

# **Power and Social Infrastructure Business Strategies**

**May 26, 2014**

**Fuji Electric Co., Ltd.**

**Power and Social Infrastructure Business Group**

- Business Overview
- Market Trends
- Business Targets
- Priority Measures

# Business Overview

## Power Plant

### 【Thermal power generation】

- Medium-capacity thermal power generation
- Combined-cycle power generation
- Biomass power generation



While focusing on medium-capacity generation, able to cover large-capacity combined-cycle power generation and coal-fired thermal power systems

### 【Hydroelectric power generation】

- Large-capacity hydroelectric power generation
- Small- to medium-capacity hydro electric power, Micro hydroelectric power



Cooperate with Voith Hydro of Germany (JV), with strength in low-head hydropower generation technologies

### 【Renewable, new energy】

- Geothermal power generation
- Solar power generation systems
- Wind power generation
- Fuel cells



- Cover wide range of output from small-capacity binary to large-capacity flash (geothermal)
- Strengths in system equipment based on EPC and power electronics technologies (solar power, wind power)
- Provide high-performance, highly reliable industrial phosphoric acid fuel cells

## Social Engineering Systems

### 【Power systems】

- Smart community
- Electric power systems
- Smart meters

### 【Social environmental systems】

- Social environmental systems



- Strengths in comprehensive capabilities leveraging our experience and expertise in various smart community pilot projects
- Introduction and expansion of smart meters benefiting from extensive expertise in watt-hour meters

## Social Information

- IT solutions
- Cloud computing

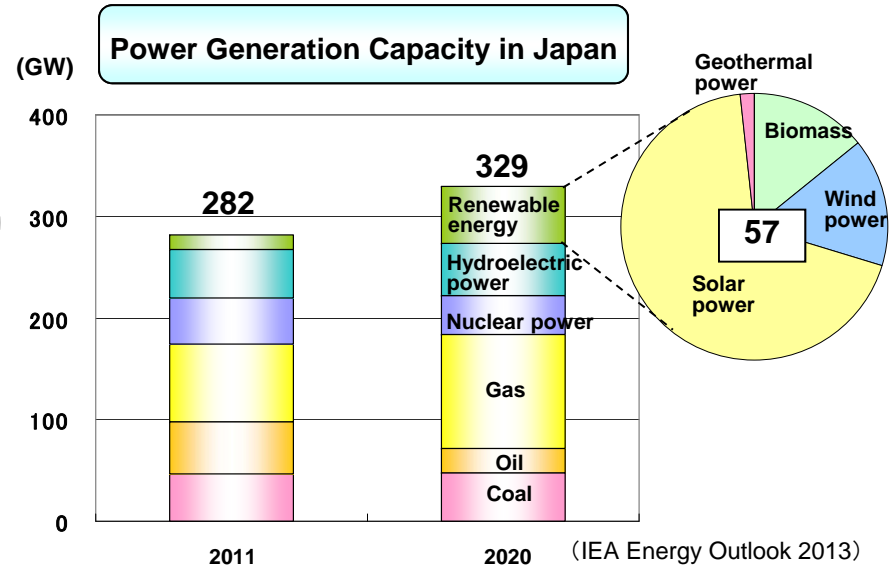
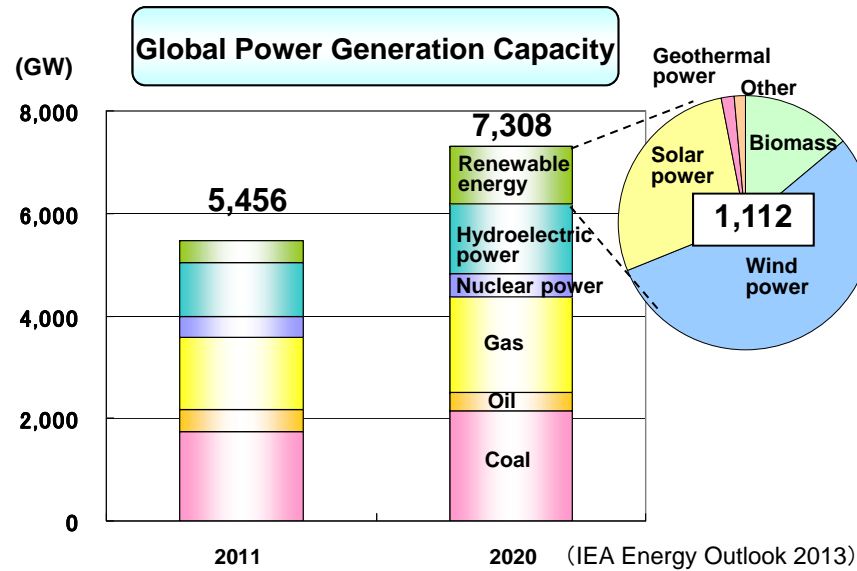


