

ADB Knowledge Partnership Week

Hirokazu Yamaguchi

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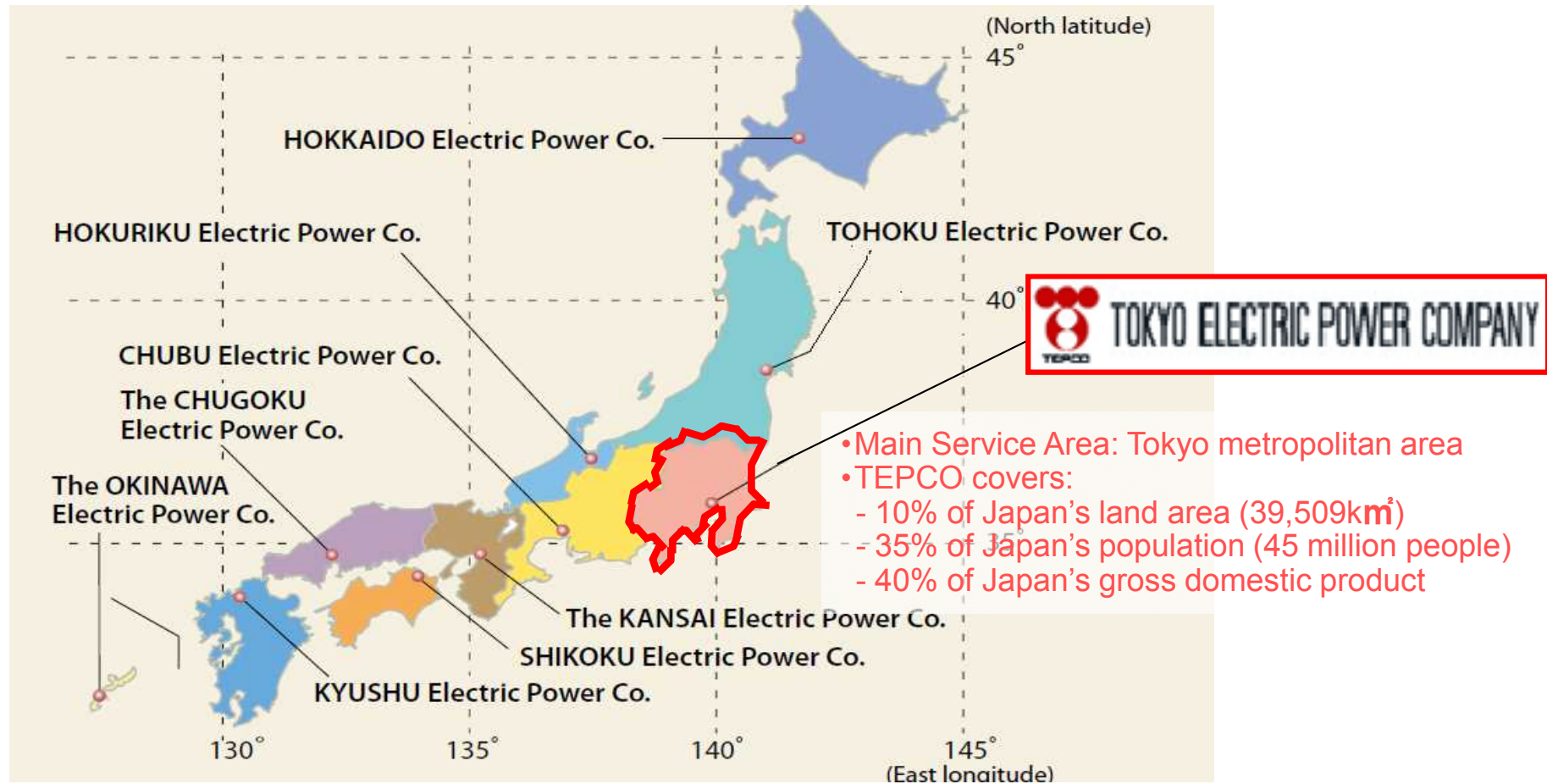


