

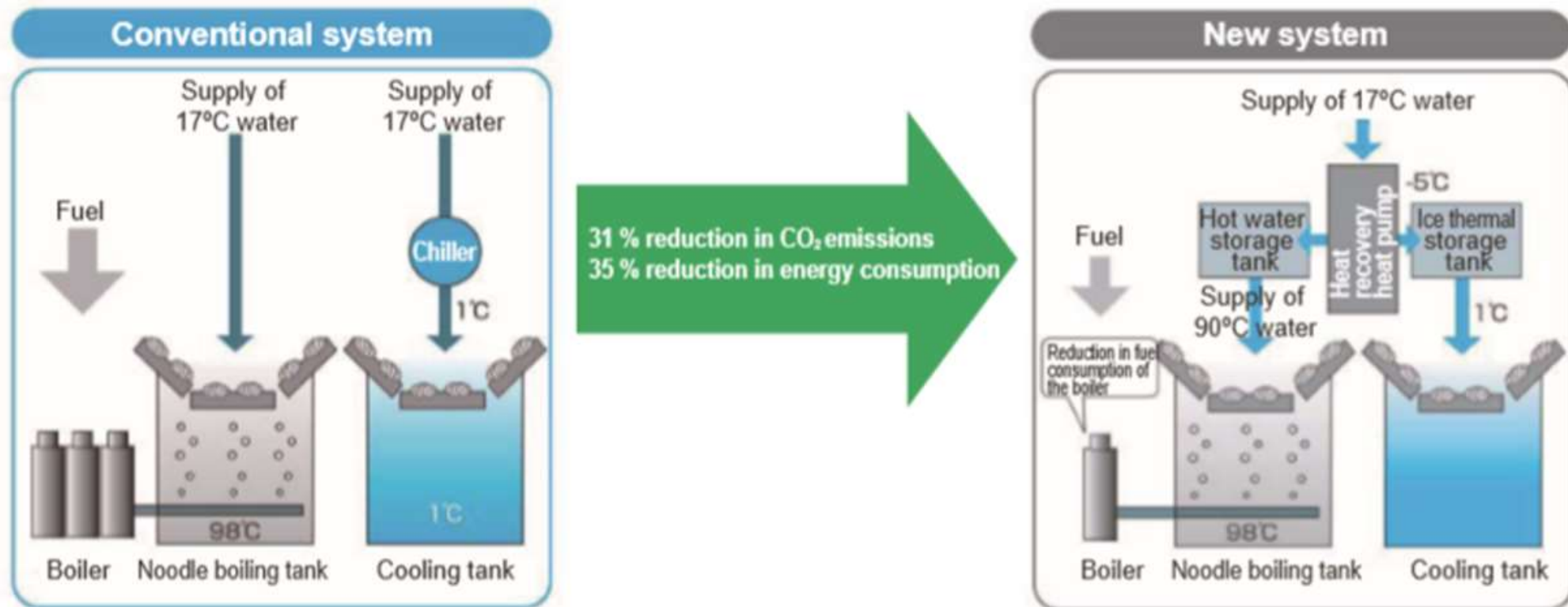
Glass Integrated Photovoltaics

- SUNJOULE™ is the Building Integrated Photovoltaics, in which structure is laminated safety glass embedded solar cells. By using Bi-facial solar cell, vertical application is also possible and efficient.



