

Trend of Energy Policy in Japan

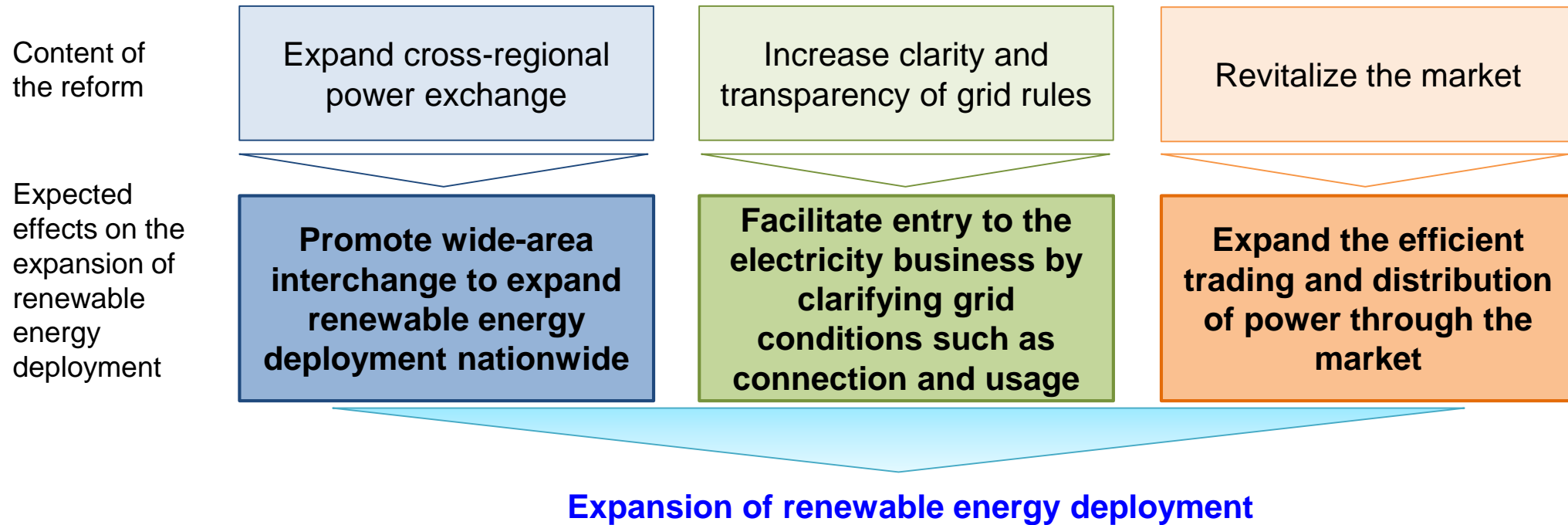
—Towards further deployment of renewable energy—

