



YASKAWA Electric Corporation Corporate Profile

OCTOBER 20 2013

YASKAWA ELECTRIC CORPORATION

Profile

(As of March 20, 2013)

Corporate Name: YASKAWA Electric Corporation

Establishment Date: July 16, 1915

Head Office Location: 2-1 KurosakiShiroishi, Yahatanishi-ku, Kitakyushu
Fukuoka Japan

Capital: 23,062 million yen

Number of Employees: Consolidated 13,667
*including temporary employees

Consolidated Net Sales: 310,383 million JPY (FY 2012*)

Main Business: Motion Control
(AC servomotors, controllers and AC drives)
Robotics
System Engineering
Information Technologies



Head office

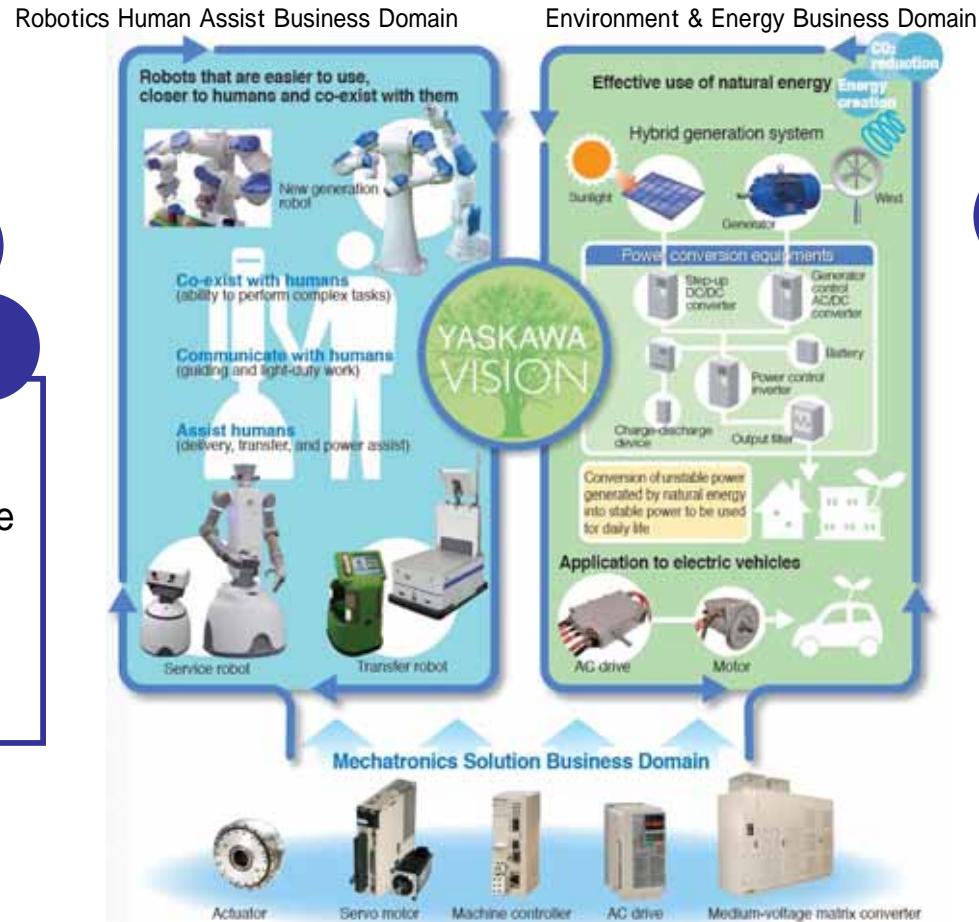
Designed by Antonin Raymond * and completed in 1954

* Antonin Raymond (1888-1976) was a Czech architect who became an American citizen. He came to Japan as the assistant of Frank Lloyd Wright who designed the Imperial Hotel. He later stayed in Japan and engaged in many projects. He is recognized as the father of modern architecture in Japan.