TOKYO ELECTRIC POWER COMPANY

TEPCO AT A GLANCE

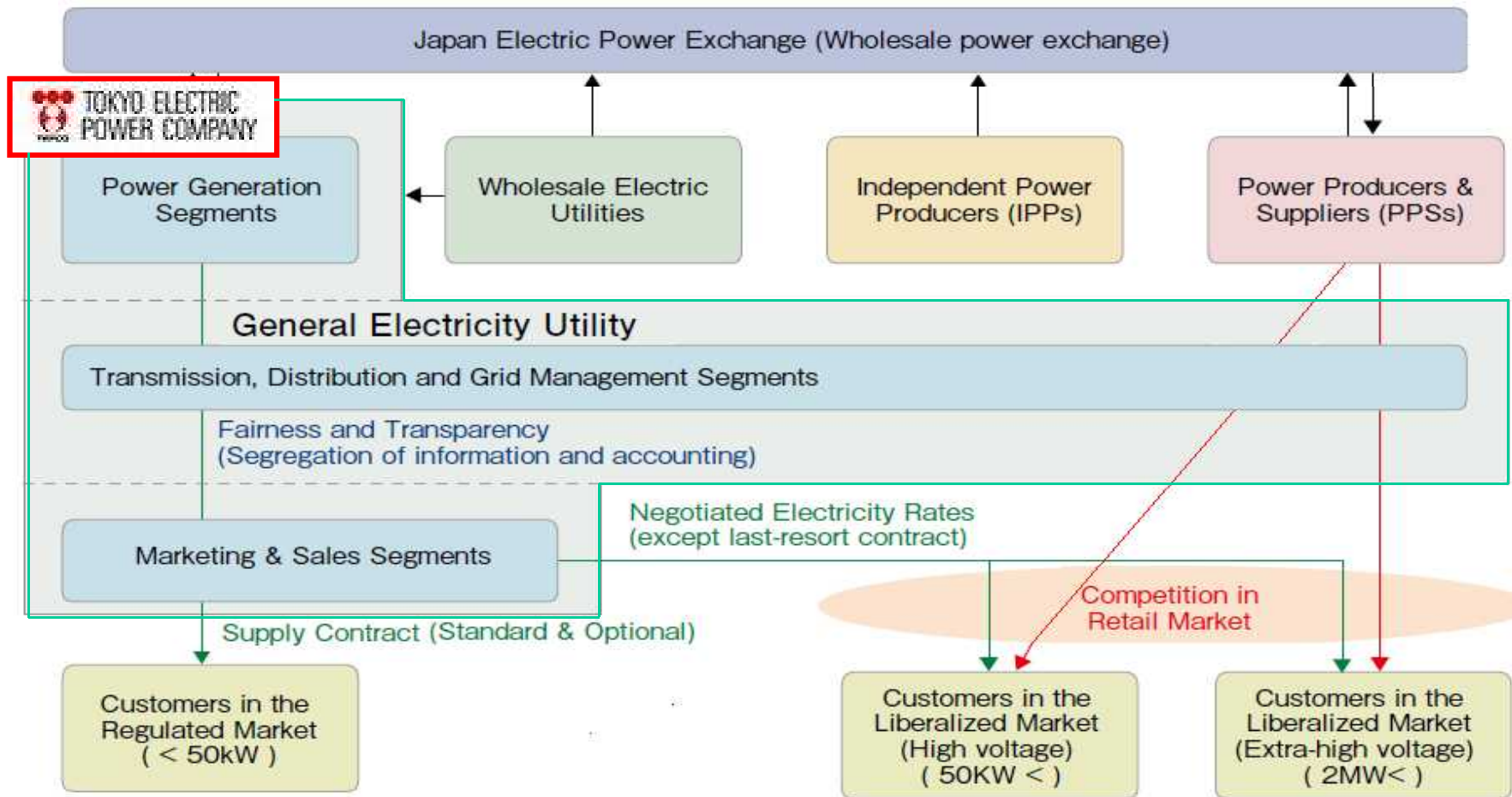
THE 10 ELECTRIC POWER COMPANIES BY SERVICE AREA

In Japan, 10 regional privately owned and managed General Electricity Utilities have the responsibility of supplying electricity to each region.