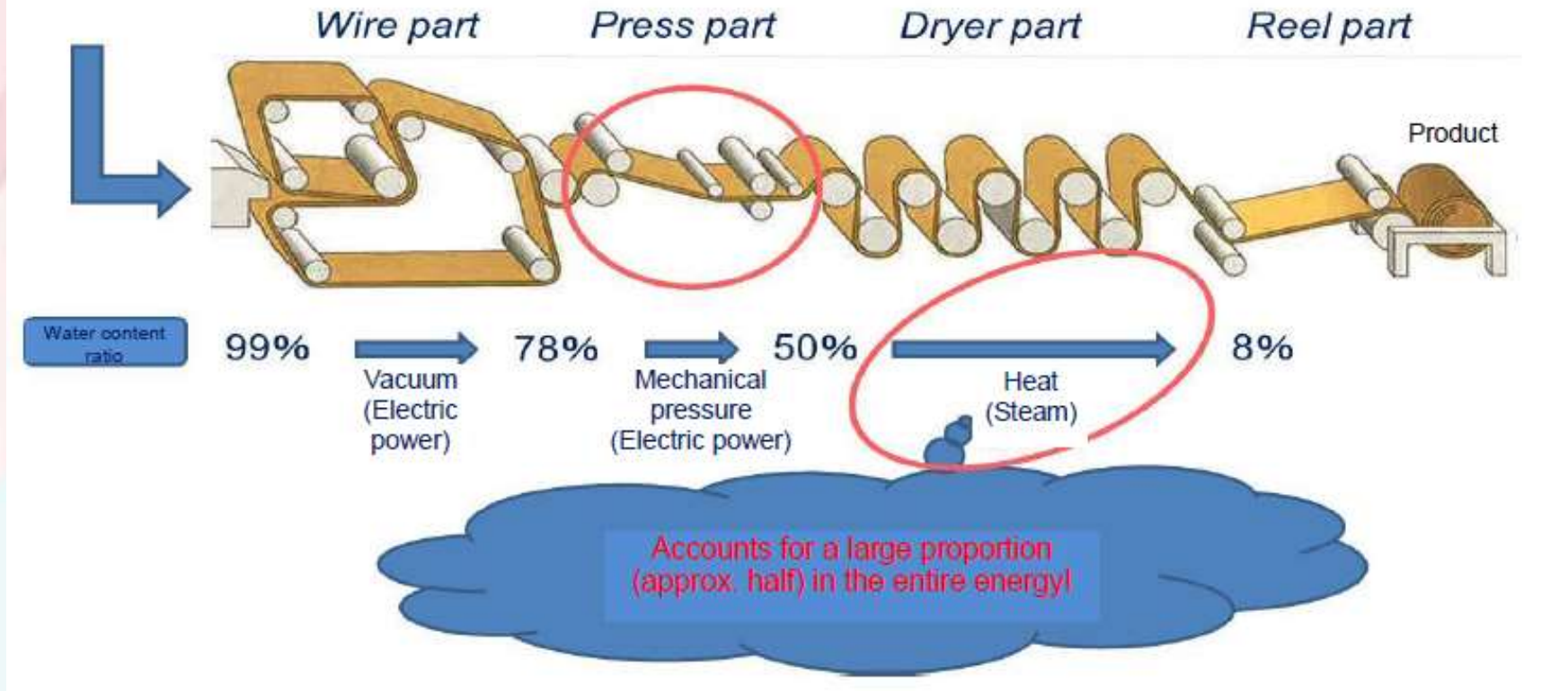
Industrial Heat Pump

- ◆ Noodle plant [The use of heat recovery heat pumps has made it possible to supply hot and low-temperature thermal energy simultaneously.]



Flow of papermaking (paper machine)

Disadvantage: As chemical is used, steam for drying increases!
 → Productivity per weight is worsened, and steam intensity deteriorates.