*FY 2012 means the consolidated fiscal year from March 21, 2012 to March 20, 2013.

2015 Vision

Toward the first centenary of Yaskawa Electric's founding in 2015, we are working on our vision of solving the global issues. We will use our core technologies in providing solutions to the aging society in industrialized countries and to the environmental and energy problems.



Coexist with humans

Assist humans

While working on the industrial applications as the core business, create a market for applications in which humans and robots coexist or work together

Energy saving

Energy creation

Focus on energy saving utilizing the AC drive technology and on power conversion equipment for the efficient use of renewable energy

Increase sales and profits through expansion of global operations and increase in added value

Business Overview

Motion Control

Core products

AC servo motors and controllers, Linear servo motors, General purpose AC drives, Power conditioners, Motor drive systems for EV, etc.



AC servo drives



General purpose AC drive



Power conditioner for photovoltaic power generation



Motor drive system for EV

Robotics

Core products

Arc and spot welding robots, Painting robots, Handling robots, FPD glass sheet transfer robots, New generation robots, Semiconductor wafer transfer robots, etc.



High path accuracy robot for laser cutting and welding



Assembly operation by a dual-arm robot



Delta robot

System Engineering

Core products

Electrical systems for steel plants, Electrical instrumentation systems for water supply plants and sewage treatment facilities, Large-scale wind power generator and converter etc.



Electric instrumentation systems for water and sewerage



Continuous-casting machine



Large-scale wind power generator and converter

Information Technologies

Core products

Computer peripherals, Laser-applied systems, Development of software, IT-related services, etc.



Scanner head for high-power laser



NetSHAKER ProxyBox

Positioning of Environmental & Energy Business

Promote business in terms of both “energy saving” and “energy creation”

Energy saving

Motors account for 50% of global electric power consumption.

Markets for motor control and its application to energy saving, as well as suppression of peak power and effective use of regenerative energy are significant. We enhance lineup of environmental-responsive products and solutions also in the existing business.

Inverter, Matrix Converter, Efficient motor,

Energy creation

Efficient creation of renewable energy by solar, wind and other sources is a global challenge.

We enter into the market with high-efficiency components and engineering capability.

Solar power, Wind power, Energy management system

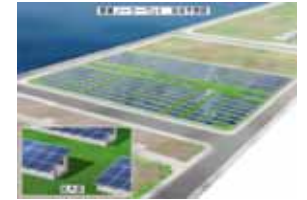
Business Expansion in “Environmental & Energy”

Create new value through optimal energy conversion technology for the use of “green energy”

Enter into energy service business



Energy service business to offer integrated solutions for “energy saving” and “energy creation” using our products



Hibikinada Mega solar power plant(2MW)
Completion in 9. 2013

Expand environment&Energy related components

Speed up commercialization of electric products for cars

PV power conditioner



Electrical products for large-scale wind power generation



Small wind turbine



Secondary battery



Rapid charger



Motor drive system for EV



Increase added value through strengthening the value chain
Expand business domain using core technology

Highly efficient components that contribute to CO₂ reduction

AC Drives, IPM motors, generators, matrix converters, switch-gear, etc.



Main Applications of System Engineering Business Products

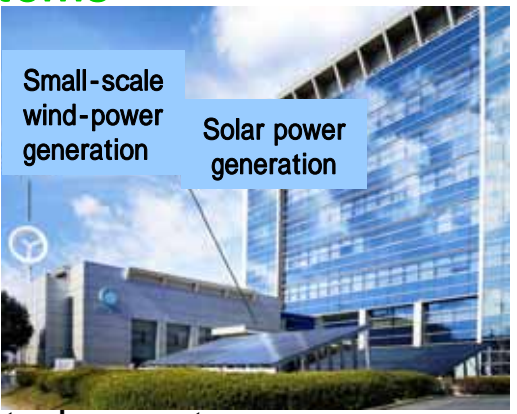
Environmental Energy Systems

Our efficiency and safety advance the environmental movement in many fields.

