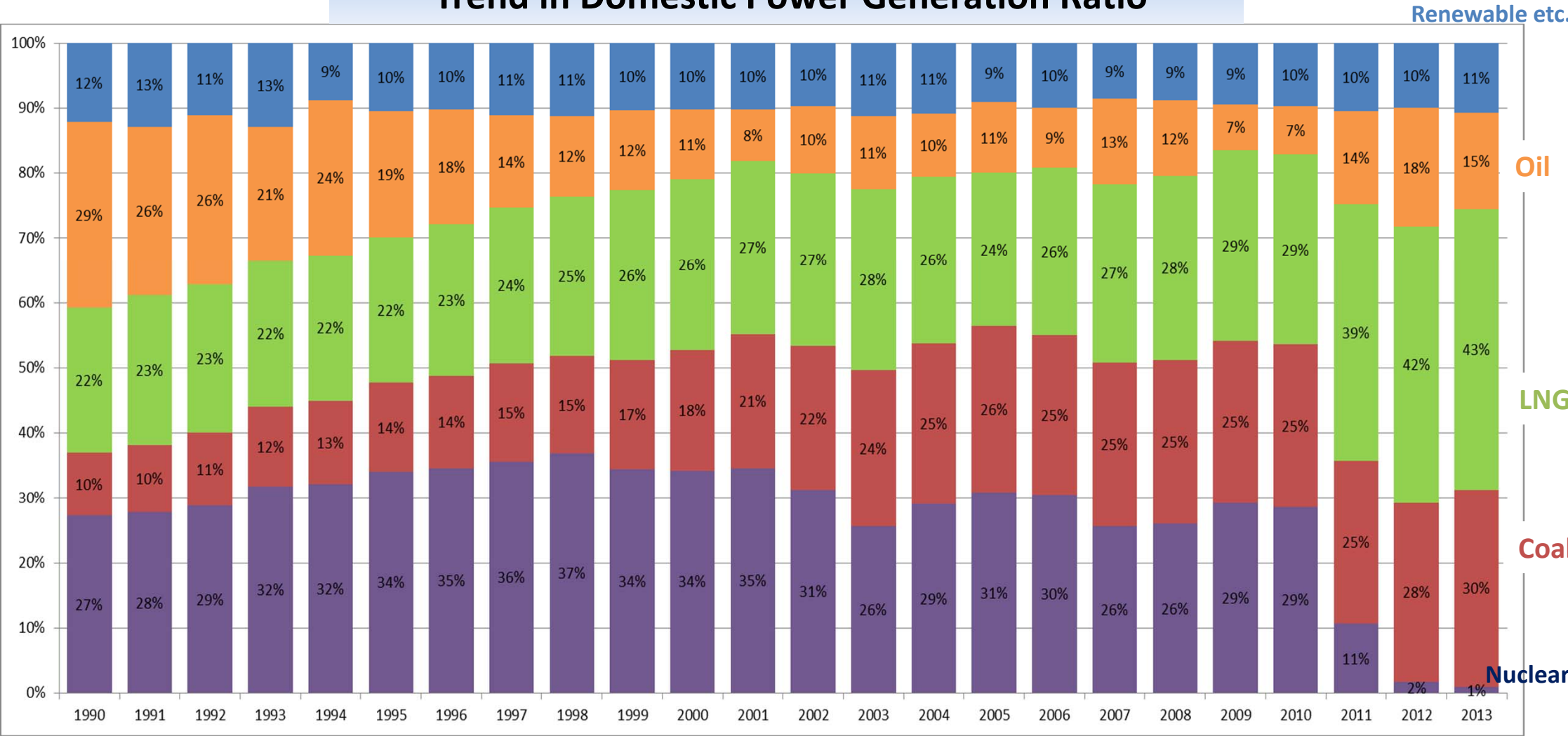


# High Dependency On Fossil Fuels For Power Generation

- The nuclear power ratio in domestic power generation has decreased after the Great East Japan Earthquake due to the long-term shutdown of nuclear power plants.
- On the other hand, the thermal power ratio has increased to 90%. Currently, LNG thermal power alone accounts for nearly 50% of domestic power generation.