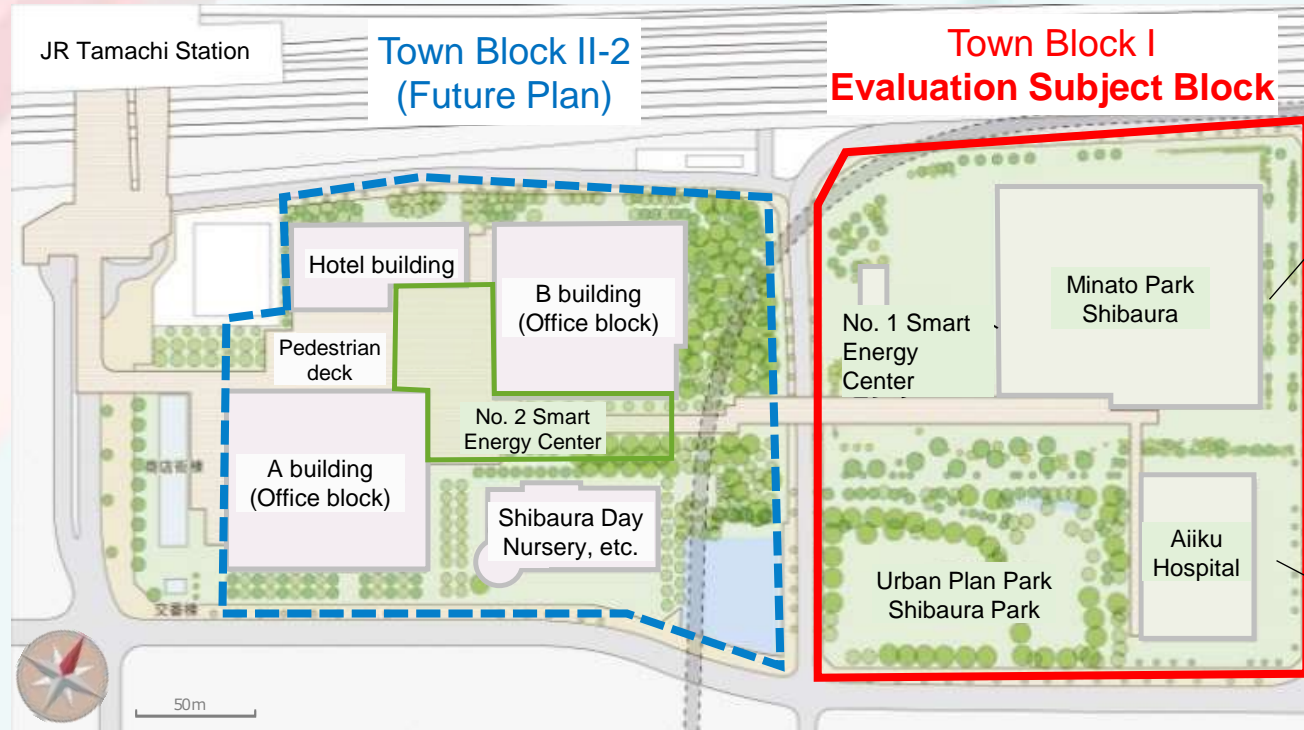


Introduced was a high nip load shoe press with the highest linear load in Japan to its inner sheet production machine No.1, aiming to lower the moisture content at the outlet of the press at 46% or lower. This achieved energy conservation and improved productivity by lowering steam intensity. (▼ 1,435kl/Y, 1.5% of total factory energy consumption)

Tamachi CEMS

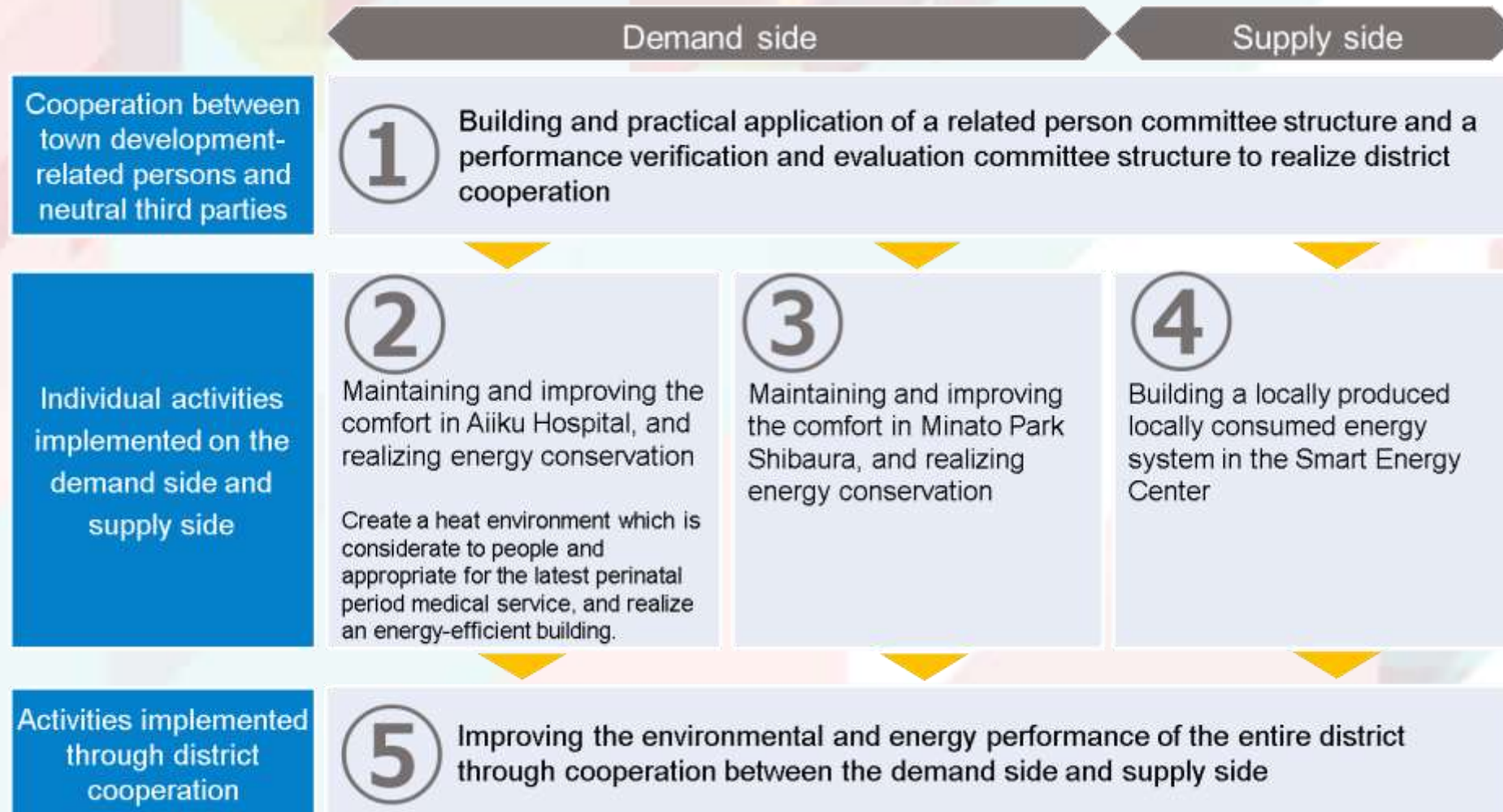
Reduction of **40%** in the primary energy consumption of the entire district