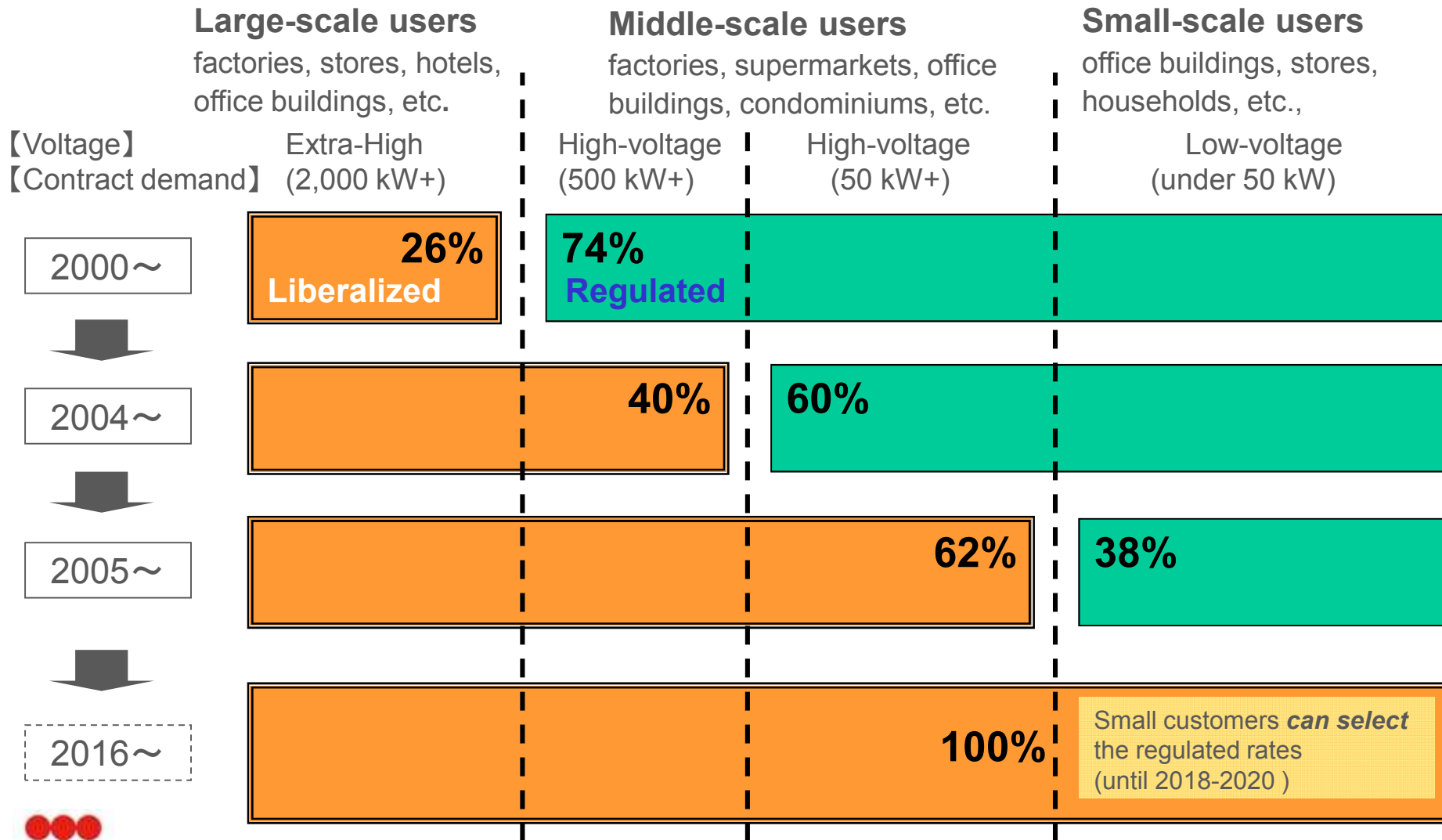
INTEGRATED POWER SUPPLY STRUCTURE

The 10 Electric Power Companies provide a retail supply through an integrated system including generation, transmission, and distribution.



(Source) "ELECTRICITY REVIEW JAPAN" (The Federation of Electric Power Companies of Japan)

EXPANSION OF LIBERALIZED MARKET



FORM OF COMPANY

Take end-to-end responsibility for accident while improving corporate value in competitive environment, with goal of minimizing burden on general public



1.