- Through cooperation with Fujitsu Ltd., IT infrastructure configuration and ICT support

# Market Trends

# Power Generation Market Trends

Ongoing global growth in electricity demand and increasing installation of generation facilities  
 In Japan, increasing introduction of large-scale thermal power generation and renewable energy

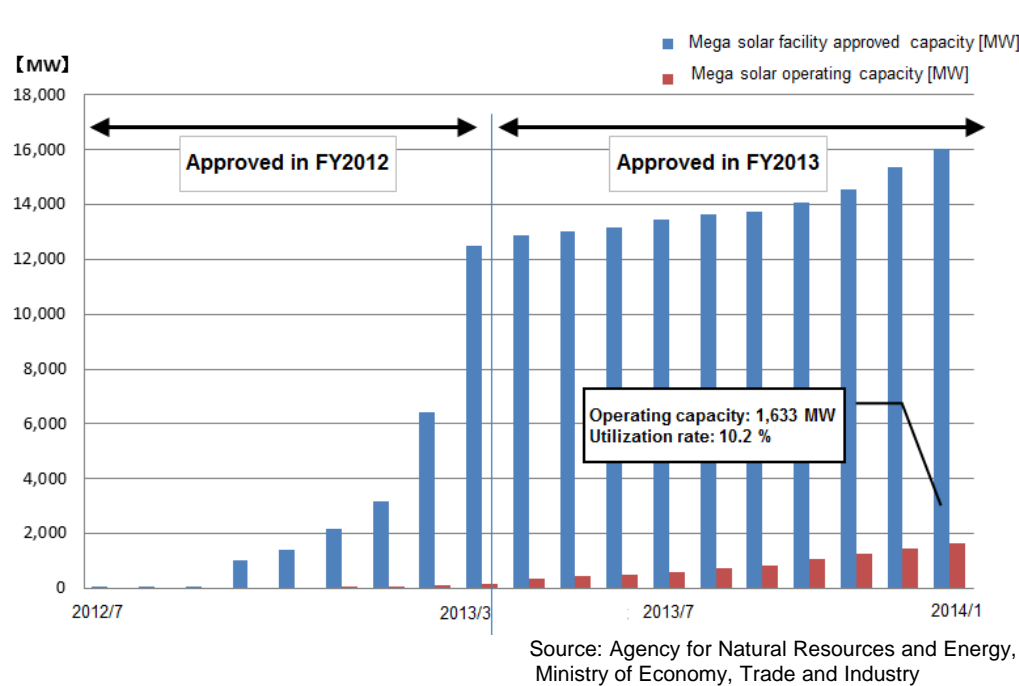


- Annual growth rate of 2.2% for global energy demand
  - Developed nations: 0.9% annual growth
  - Emerging nations : 3.3% annual growth
- Improvement of economic performance through higher efficiencies, and reduction of environmental impact
- Promotion of geothermal power generation system introduction by government measures and subsidies
  - Rising demand in Indonesia followed by Central and South America and Africa

