Meeting the Integration Challenge in Smart Meters

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Executive Summary

In many countries, the smart grid is quickly progressing from vision to reality. Thanks to fiscal incentives and government mandates, utilities have advanced from pilot projects to full-scale rollouts, and they’re beginning to realize the benefits of advanced metering infrastructure (AMI) and other smart grid technologies.

However, a number of countries are still sitting on the sidelines evaluating their options. The European Commission recently conducted a benchmark study of Member States investigating why 40% do not plan on initiating large-scale rollouts before 2020. The study concluded that without fiscal incentives, the business case for smart meters is far from clear.1

The fact of the matter is that utilities are pinched between massive outlays for smart grid infrastructure and declining CapEx spending. Understandably, they are taking a hard look at their deployment costs versus ROI, and in many cases these numbers don’t support deployment. When explaining why they are not proceeding with an AMI rollout, utilities cited two reasons: 1) the meters themselves are still too expensive; 2) their lifespans are too short, sometimes as little as 8 years. Meaning utilities would be forced to replace the meters before they’ve recouped their original deployment costs.

This is a critical insight for meter manufacturers. Focusing exclusively on unit cost can leave you with a product that won’t meet utility requirements for lifespan and, therefore, won’t sell. To win in this market, you need to strike a balance between sticker price and meter capabilities. Utilities will continue to focus on unit cost, because when meter rollouts run in the billions, every dollar in BOM reduction can deliver millions in CapEx savings. However, you should not overlook the importance of meter lifespan in the final cost-benefit analysis conducted by utilities.

This raises a considerable challenge for meter designers. Extending meter lifespan requires adding more memory, processing power, and capabilities than needed for today’s applications. Yet, you must do this while carefully managing unit cost. Meter manufacturers who master these competing demands will find themselves on the winning side of cost-benefit analyses, and enjoy greater share of this multibillion dollar opportunity.

This white paper takes a closer look at the capabilities demanded by utilities and the integration challenges they raise. Read on to learn how new developments in analog integration can help you close the gap between meter requirements and cost.

1 European Commission, “Benchmarking smart metering deployment in the EU-27 with a focus on electricity” (Brussels: June 17, 2014).
2 TechValidate, “Analog Integration Market Study” (Sept. 9, 2014).
Table of Contents

Executive Summary 1
Capitalizing on the Smart Grid Opportunity 2
The Growing Integration Challenge 2
Securing It All 3
The Hidden Costs of Discrete Solutions 3
Advantages of an Integrated Approach 4
Seizing the Integration Advantage 6