(Compared to building clusters corresponding to the FY2013 energy conservation standards)



Tamachi station east exit north district Zone diagram

Tamachi CEMS

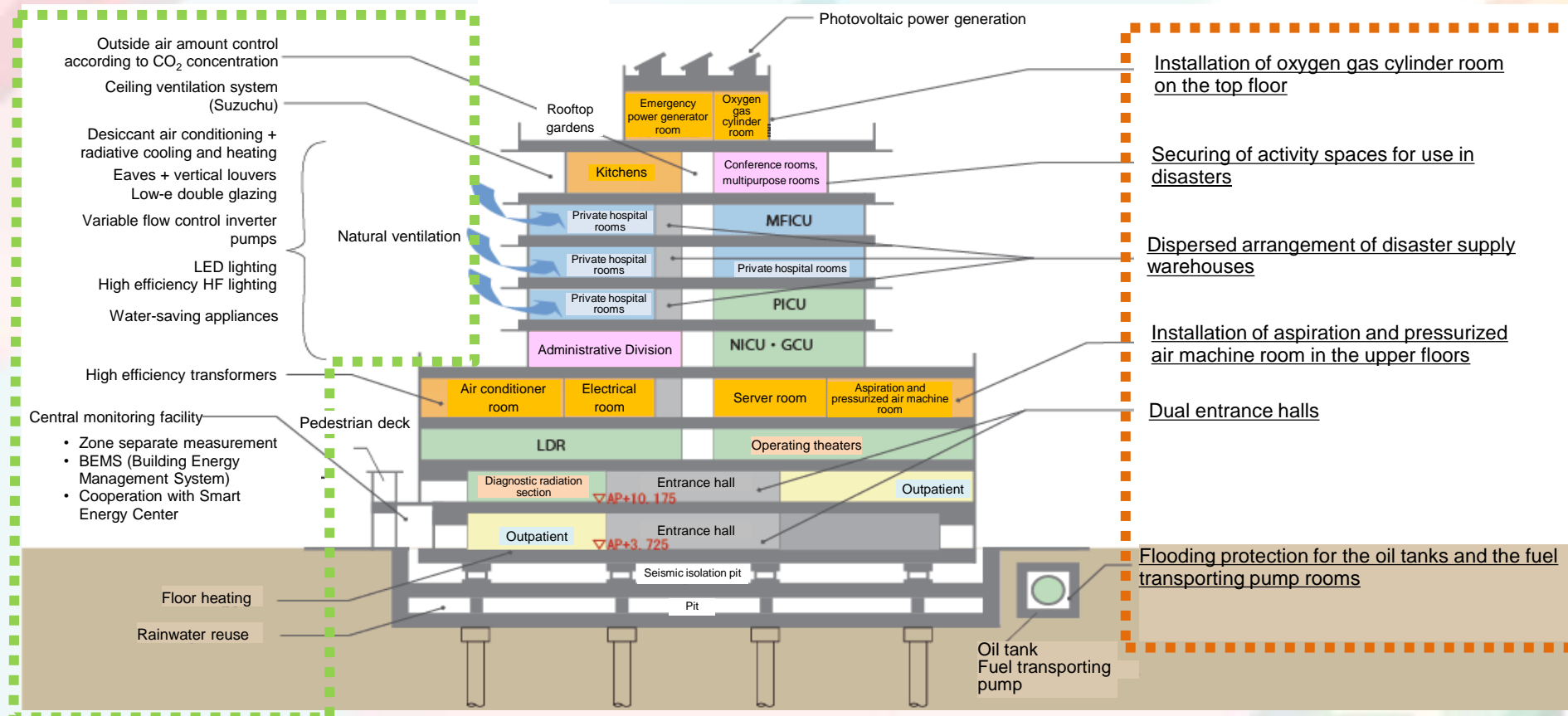


Tamachi CEMS

Aiiku Hospital