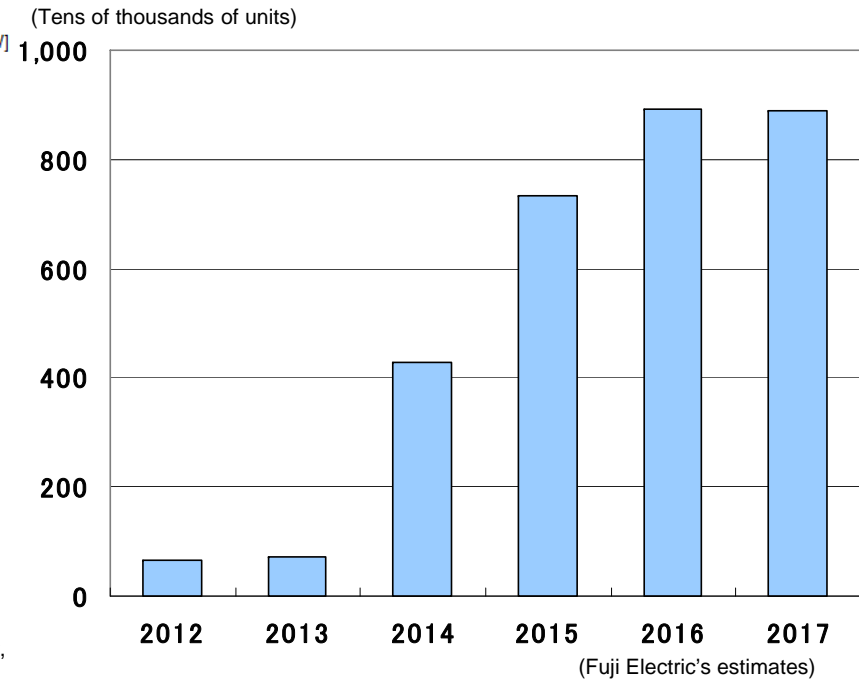
- Accelerated expansion of thermal power generation due to new IPP and PPS operators
- Increasing installations of highly efficient ultra-supercritical coal-fired thermal power and combined-cycle power generation systems

# Mega Solar / Smart Meter Market Trends

## Japanese Mega Solar Facility Approval and Operational Status



## Smart Meter Market Forecast



- [Mega Solar Trends]**
- Only 10% of approved generation facilities operational (as of January 31, 2014)
  - Ongoing demand for construction expected to last through 2017
    - Approximately three years required to build large-capacity mega solar facility

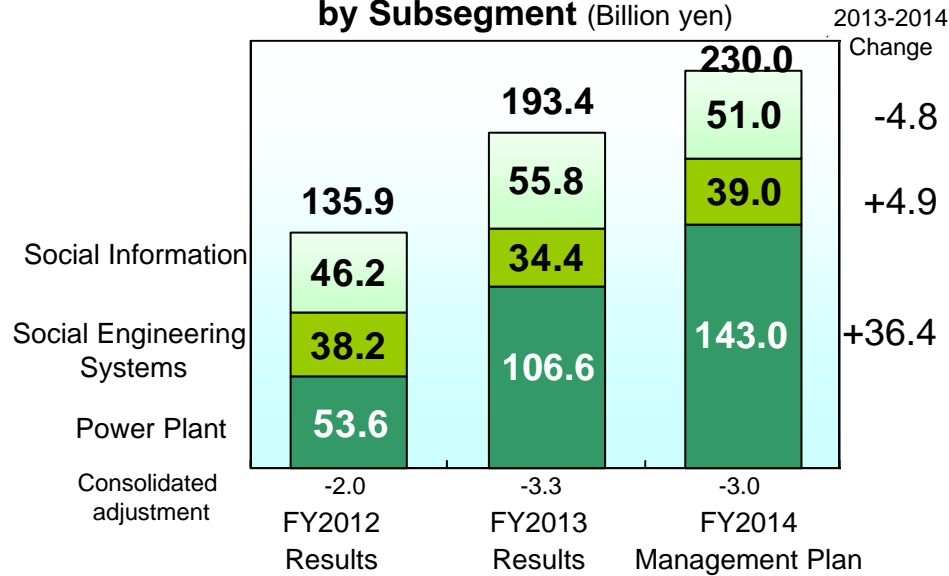
- [Smart Meter Market Trends]**
- Full-fledged deployment of smart meters from 2014 (Tokyo Electric Power Company)
  - From 2015, market expansion to meet meter replacement needs over period of approximately 10 years