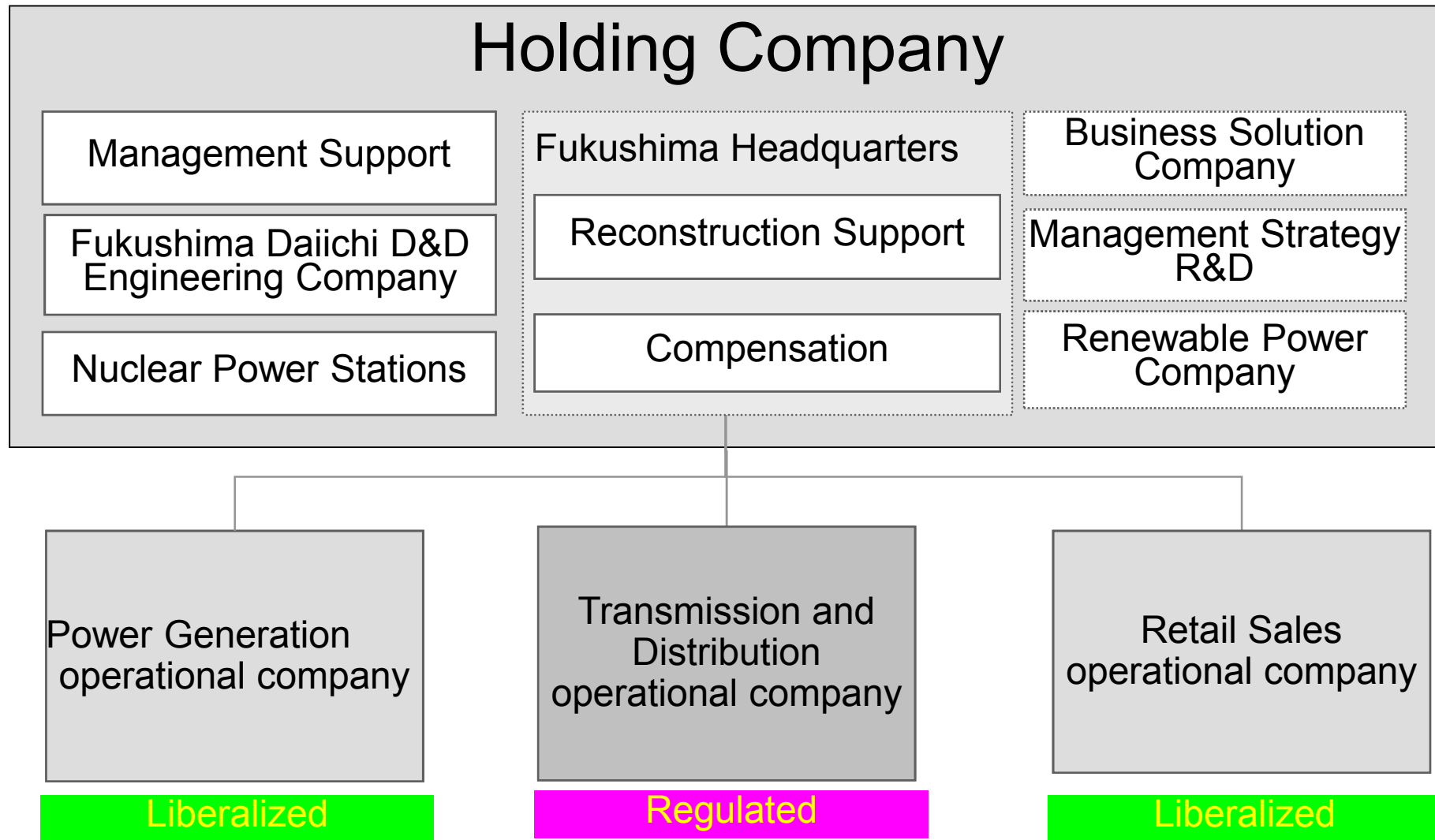
Creation of durable accident response structure

- Bolster compensation and build Fukushima reconstruction capacity
 - Add personnel and beef up capabilities of Revitalization Headquarters
- Bolster decommissioning efforts
 - Create internal decommissioning company
- Create employment in Fukushima
 - Building coal-fired thermal power plant and R&D

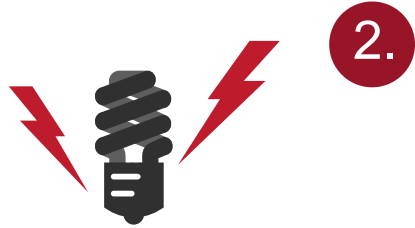
New Comprehensive Special Business Plan



FORM OF COMPANY



FORM OF COMPANY



2.

Innovations to produce “new power operator model”

- Fuel/Thermal Power Division
 - Reduce fuel and power production costs by expanding scale through alliances
- Energy Transmission Division
 - Reduce cost of wheeling and optimize wide-area operation
- Retail Sales Division
 - Optimize sales of electricity/gas throughout the country

Make strategic investments and engage in competitive operations

Through growth investment of ¥750 billion over 10-year period along with dynamic business operations responsive to electric power system reforms, expect share value of ¥4.5 trillion by early 2030s



GUARANTEES OF NUCLEAR SAFETY

Implement Nuclear Safety Reform Plan under supervision of Nuclear Reform Monitoring Committee

With the aim of resuming operations at Kashiwazaki-Kariwa nuclear plant, address both tangible (safety measures) and intangible (safety culture enhancement)

Nuclear Reform Monitoring Committee
(An advisory body to the Board of Directors)