Energy-efficient technologies

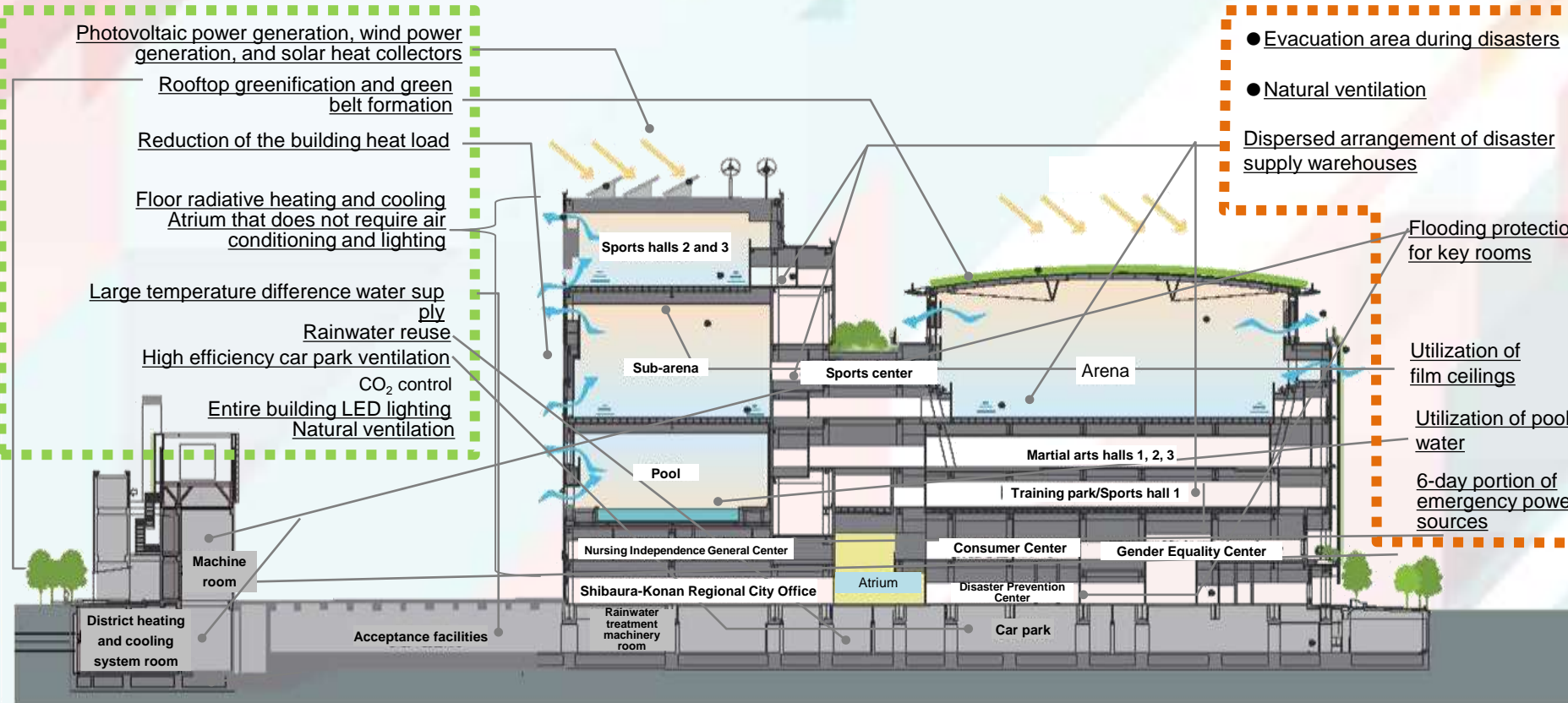
Energy security



Tamachi CEMS

Minato Park Shibaura

Energy-efficient technologies

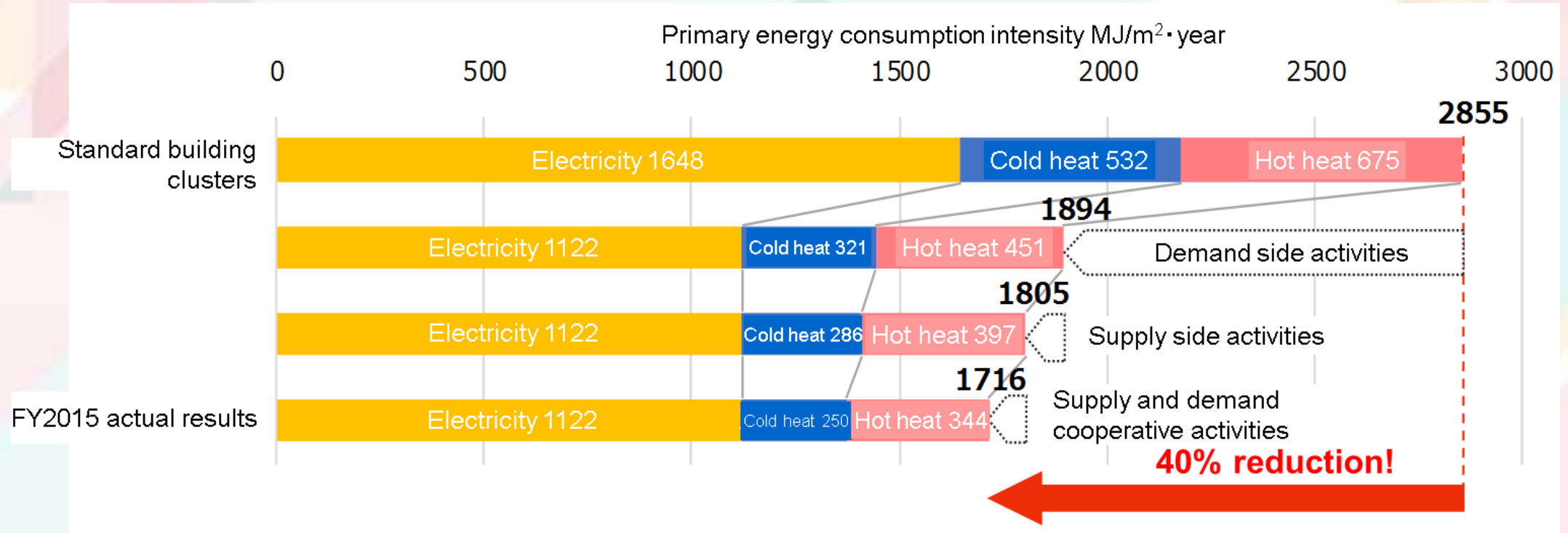


Energy security

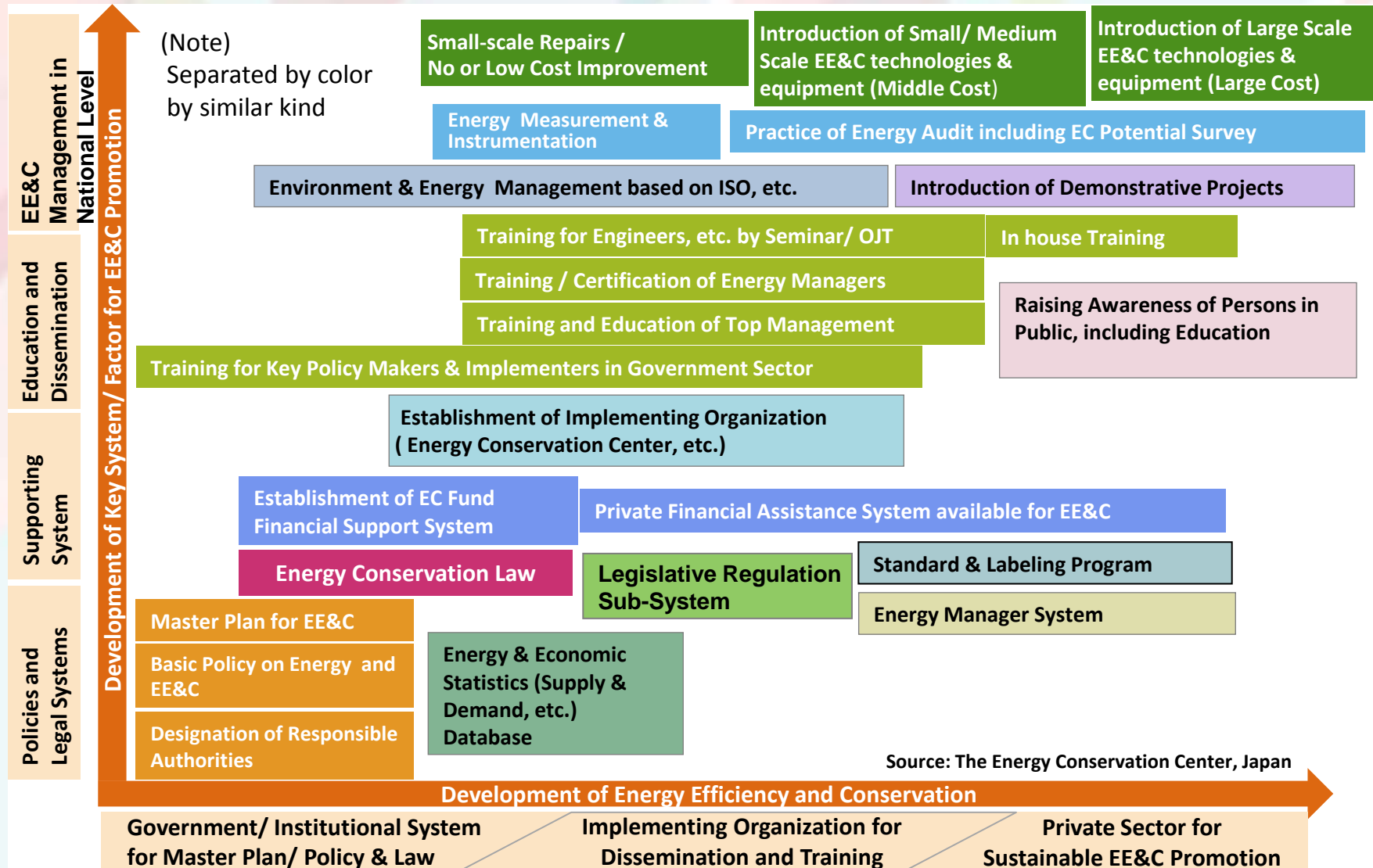
- Evacuation area during disasters
- Natural ventilation
- Dispersed arrangement of disaster supply warehouses
- Flooding protection for key rooms
- Utilization of film ceilings
- Utilization of pool water
- 6-day portion of emergency power sources

