

# Multilateral Assessment Japan

SBI46, Bonn, 12 May 2017



# Outline of the presentation

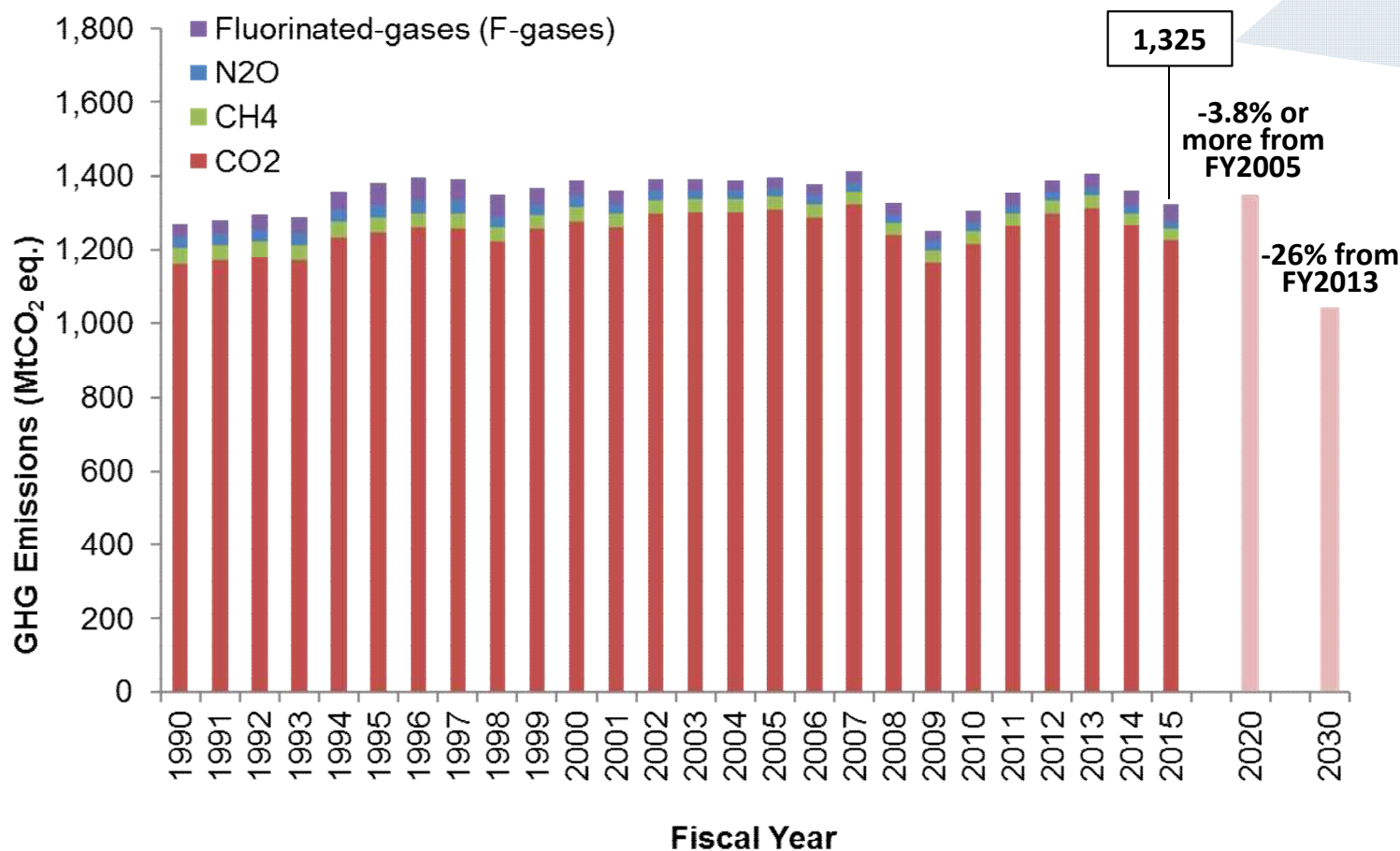
- GHG Emissions and Trends
- National Circumstances
- Japan's Emissions Reduction Target
- Policies and Measures
- Summary



