

# **Toshiba's Smart Grid Technology and Business Strategy Towards Low-Carbon Emission Societies**

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## **Abstract**

We at Toshiba are focusing our attention on efforts to improve efficiency and reduce carbon footprints through the development of Smart Communities that are equipped with sustainable, environmentally friendly infrastructure. We aim to utilize our expertise in a wide range of fields ranging from power T&D to water treatment and transportation systems in order to create the next-generation integrated infrastructure systems. We are currently actively involved in international projects for Smart Community development in Japan, France, India and the United States, among others.

This document provides Toshiba's prospects and solutions of Smart Communities. Globally, we have industrial towns upgrading their infrastructure to cope with surging global demand for products and services. To attain sustainable growth while minimizing environmental impact, we propose highly efficient, eco-friendly solutions for industrial towns to become 'Smart Cities'.

What are the Aspects of a 'Smart Community'?

1. More Ecology (Reduce CO<sub>2</sub> and Energy Consumption)  
Renewable Energy Systems, EV Systems
2. Better Quality of Energy (Maintain Stability of Energy)  
CEMS
3. Better Quality of Life  
HEMS, IT Health Care Systems, LED Monitor and Lamp
4. Better Economy (Energy Efficiency), CEMS, HEMS, BEMS
5. Others (Water, Environment)

We introduce our rich experiences in PJ of Japan, France, USA, China, India, and Singapore.

We have a wealth of smart community technologies. For example, Advanced Metering Infrastructure (AMI) System, CEMS (Community Energy Management System), Advanced Photovoltaic System, EV(Electric Vehicles ) charging station, Battery Energy Storage for Demand and Supply Balance, BEMS(Building and Energy Management System) - Optimized Air-Conditioning System and Neuro PMV Control as "cloud" service, HEMS(Home and Energy Management System) - Data Recording & Analysis System, and In-Home Monitor, and environment (High-concentration Organic Wastewater Treatment , Waste-Plastic Oil Reclamation System ), and the like.

We are grateful for this opportunity to present Toshiba's prospects and solutions.

Toshiba recognizes the importance of cooperation with various stake holders, and that continuous cooperation is necessary.

Toshiba hopes that interest is generated for our solutions, technologies and products as we aim to expand our business and become involved in more new projects globally.