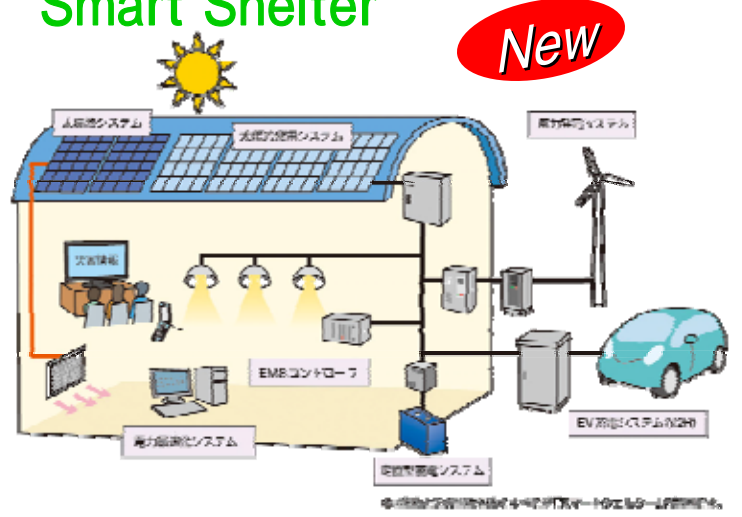
Kyushu Human Media Creation Center Hybrid Power Generation Systems



Generator monitoring system



Environment-conscious refuge business facilities Smart Shelter



Hiagari Drainage Treatment Center, Kitakyushu Large-Scale Solar-Power Generation Systems



Photovoltaic power conditioners



Kitakyusyu Smart Community (SC) Creation Project

CEMS, HEMS, BEMS, FEMS are demonstrated for the purposes of
A community energy sharing society, meaning a combination of existing energy and next generation energy
Achieving both total optimizing and part optimizing of community energy

HEMS

Solar battery, accumulator and fuel cell utilization and home electronics control are demonstrated applying CEMS

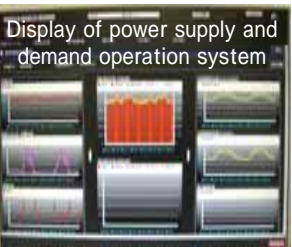


Eco drive support system



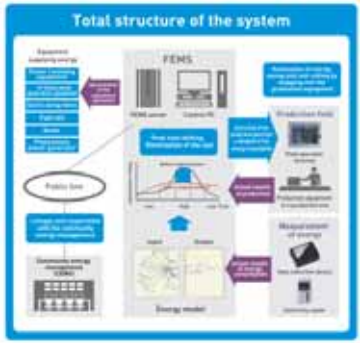
CEMS

Leveling fluctuation in the demand load of power and equilibrium of power supply and consumption are demonstrated applying dynamic pricing and incentive program



BEMS

Demand response for office, buildings, supermarket, convenience store, hospital etc. are demonstrated.



FEMS

Influence of industrial division for leveling equilibrium of power supply and consumption and keeping energy quality of community grid is evaluated.