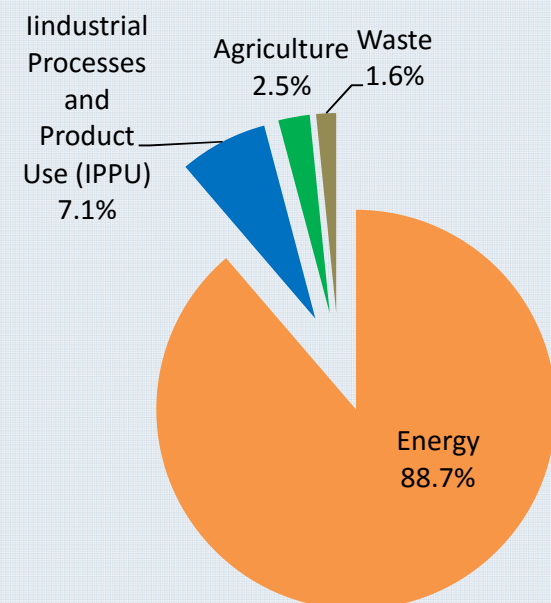


## ■ GHG Emissions and Trends

# GHG Emissions Trends (1990-2015)



## Emissions by sector in FY 2015 (excluding LULUCF)



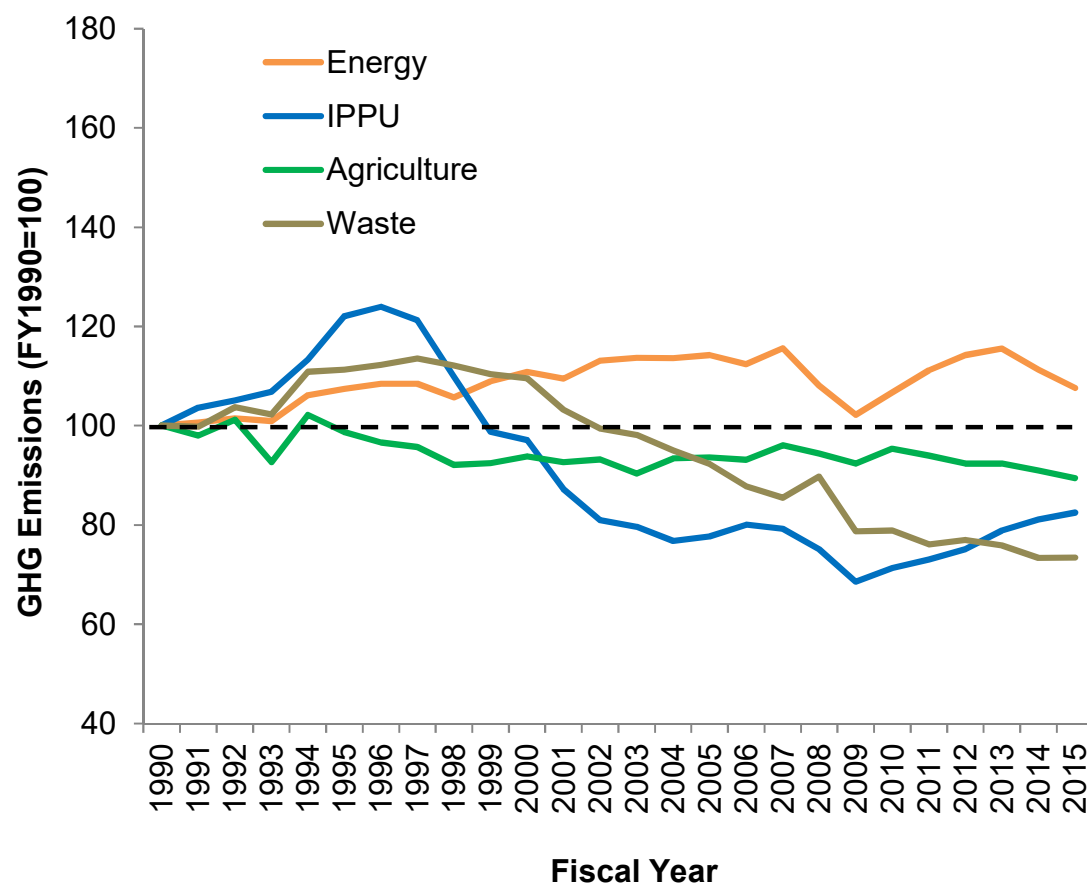
(Source) National Greenhouse Gas Inventory Report of Japan (April, 2017),  
Global Warming Countermeasures Plan

Note: The values of GHG emissions are based on the 2017 GHG inventory submission, which were revised from the values reported in the BR2. In the right pie chart, total is not equal 100% due to rounding.