## Trend in Domestic Power Generation Ratio

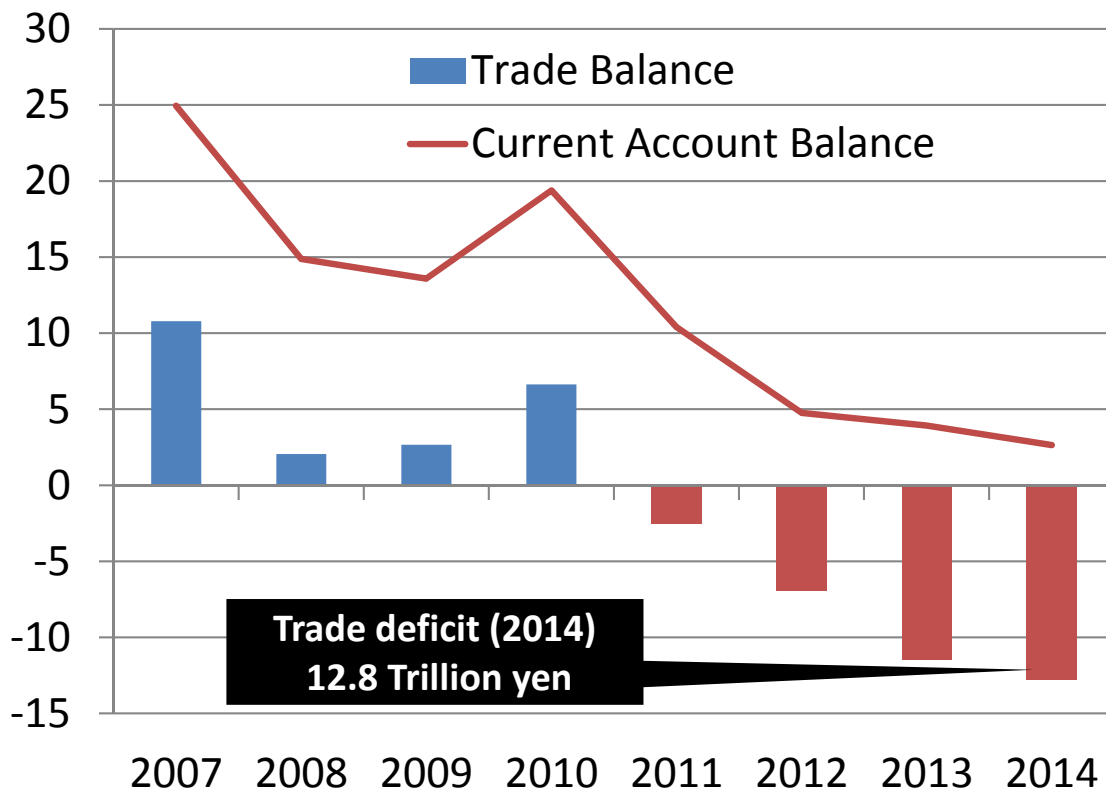


Source: Compiled by METI based on "Outline of Electric Power Development in FY 2010" etc.

# Japan Suffers Huge Trade Deficit

- The overall cost of LNG imports to Japan has increased from 3.5 trillion yen (2010) to around 8 trillion yen (2014).
- Japan recorded a trade deficit for the first time in 31 years in 2011. Trade deficit for 2014 was 12.8 trillion yen, which is not a sustainable level for Japan.