Tamachi CEMS

- Reduction of 40% in the primary energy consumption (1,139 MJ/m²·year)



Systematic Development Map for EE&C



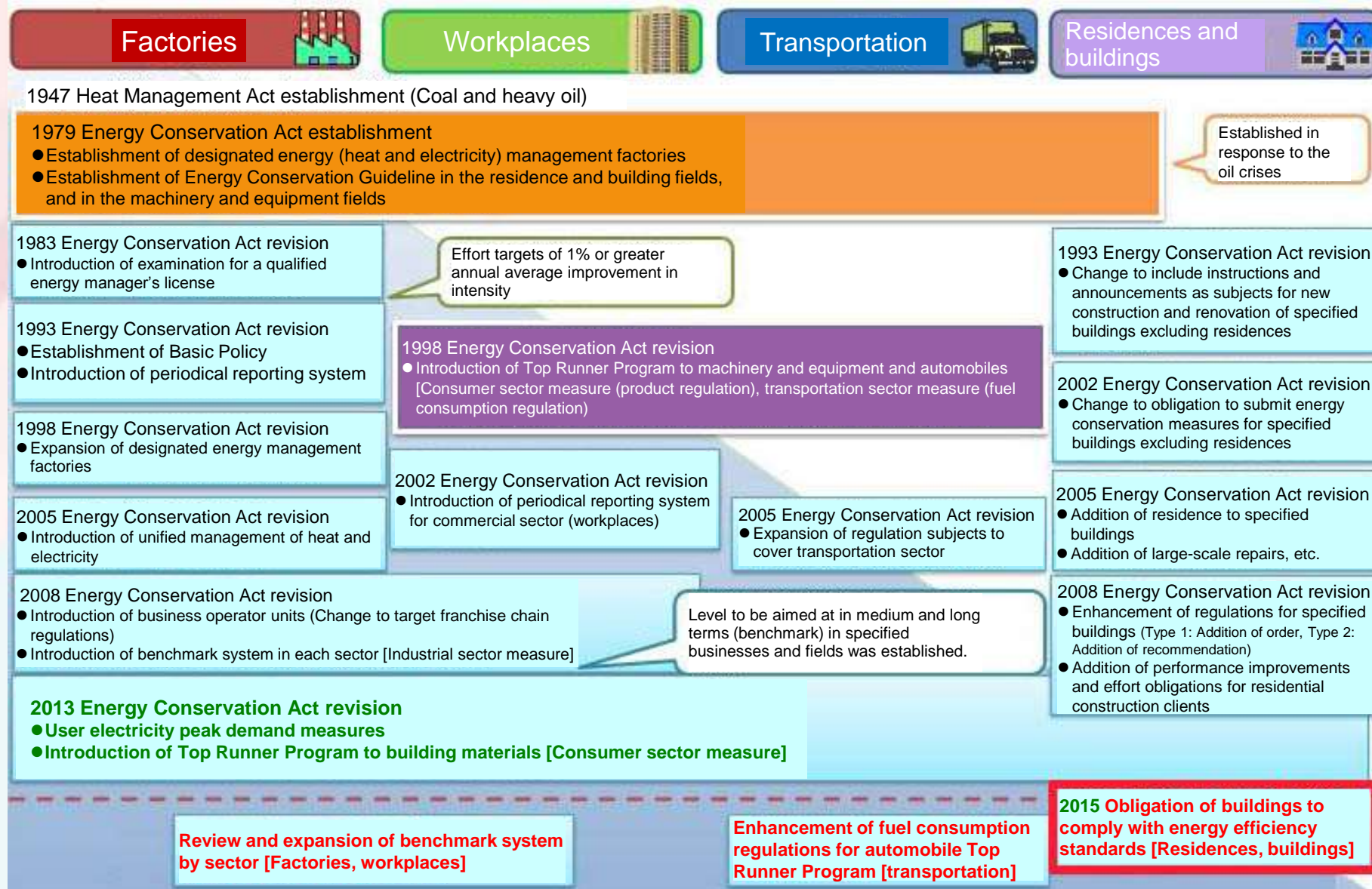
Source: The Energy Conservation Center, Japan