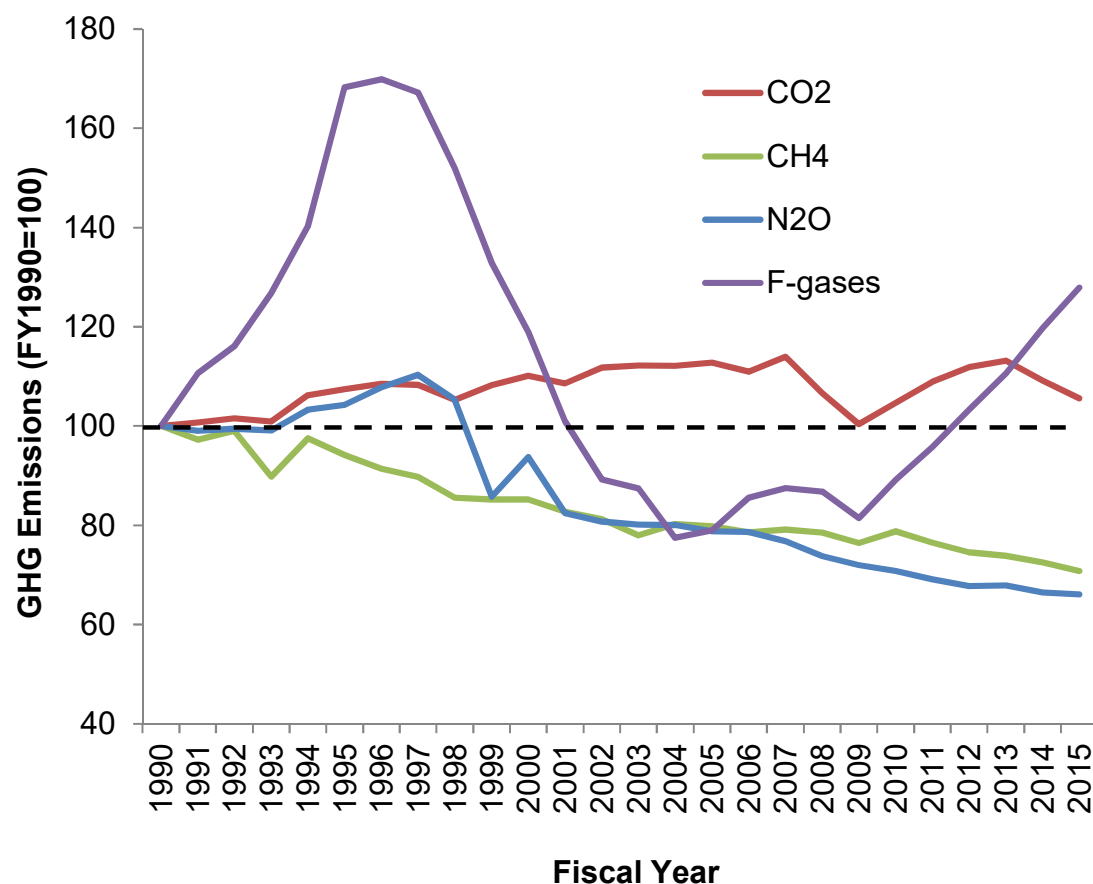
# GHG Emission by Sector / by Gas (1990-2015)

## Emissions trend by sector



(Source) National Greenhouse Gas Inventory Report of Japan (April, 2017)