## Changes in trade balance and current account balance (trillion yen)

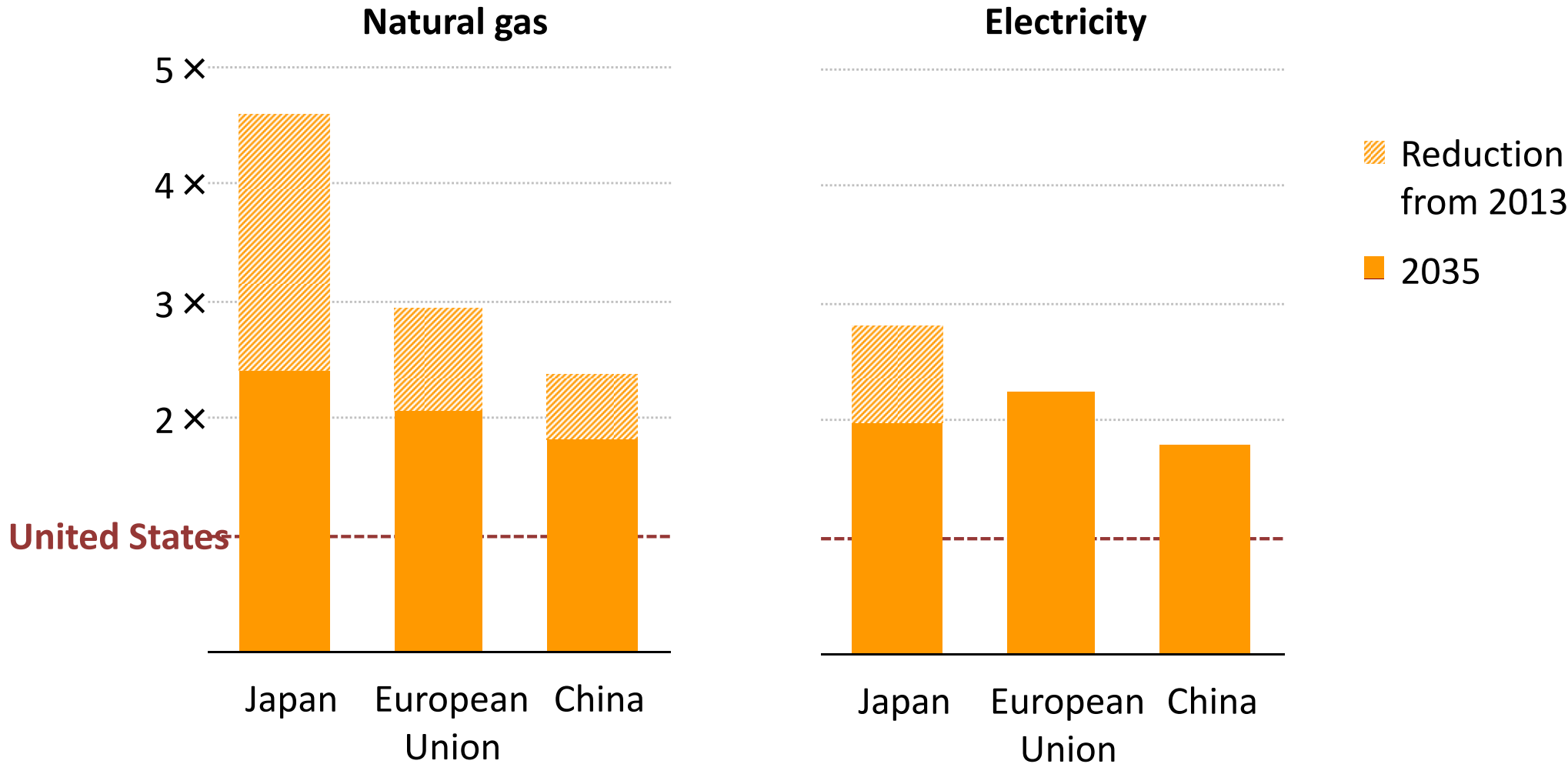


	2010	2014	Difference
Trade Balance	6.6	- 12.8	- 19.5
<b>Net Import Costs</b>			
LNG	3.5	7.9	+4.4
Crude Oil	9.4	13.9	+4.5
Petroleum Products	2.5	3.1	+0.7
Coal	2.1	2.1	-0.0

# Reducing fuel procurement cost is an urgent issue

➤ High energy costs in Japan have negative impact on the competitiveness of energy intensive industries.

## Ratio of industrial energy prices relative to the United States



Source: IEA

## Principles of Energy Policy and Viewpoints for Reformation

### 1) Confirmation of basic viewpoint of energy policies (3E + S)

■ Stable Supply (Energy Security)

■ Cost Reduction (Economic Efficiency)

■ Environment

■ Safety

+

#### Global Viewpoint

- Developing energy policies with international movement appropriately
- Internationalizing energy industries by facilitating business overseas.