March 9, 2016

Agency for Natural Resources and Energy

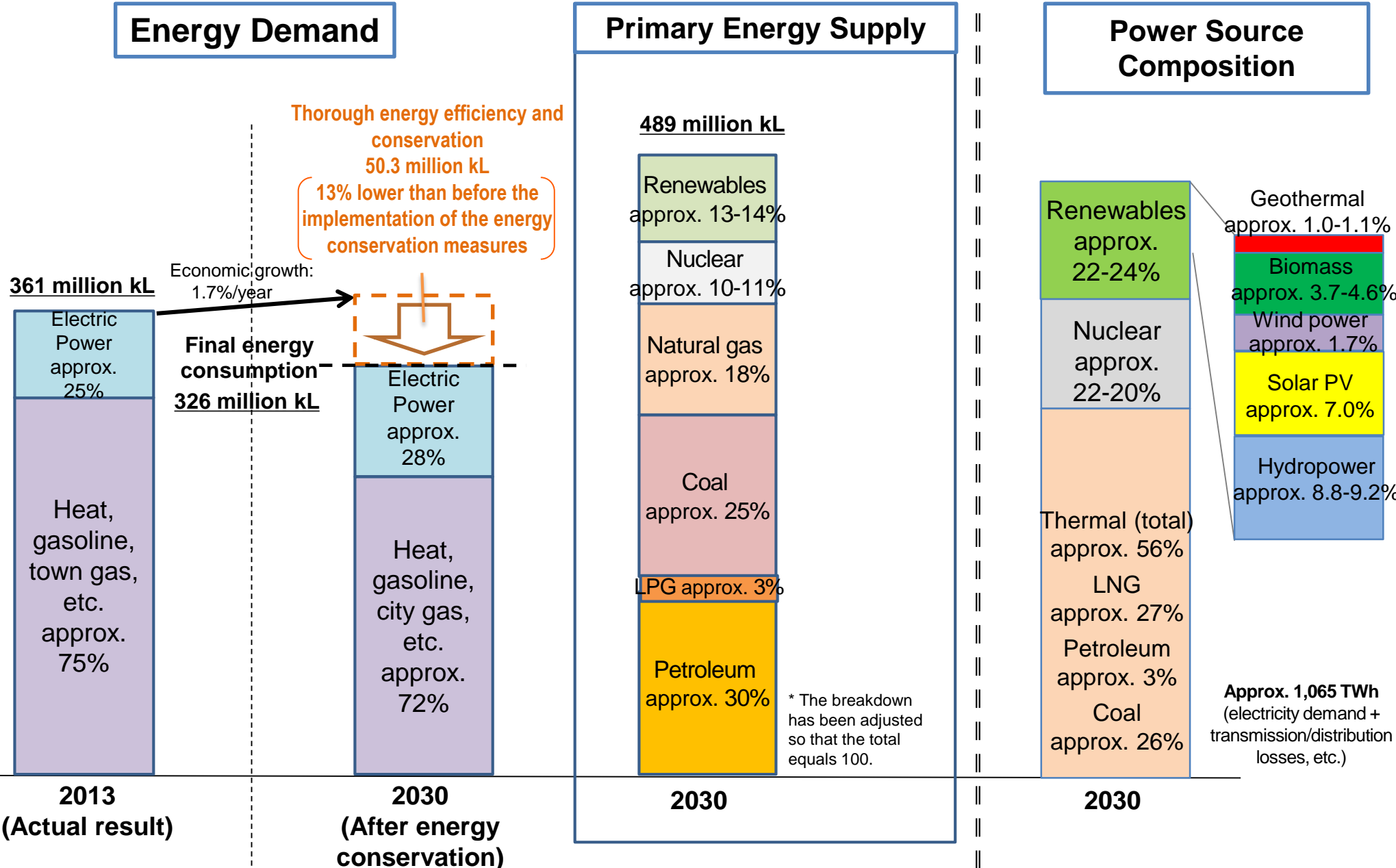
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< Content of the electricity system reform and the effects on the expansion of renewable energy deployment >



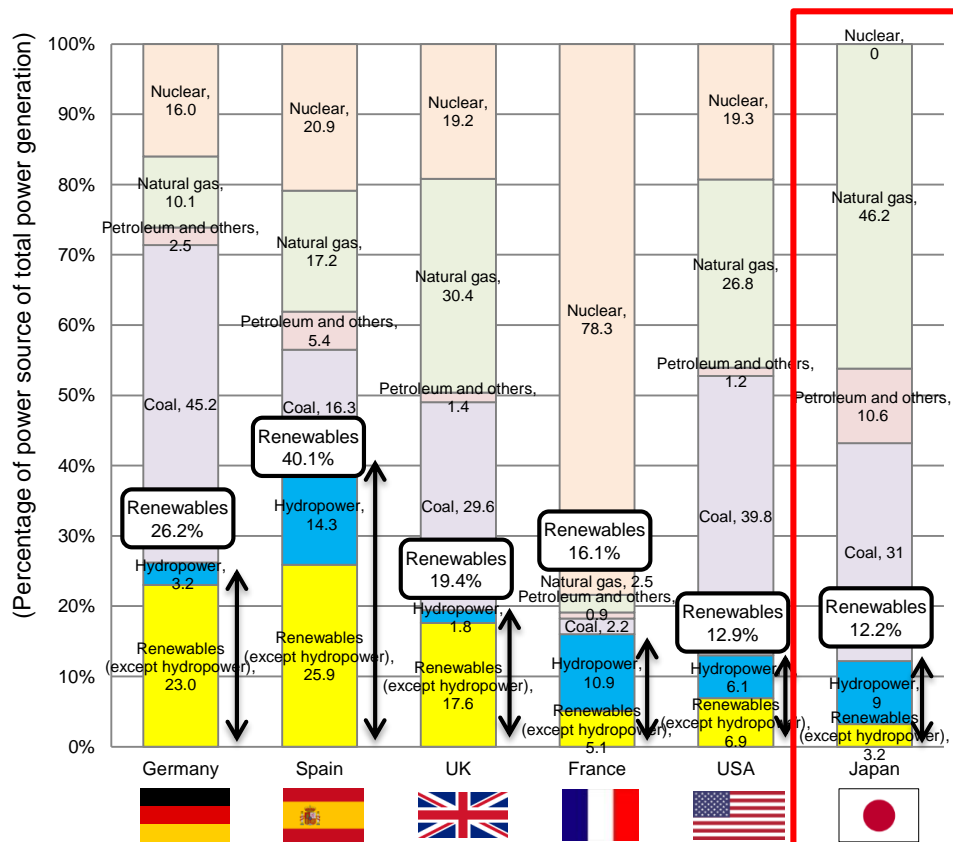
< Schedule for electricity system reform >