## Emissions trend by gas

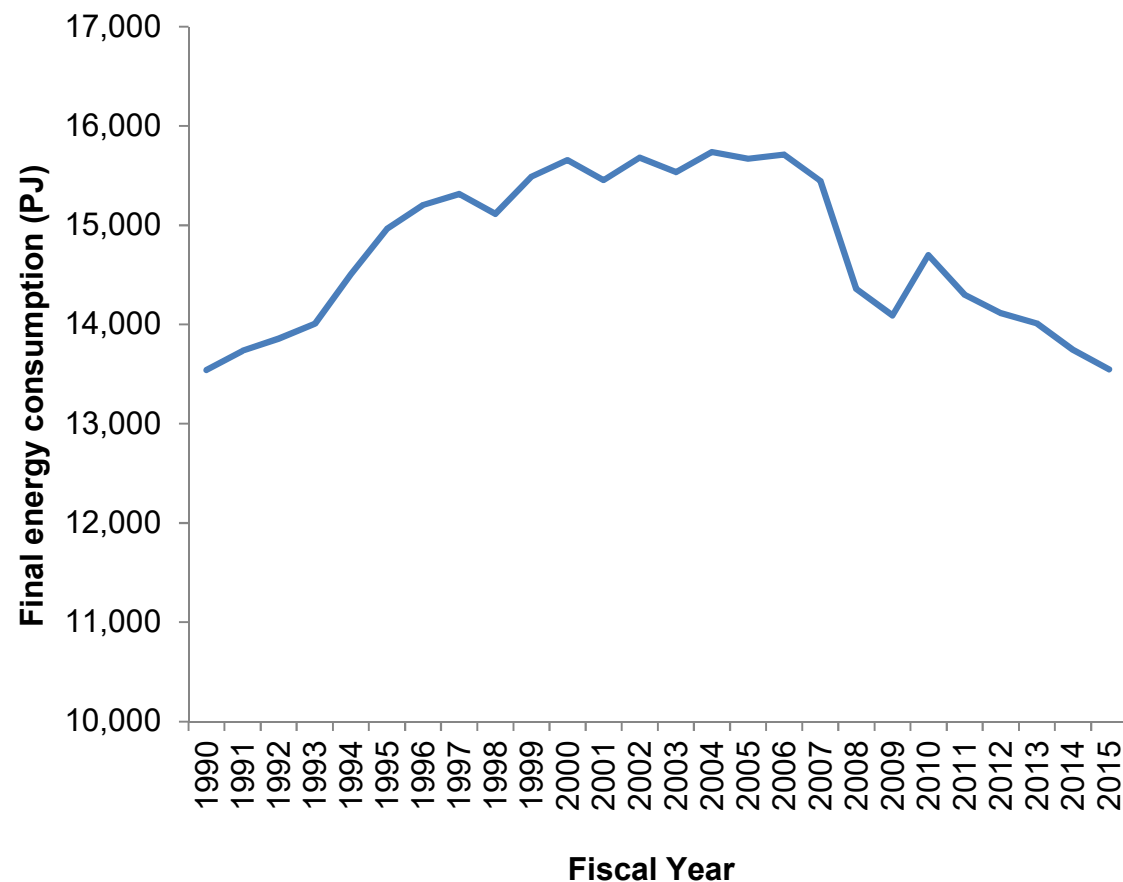


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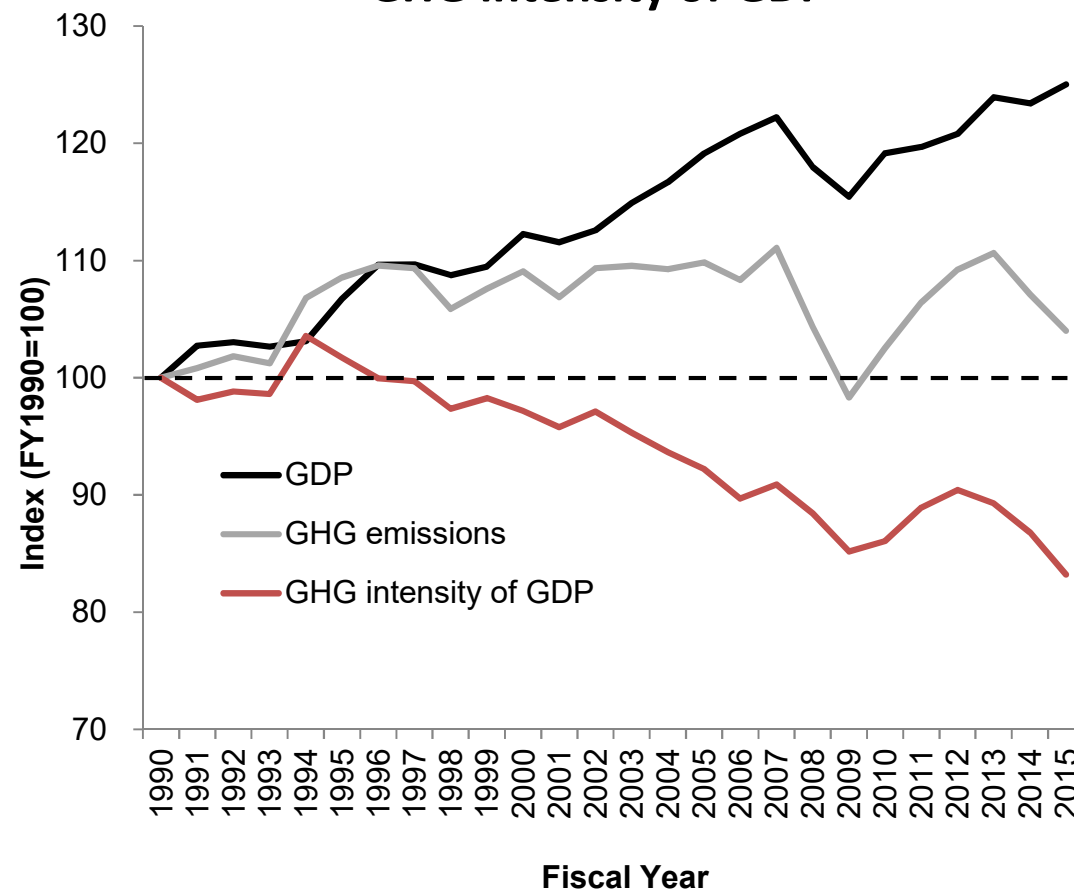
# Trends of Energy Consumption and GHG Intensity

