively low income levels. In poorer countries like Bolivia, smart grid will not be feasible on a large scale for several years. Other delays are simply the result of regulatory lag that is common in the region. But these factors are slowly changing—incomes are rising, smart grid infrastructure prices are falling, and regional collaboration is creating regulatory frameworks that can be adopted throughout the region. As a result, South American countries are poised to reap the significant benefits of smart grid, with significant investment expected throughout this decade.

Northeast Group’s *South America Smart Grid: Market Forecast (2013 – 2023)* study is over 260 pages in length. For each of the ten countries, the study has 10-year forecasts for:

- AMI;
- Distribution automation;
- Wide area measurement;
- Home energy management;
- IT.



The study also includes a 15-page stand-alone executive summary for a quick synthesis, along with full regional and country-by-country analysis of regulatory frameworks, drivers, and utility and vendor activity. It also comes with an excel file that includes over 2,300 data points covering all segment forecasts for each country.

Key questions answered in this report:

- How large will the smart grid market in South America become over the next decade?
- Which market segments beyond AMI are likely to develop in South America?
- What are the details of the emerging national smart grid roadmaps?
- Which vendors are already active in South America and which local vendors are they partnering with?
- Which utilities already have large-scale smart meter rollouts planned and when will they be complete?

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