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Smart Appliances

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Abstracts

Smart appliances will play a critical role in the transformation to Smart Grid infrastructure adoption. Smart appliances are products that use electricity and have the ability to receive, interpret, and act on a signal received from a utility and then automatically adjust their operation to save energy or perform other functions. The growth and development of smart appliances represents a substantial component of the residential demand response capabilities of the Smart Grid. Smart appliances are sold as standalone products and marketed as highly energy-efficient machines that operate independently with minimal user maintenance. Despite this sales approach, SBI Energy finds that the growth trend of the global market for smart appliances is dependent upon the successful development of the larger electric Smart Grid.

Although it is not a requirement for smart appliance use, consumers can optimize the benefits of smart appliances by connecting them to a Home Energy Management System (HEMS) that maximizes the use of home electricity and is capable of trimming an estimated 15% off annual electric bills. Utilities, meanwhile, are looking at the much broader picture of Smart Grid infrastructure development and the consumer households that they serve. The utilities say the Holy Grail of the electric future depends on the successful overhaul of the grid, combined with the effective use of HEMS connected to smart appliances and smart meters at the home. Utilities and smart appliance manufacturers together agree that growth also highly depends on the willingness of consumers to adopt appliances and connect them to HEMS.

There are two main reasons why consumers will adopt smart appliances: either to gain an economic benefit from reduced energy costs or for the added conveniences some smart appliances bring to their daily lives. Consumers clearly expect an economic benefit to use smart appliances and are not prepared to change their behavior without the proper incentives from utility companies and appliance manufacturers. This report, “Global Market for Smart Appliances,” examines the market drivers for smart appliance

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adoption, including unit costs, manufacturing demand, regional and environmental factors, and consumer acceptance.

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