## Final energy consumption



(Source) General Energy Statistics of Japan (April, 2017)

## GHG intensity of GDP



(Source) National Greenhouse Gas Inventory Report of Japan (April, 2017), Annual Report on National Accounts

Note: The values of GHG emissions are based on the 2017 GHG inventory submission, which were revised from the values reported in the BR2.

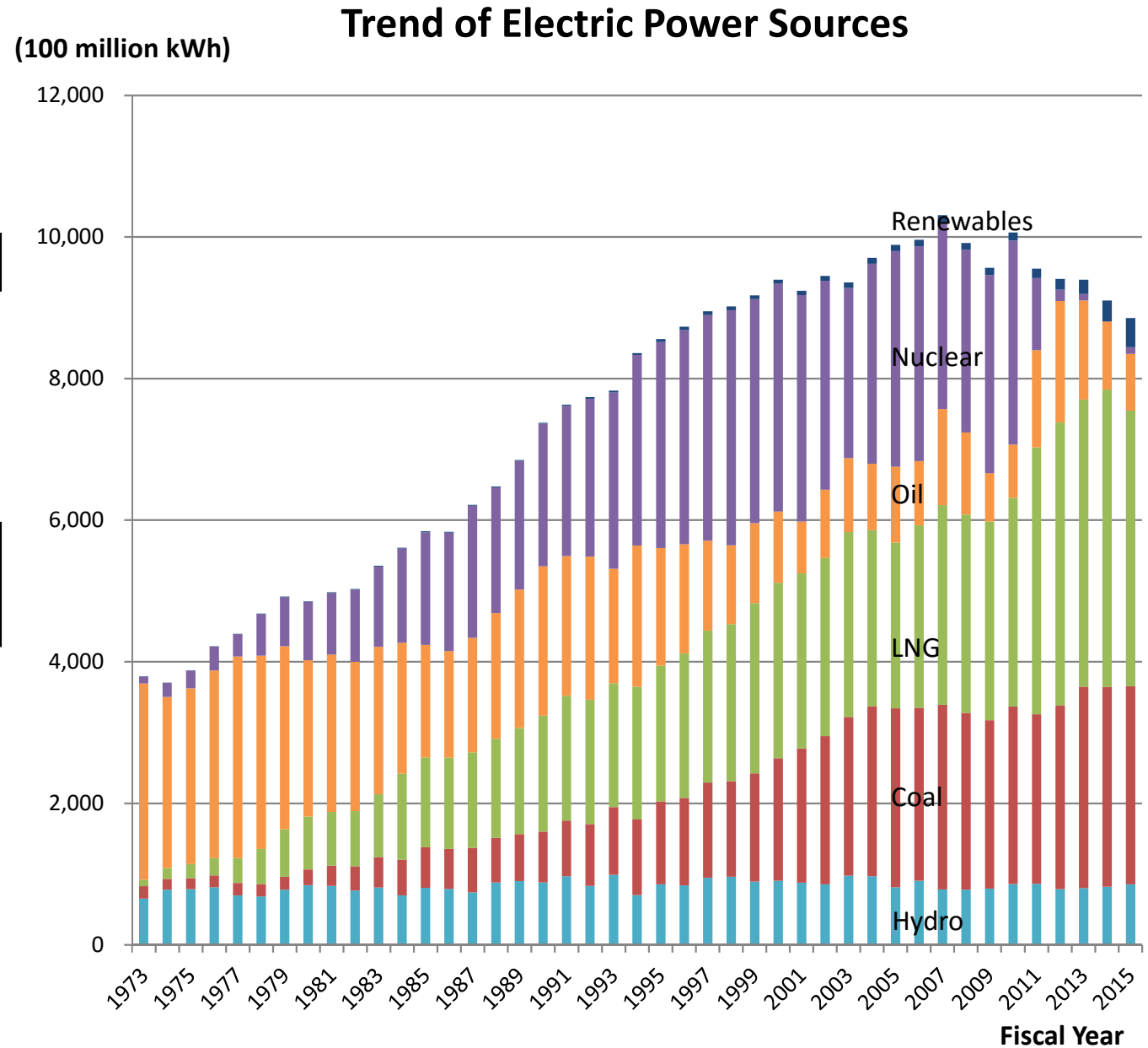
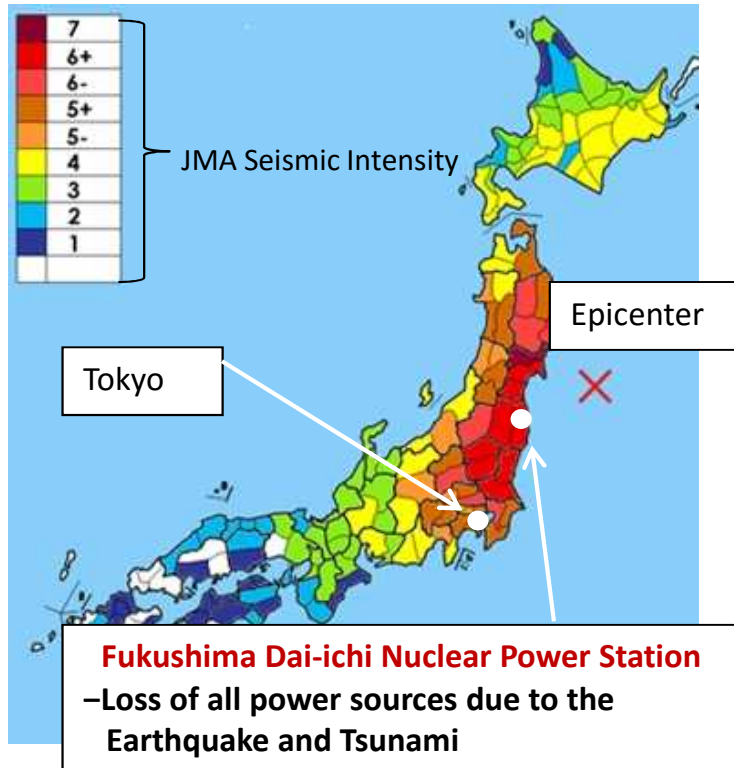