Dr. Dale
Klein

Lady Barbara
Judge CBE

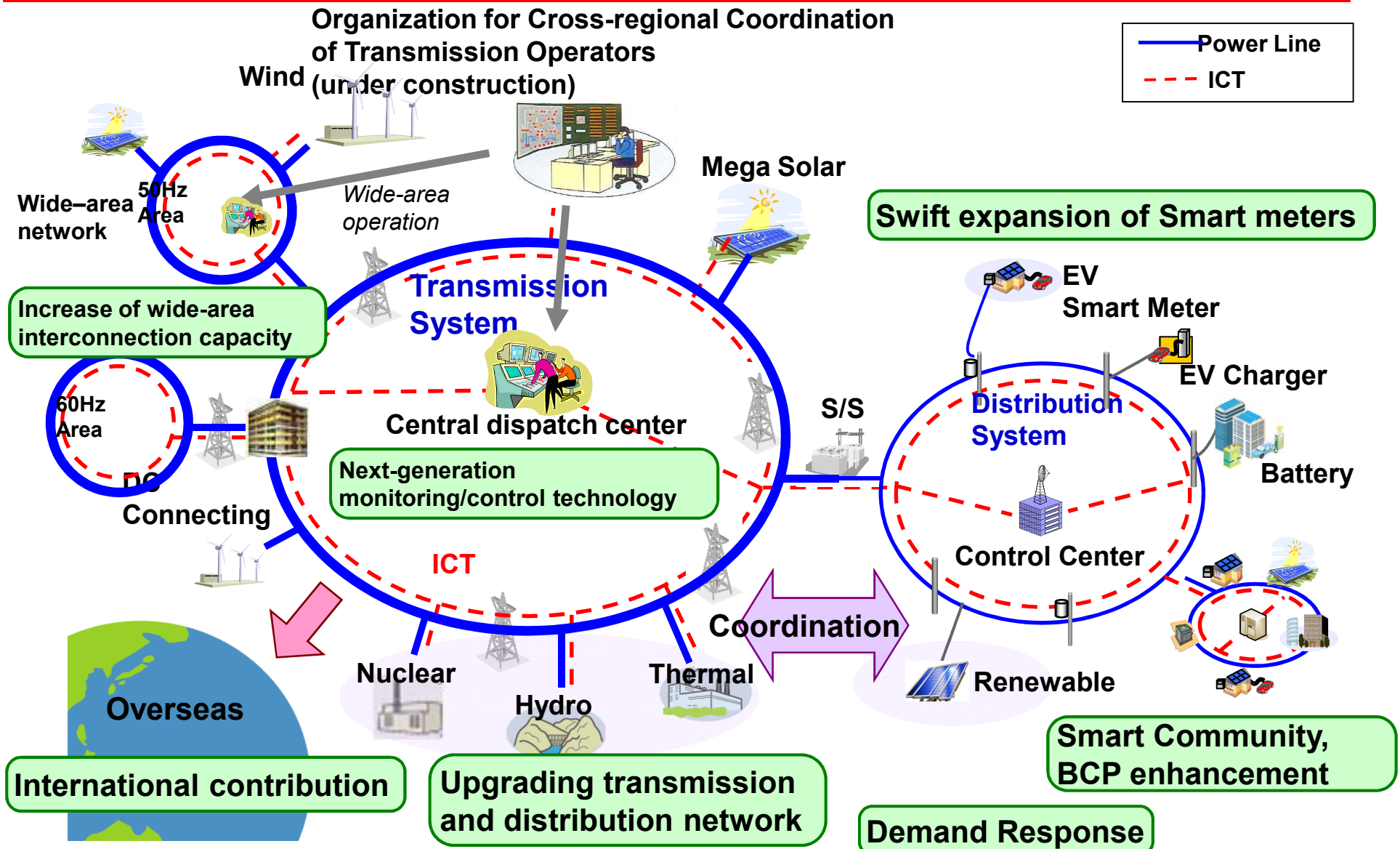
Dr. Kenichi
Ohmae

Mr. Masafumi
Sakurai

Mr. Fumio
Sudo

TEPCO's CHALLENGES

NEXT GENERATION WITH SMART GRID



SMART METER DEPLOYMENT

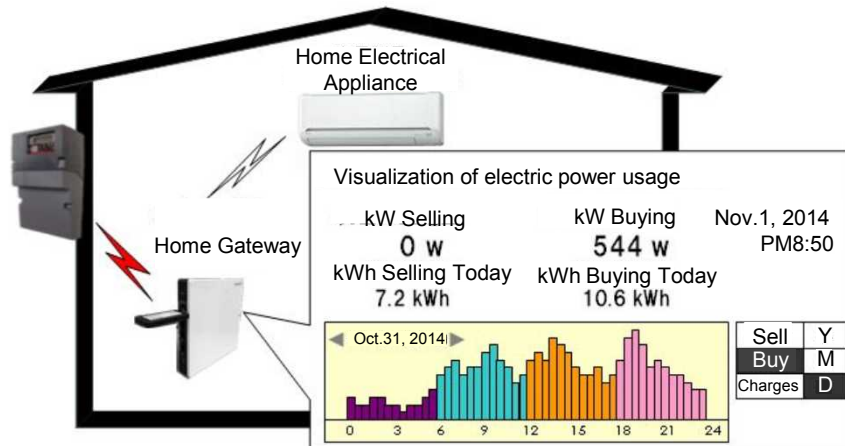


Deployment of Smart meters

- ◆ By FY 2020, TEPCO will install 27 million smart meters throughout the entire TEPCO customer area
- ◆ Early realization of new rate menu and helpful services for life
- ◆ Early realization of management rationalization, such as automatic metering, elimination of field visits and reduction of investment via demand response, etc.