Overall EE&C Policies of Japan

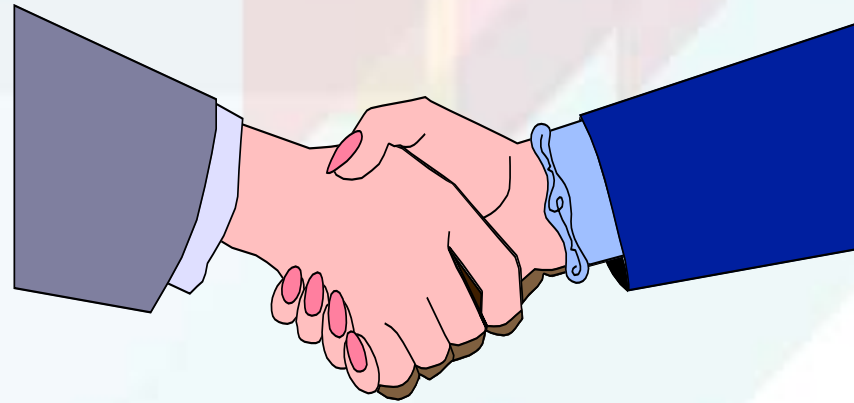
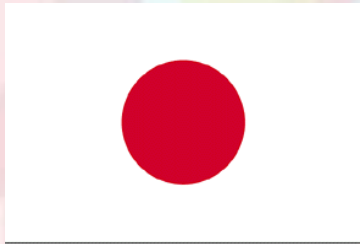
- Programs for energy conservation policies in Japan are classified roughly into categories of "industrial sector", "consumer sector (commercial and household)" and "transportation sector".
- **Strategies implemented from both aspects of regulation and support** (budget, tax programs, etc.) in the respective sectors are according to the Energy Conservation Law.
- **Development of energy conserving technologies** and **nationwide activities intended to improve energy awareness** have been implemented as support across fields.

	Industrial sector	Consumer sector		Transportation sector
		Commercial sector	Residential sector	
Regulatory measures (Act on the rational use of energy)	Business operators (energy consumption of at least 1,500kl): Energy conservation measures (periodical reports) and reduction efforts of 1% per year.			Cargo owners and carriers (of specific minimum size): Energy conservation measures (periodical reports), etc.
	Buildings and structures (at least 300m2): Observation of Energy Conservation Standards at the time of construction (submission of notification).			
			Automobiles and household electrical appliances: Regulation by Top Runner Program, etc.	
			Household electrical appliances: Display of energy conservation performance (Labeling), etc.	
Support Measures (Budget and tax system, etc.)	Provision of subsidies and supplement of interests, etc., for implementation of energy conservation facilities		Residential Eco Points, Etc.	Provision of subsidies for implementation of Clean Energy cars, etc.
	Tax system (accelerated depreciation) for implementation of energy conserving facilities or construction of energy conserving buildings.		Residential renovation tax reductions, etc.	Eco Car tax reductions, etc.
	Provision of subsidies for development of energy conserving technologies (high performance heat pumps, high performance thermal insulation materials etc.)			
	Provision of information and promotion of nationwide activities (such as forum activities) intended to improve energy conservation awareness, etc.			

Japan's Road to EE&C



Thank You Very Much



For More Information;
The Energy Conservation Center, Japan
<http://www.eccj.or.jp> <from 1996>

Asia Energy Efficiency and Conservation Collaboration Center
(Established in April 2007)
<http://www.asiaeec-col.eccj.or.jp>

Japanese Business alliance for Smart Energy-Worldwide
(Established in October 2008)
<https://www.jase-w.org/>

The Energy Conservation Center, Japan
Since 1978

The Symbol of Energy Conservation
Since 2005 ECCJ has been spread the symbol mark with the visual image of a four-leaf clover which is thought to bring happiness named as "SMART CLOVER", representing everyone's energy conservation activities.

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