- 1st stage (from April 2015): **Expansion of cross-regional grid operation (Establishment of the Organization for Cross-regional Coordination of Transmission Operators)**
- 2nd stage (to be implemented from April 2016): **Full liberalization of entry to the retail electricity business**
- 3rd stage (to be implemented from April 2020): **Legal unbundling of the transmission/distribution sector and deregulation of retail electricity prices**



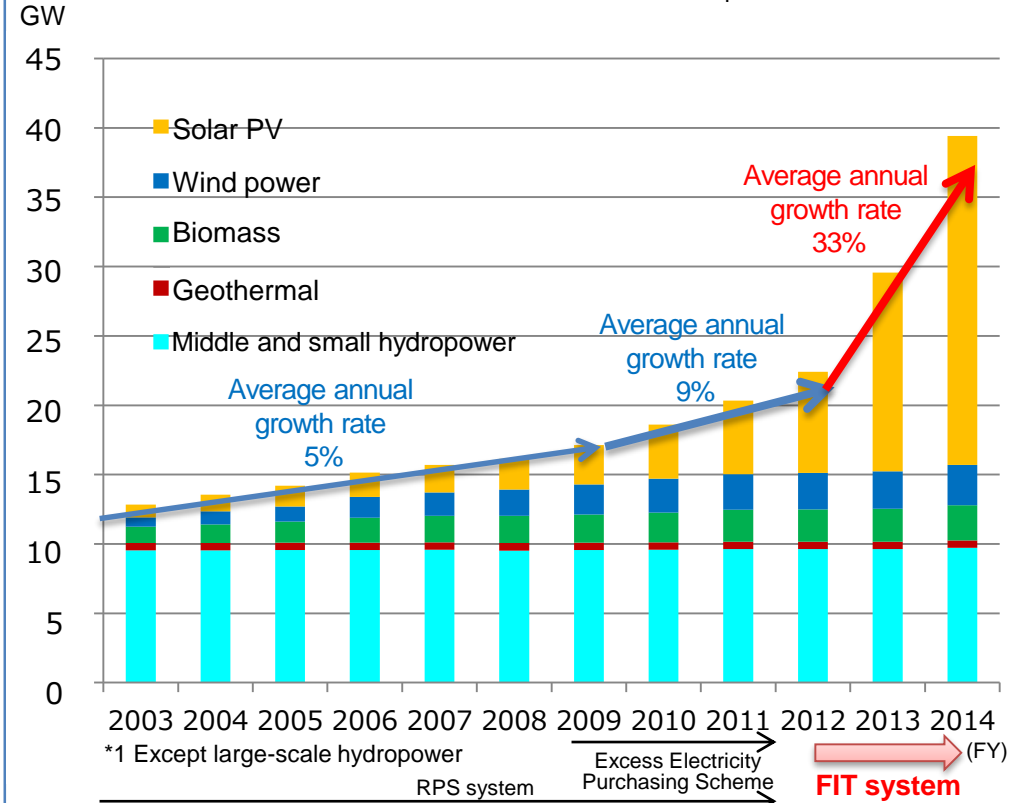
- (1) Support with **subsidies** (1997-)
- (2) Support by imposing the use of a certain amount of renewable energy on power companies (the RPS system) (2003-2012)
- (3) Support by setting fixed prices for purchase of renewable electricity (to facilitate the prospect of payback on investment) (2009-)
 - 2009: **Excess Electricity Purchasing Scheme** was launched.
 - July 2012: **Feed-in Tariff (FIT) system** was launched.

International comparison showing renewables share of total power generation



Sources: [for Japan] Created based on "Overview of Electric Power Development" (actual values in FY 2014)
 [for other countries] Estimated data in 2014, IEA Energy Balance of OECD Countries (2015 edition)

Trend of installed capacity and effect of renewables



(Created by the Agency for Natural Resources and Energy based on JPEA's PV Shipment Statistics, NEDO's Statistics on Actual Installed Wind Power Capacity, Survey on Water Power Resources, Current Status and Trends of Geothermal Power Generation, Results of Approval by the RPS/FIT System, etc.)

(1) Innovation of technologies and costs

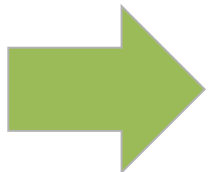
- Drastic reduction of renewable power generation costs
- Grid control using IoT and introduction of storage batteries

(2) Innovation of systems

- Review of the law related to FIT (for long-term stabilization and self-sustainability of renewable power generation)
- Review of the grid operation rules and disclosure of related information

(3) Innovation of players

- New businesses such as aggregators, Negawatt trading and VPP (virtual power plant)
- Professional renewable power service providers



- **Achieving self-sustainability as an important power source**
- **Developing a future vision with a view to Post-FIT**