Advanced services using meter data

- ◆ Smart meter transmits metering data to HEMS at customer's home
- ◆ Efficient energy savings using HEMS, which reads the amount of electricity and current every 30 minutes



VALUE PROPOSITIONS TO CUSTOMERS

New TEPCO retail “must” think of new value with “Innovation” proposition for each segment

e.g. 1) Bundle various non-electricity services and products to retain customers and create revenue

Gas, Telecoms, Home services, Security, Solar Panel, HEMS etc

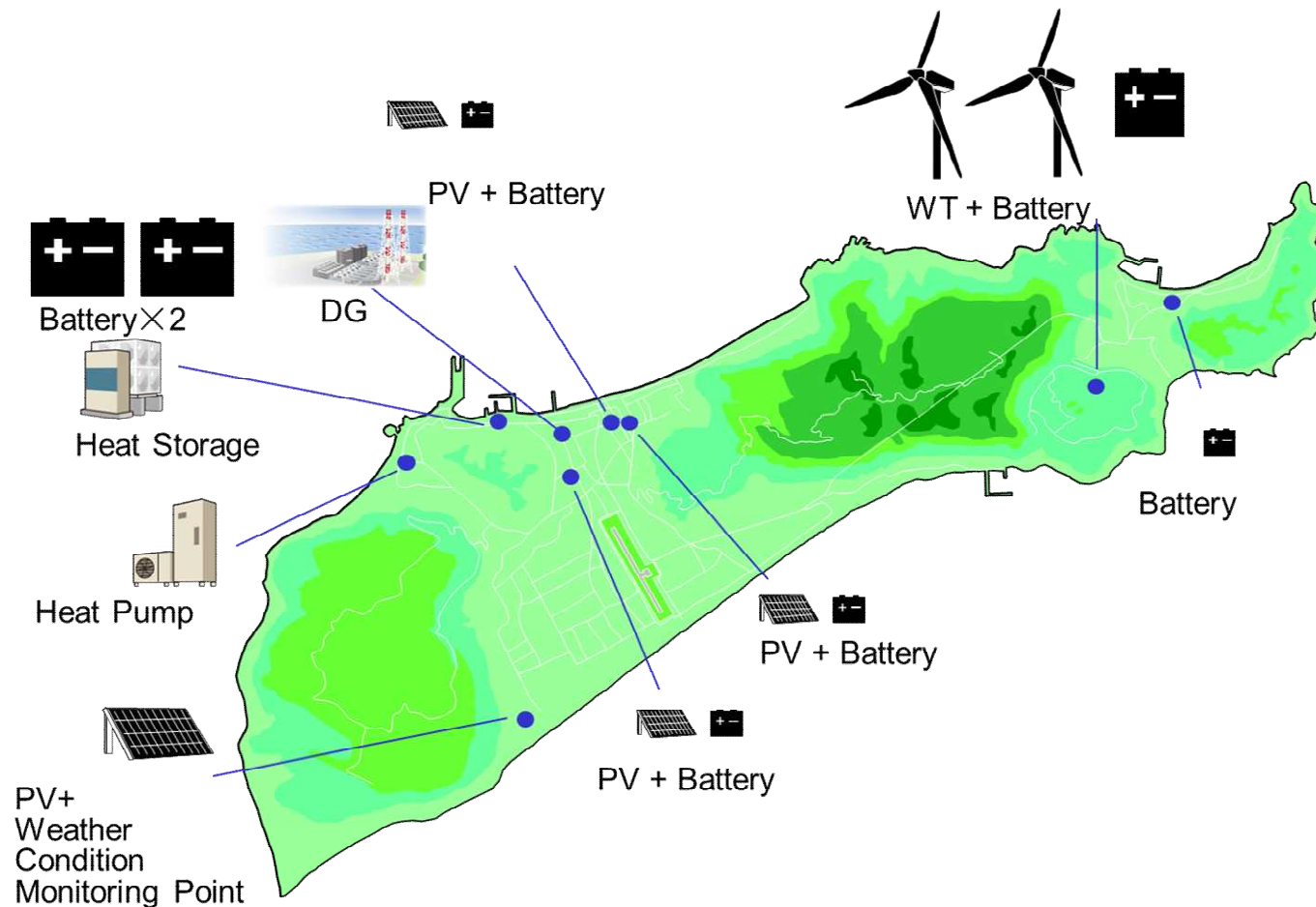
2) Incentives/premium services for high consumption customers