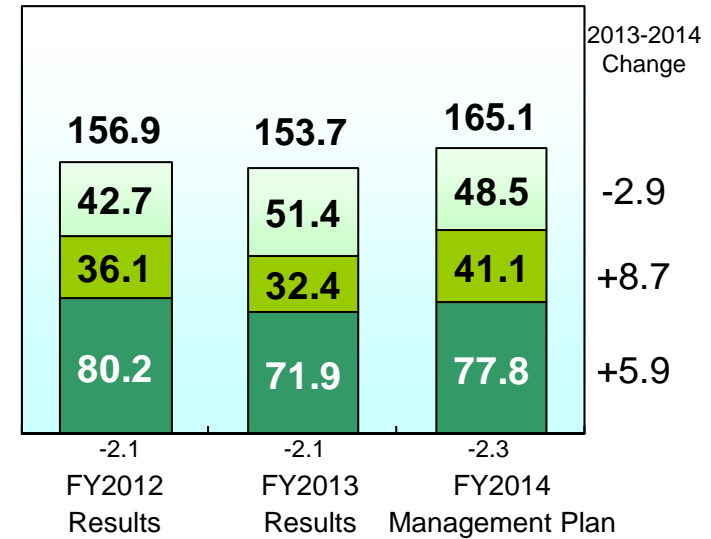
# Business Targets

# Business Targets

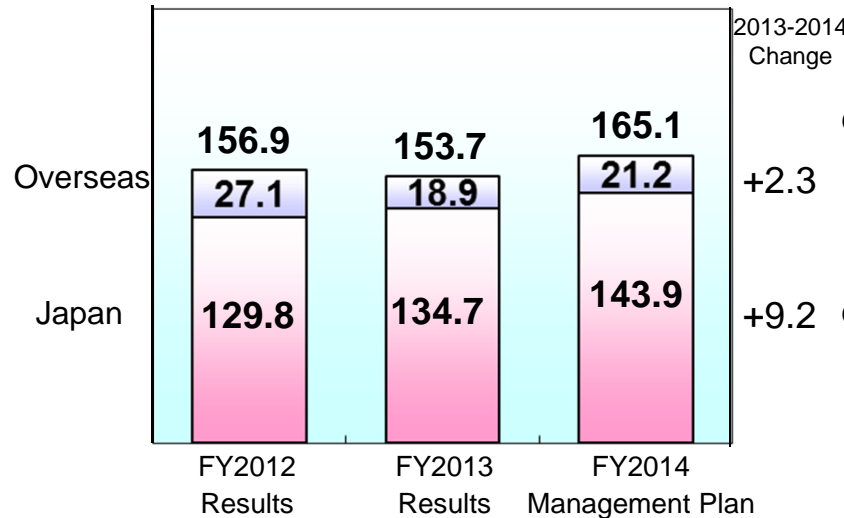
**Amount of Orders Received  
by Subsegment (Billion yen)**



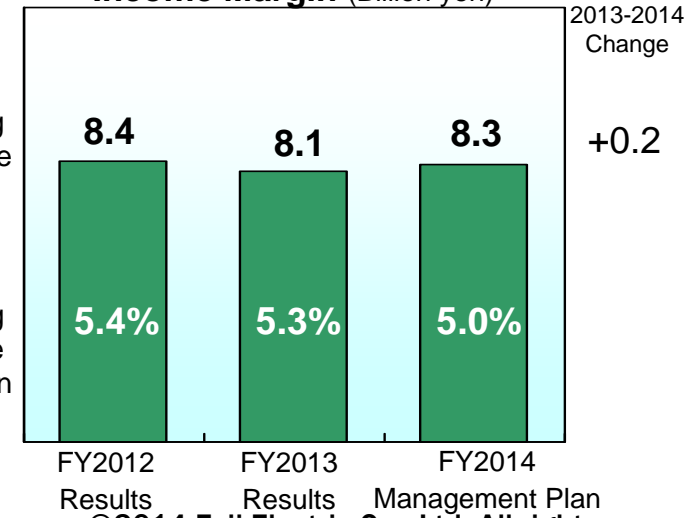
**Net Sales by Subsegment (Billion yen)**