Transport

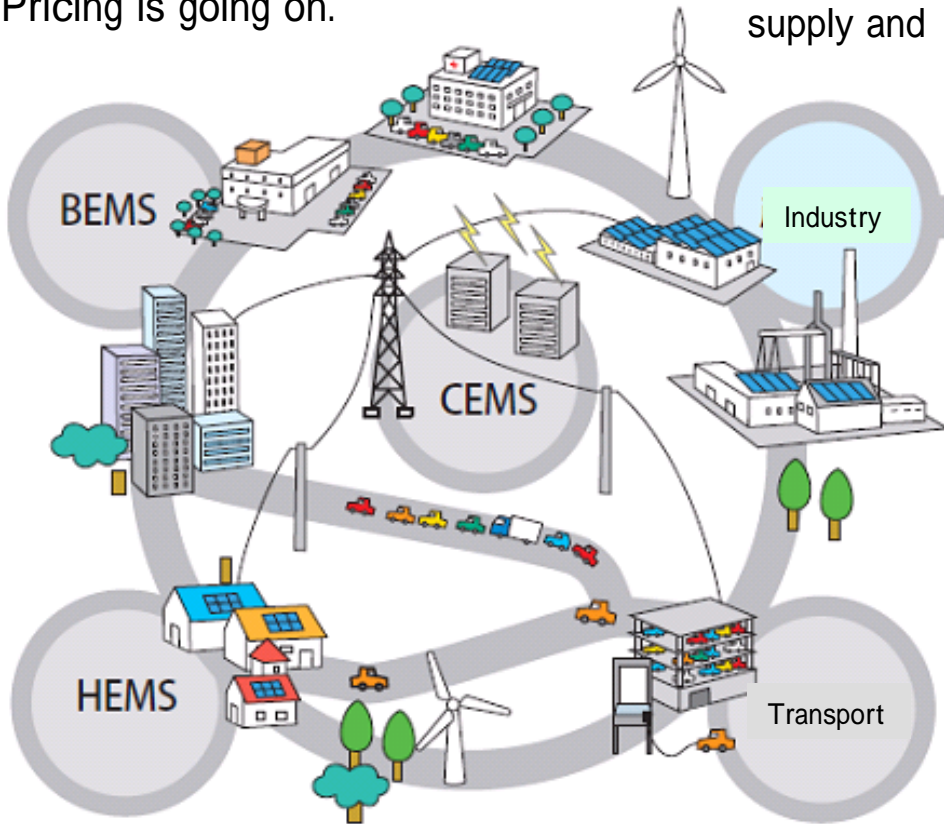
BEMS cooperated with CEMS, and EV electric charge and discharge control cooperated with FEMS are demonstrated.



Position of Yaskawa FEMS

Relationship between CEMS and each EMS

CEMS is connected to each EMS.
An experiment of Dynamic Pricing is going on.

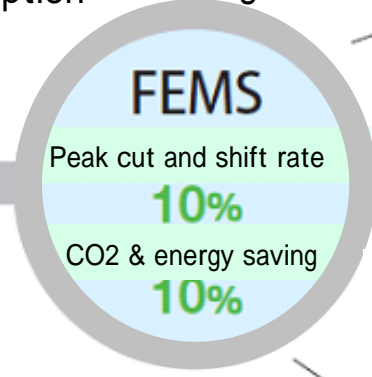


Request from CEMS

- Dynamic Pricing
- Equilibrium of Power supply and consumption

Yaskawa FEMS (Development theme in 2013)

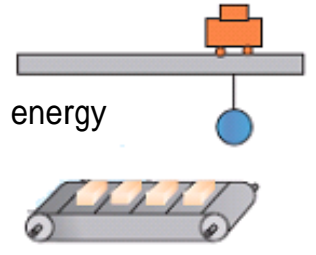
Yaskawa constructs process management for our motor factory, considering energy saving



A function to establish a production equipment operation plan including the energy assessment



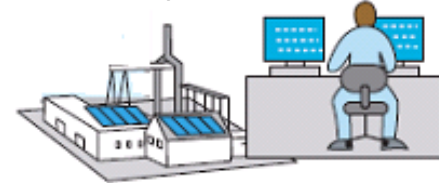
A function of the energy saving control to meet the function above