New Comprehensive Special Business Plan



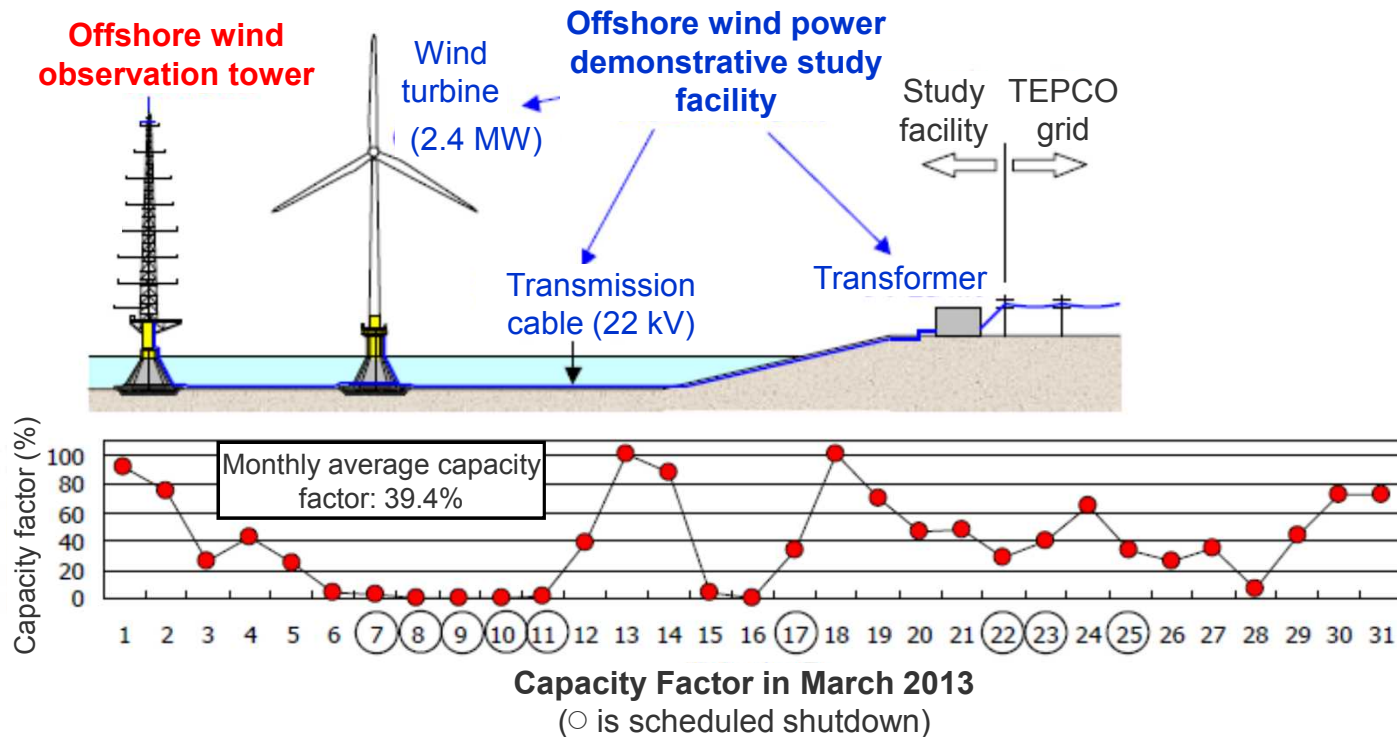
ISLAND MICRO GRID

TEPCO is leading a large-scale field test of an Island Micro Grid model. The Renewable Energy Forecasting Station and Battery System make it possible to maximize the acceptability of renewable energy into the small network.