**Net Sales in Japan / Overseas (Billion yen)**



**Operating Income / Operating  
Income Margin (Billion yen)**



# Priority Measures

## **Achieve business growth in conjunction with expanding demand for electricity**

- **Increase orders related to thermal power and geothermal power generation**
  - Boost orders from Asia and the Near and Middle East, where electricity demand is rising
  - Enter into large-capacity thermal power generation in Japan
- **Achieve ongoing orders for solar power generation systems**
- **Expand orders for fuel cells**

# Thermal Power Priority Measures

## Overseas thermal power generation

- Expand orders in Asia and the Near and Middle East through closer coordination with partners (EPC)

## Domestic thermal power generation

- Increase orders for large-capacity thermal power generation (IPP, PPS)
  - Enter into combined-cycle power generation through deployment of Siemens' state-of-the-art high-performance gas turbines
  - Enter into ultra-supercritical coal-fired thermal power generation

## After sales business

- Develop new technologies to improve efficiency and output of the existing units, and to shorten processes
- Establish local bases (engineering, manufacturing)



POSCO II PP Thermal Power Plant  
(Indonesia)



Okinawa Electric Power Company  
Yoshinoura Thermal Power Station (Japan)

# Geothermal Power / Solar Power / Fuel Cells Priority Measures

## Large-capacity flash geothermal power generation

- Continue strengthening operations in Asia, and expand orders in Central and South American and African markets
- Strengthen competitiveness through the development of highly efficient and reliable turbines

## Binary geothermal power generation

- Accelerate efforts to capture orders in the United States, New Zealand and Turkey
- Capture geothermal orders in Japan (medium-capacity facilities, generation from hot springs)

## Mega solar power systems

- Expand orders and sales by leveraging plant engineering capabilities
- Boost competitiveness through market launch of SiC-equipped PCSs

## Fuel cells

- **Japan** : Increase orders for FIT(feed-in tariff) projects utilizing sewage biogas
- **Overseas:** Accelerate business development through collaboration with European companies



Miyama Takayanagi  
No.1/No.2 Solar  
Power Plant  
(Fukuoka Prefecture,  
Japan)



Nga Awa Purua  
Geothermal Power  
Plant  
(New Zealand)

**Aim to achieve business growth against the backdrop of efforts to realize the stable supply of electricity and create a society filled with smart communities**

- Increase smart meter production capacity to facilitate orders and sales growth
- Undertake full-fledged development of the smart community business
  - Increase project orders for electrical energy storage control systems and microgrid systems for isolated islands
  - Expand orders for overseas ODA projects

# Smart Meter Priority Measures

**Establish production system**

- Increase productivity and product reliability through capital investment centering on automation
- Curtail costs through supply chain management

**Boost orders and sales**

- Commence deliveries to Tokyo Electric Power Company
- Undertake initiatives to meet demand from other electric power utilities
- Meet commercial demand for high-voltage power receiving equipment (condominiums, etc.)