A function to level the fluctuation in the demand load of power



A function to analyze electricity for the production system



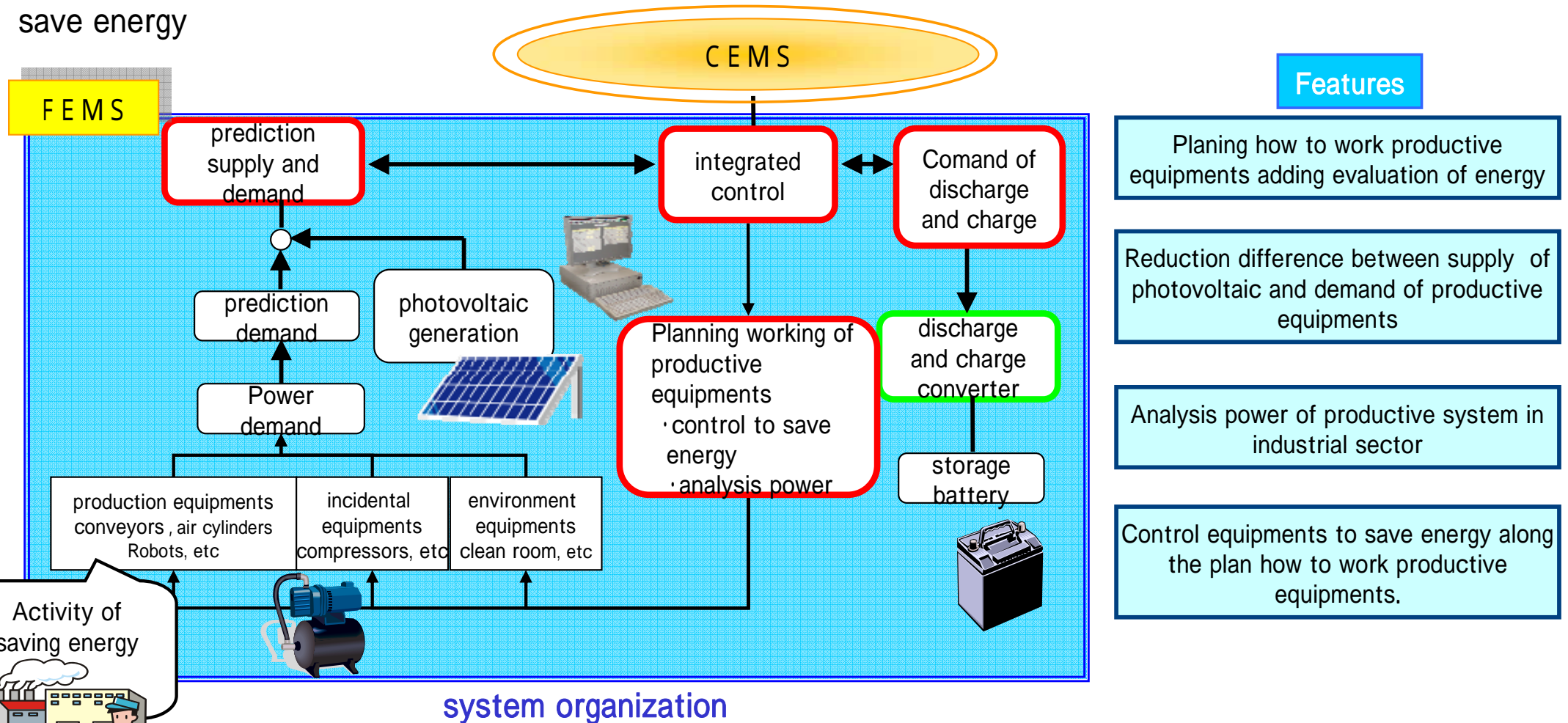
Factory Energy Management System (F E M S)

F E M S to accept common factories in industrial sector (A s s e m b l y F E M S)

It is structured to bring a balance between supply and demand in semiautomatic assembly factory

It can connect CEMS (Community EMS) to accept DP (Dynamic Pricing) and DR (Demand Response)

FEMS plans how to work productive equipments adding evaluation of energy, and reduces difference between supply and demand to plan about discharge and charge of storage battery and control equipments to save energy



Features

Planing how to work productive equipments adding evaluation of energy

Reduction difference between supply of photovoltaic and demand of productive equipments

Analysis power of productive system in industrial sector

Control equipments to save energy along the plan how to work productive equipments.