OFFSHORE WIND POWER

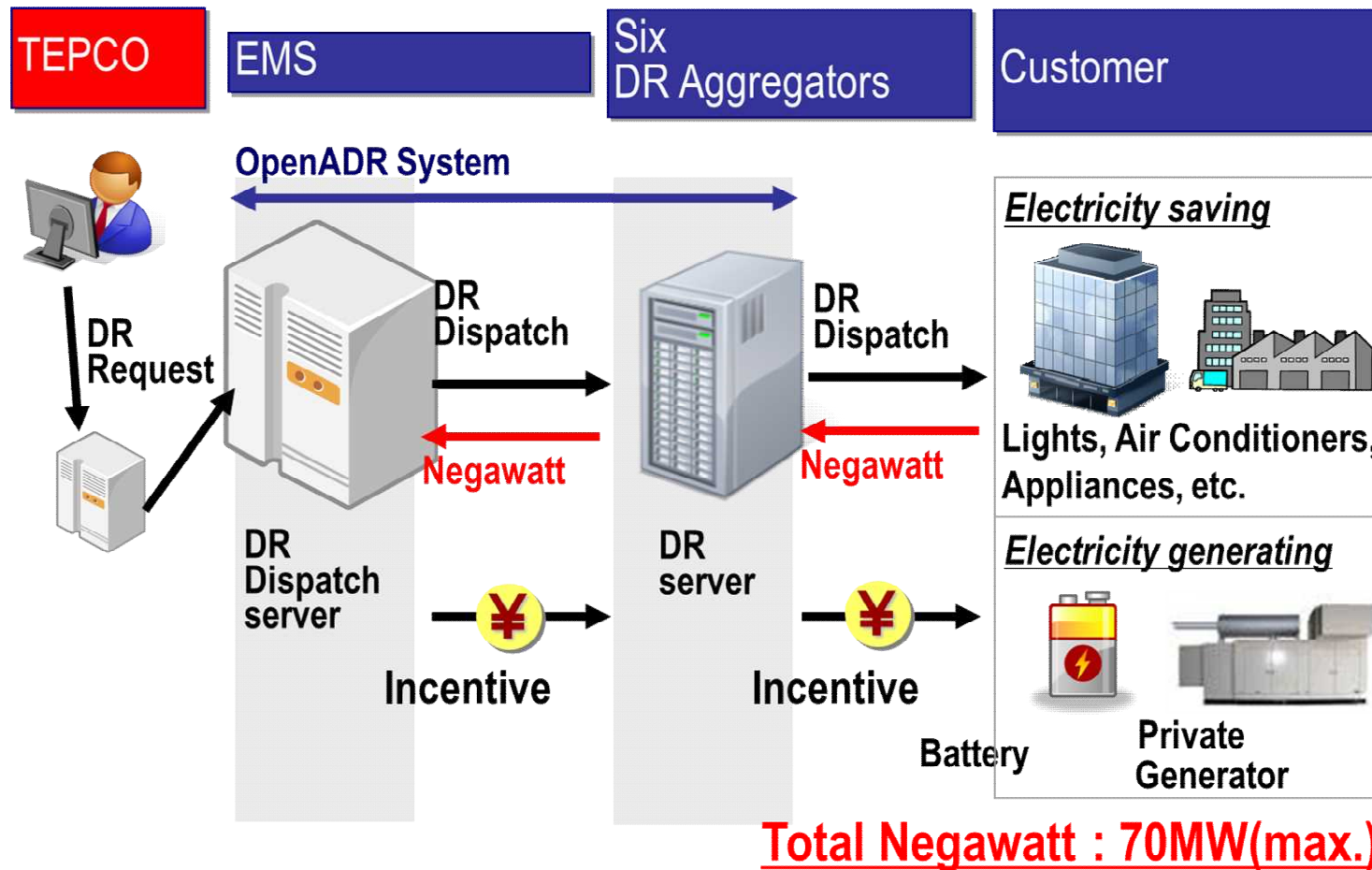
Through study/survey of facility safety and environmental impact, offshore wind power technology suitable for Japan's severe natural environment (typhoons, earthquakes, etc.) will be established.



Annual average wind speed: 7.3m/s
 (1.2 times' onshore feasible wind [6.0m/s*]) → Capacity factor of about 36%
 (1.8 times' onshore wind power)

INCENTIVIZED DEMAND RESPONSE

TEPCO is conducting a large-scale field test of demand response with 6 DR aggregators. 70MW negawatt is supplied to TEPCO through DR aggregators during peak time.



TEPCO READY TO BRING SMART SOLUTIONS

- In 2014, TEPCO started up two JVs with Hitachi and Toshiba, aiming to deliver smart power systems and solutions to emerging countries with TEPCO and Tech Providers' combined knowledge/know-how/experience in Planning and Operation & Maintenance

THE Power Grid Solution Ltd.
(2014 APR)

HITACHI
Inspire the Next



東京電力

T.T. Network Infrastructure Japan
(2014 SEP)

TOSHIBA
Leading Innovation >>>

THE Power Grid Solution

Consulting and engineering in the power transmission and distribution field.



T.T. Network Infrastructure Japan

<Main Business Areas>
For developing countries

- ✓Consultancy for network planning
- ✓Operation & maintenance support

For advanced/developed countries

- ✓Solutions to improve ability to withstand disasters
- ✓Reliability improvement for network stability, expansion, connections, etc.
- ✓Optimal utilization of renewable energy through integration solutions

For islands or remote regions

- ✓Realization of environmentally friendly systems



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TEPCO

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