#### Economic Growth

- Contribution to reinforce Japan's locational competitiveness.
- Activating Japan's energy market through energy system reform.

### 2) Building multilayered and diversified flexible energy demand-supply structure

- Establishing resilient, realistic and multi-layered energy supply structure, where each energy source can exert its advantage and complement others' drawbacks.
- Creating a flexible and efficient supply/demand structure where various players can participate and various alternatives are prepared by system reforms.
- Improving self-sufficiency ratio by developing and introducing domestic resources to minimize influence from overseas' situation.

# New Energy Mix

## Basic Direction

- 1) To improve the self-sufficiency ratio to around 25% surpassing the level before the Earthquake.
- 2) To reduce the electricity costs lower than today.
- 3) To set a high-level GHG reduction goal compared with other developed countries to lead the world.

## Electricity Demand

GDP growth  
1.7%/year

Electricity  
Demand  
967  
TWh

2013  
(actual results)

## Energy conservation

196 TWh  
(▲17%)  
(loss form Electricity  
transmission etc.)



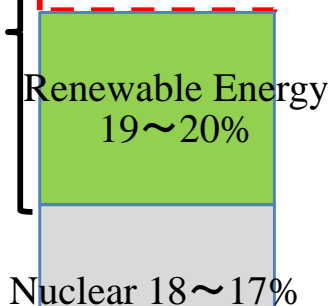
Energy  
Conservation  
+  
Renewable  
Energy  
= about 40%

Electricity  
Demand  
981  
TWh

2030

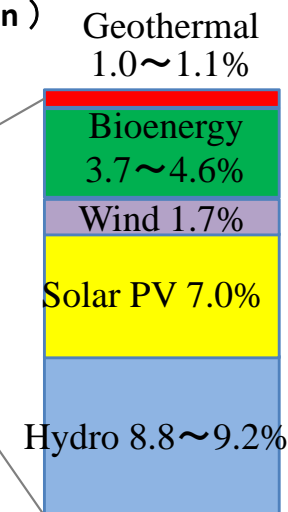
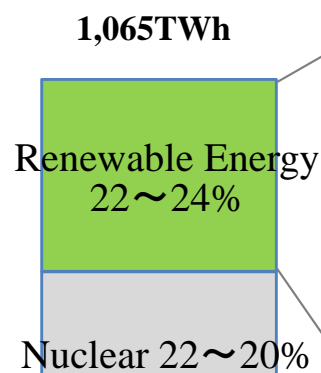
## (Total Electricity generation)

1,278TWh  
Energy Conservation  
17%



## Electricity generation mix




## (Total Electricity generation)



Total base load  
power ratio  
: 56%

2030

# Comparison of INDCs by major countries

	Comparison with 1990	Comparison with 2005	Comparison with 2013
Japan 	▲ 18.0% (2030)	▲ 25.4% (2030)	▲ 26.0% (2030)
USA 	▲ 14~16% (2025)	▲ 26~28% (2025)	▲ 18~21% (2025)
EU 	▲ 40% (2030)	▲ 35% (2030)	▲ 24% (2030)

\*INDCs: Intended Nationally Determined Contributions

# Energy Market Reform

- The first comprehensive electricity and gas market reform in 60 years.

## 3 Objectives

- 1) Securing a stable supply of electricity and gas
- 2) Suppressing electricity and gas rates to the maximum extent possible
- 3) Expanding choices for consumers and business opportunities

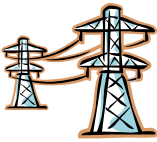
## Full liberalization of the retail energy market

 Electricity

*Law enacted in June 2014, to be implemented from 2016*

Gas

*Law enacted in June 2015, to be implemented from 2017*



## Legal unbundling of transmission/ distribution sector, and abolishing retail price regulations

 Electricity

*Law enacted in June 2015, to be implemented from 2020*

Gas

*Law enacted in June 2015, to be implemented from 2022*