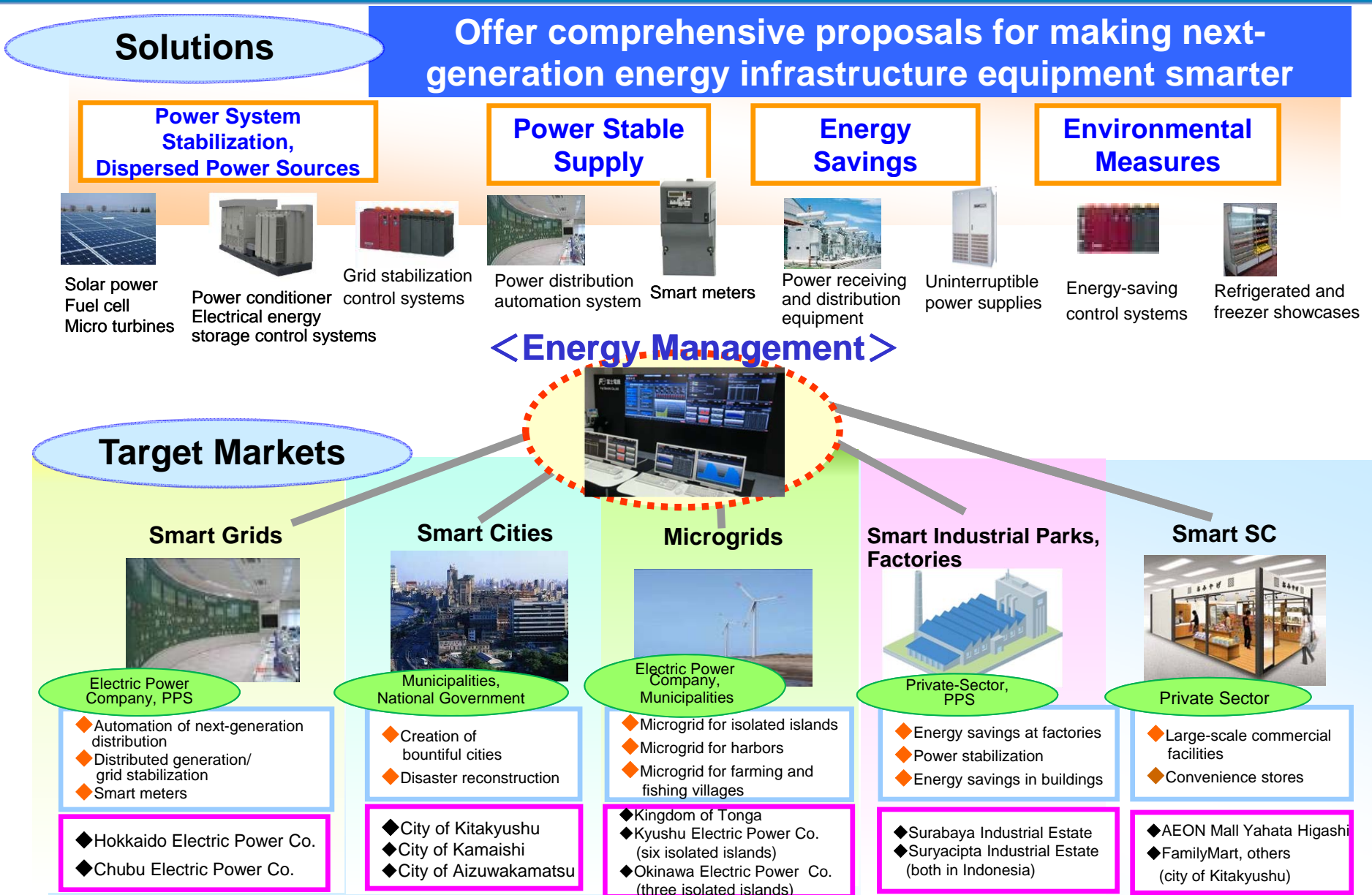
Automated line



Smart meters



# Smart Community Priority Measures



1. Statements made in this documents or in the presentation to which they pertain regarding estimates or projections are forward-looking statements based on the company's judgments and assumptions in light of information currently available. Actual results may differ materially from those projected as a result of uncertainties inherent in such judgments and assumptions, as well as changes in business operations or other internal or external conditions. Accordingly, the company gives no guarantee regarding the reliability of any information contained in these forward-looking statements.
2. These documents are for information purpose only, and do not constitute an inducement by the company to make investments.
3. Unauthorized reproduction of these documents, in part or in whole, is prohibited.