## ■ National Circumstances



# Change of National Circumstances after the Great East Japan Earthquake

- Date : 11 March 2011
- Magnitude : 9.0 (the largest magnitude recorded in Japan's history)





A scenic landscape photograph of a mountain range. The foreground is filled with dense evergreen and deciduous trees, many of which have turned vibrant shades of red, orange, and yellow, indicating autumn. In the middle ground, a wide, flat, brownish field stretches across the landscape. In the background, several mountain peaks are visible, with the central peak being the most prominent. The sky is a deep blue with wispy white clouds. A semi-transparent text box is overlaid on the lower half of the image.

# ■ Japan's Emissions Reduction Target



# Japan's Emissions Reduction Target

- 2020 target: 3.8% or more emission reduction by 2020 compared to 2005 (Updated on May, 2016)
- 2030 target (Japan's NDC): 26.0% reduction by 2030 compared to 2013 (25.4% reduction by 2030 compared to 2005)

	2020	2030
Emissions reduction target	3.8% or more reduction	26.0% reduction (25.4%)
Base year	FY2005	FY2013 (FY2005)
Target year	FY2020	FY2030
Covered gases	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> and NF <sub>3</sub>	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> and NF <sub>3</sub>
GWP	IPCC AR4	IPCC AR4
Covered sector	Energy, Transport, IPPU, Agriculture, LULUCF and Waste	Energy, Transport, IPPU, Agriculture, LULUCF and Waste
Removals from the LULUCF	Included (Activity-based approach)	Included (Activity-based approach)



A young owl with light brown, streaked feathers and large yellow eyes is perched on a thick, mossy tree branch. The background is a dense forest with green leaves. A semi-transparent grey box is overlaid on the lower part of the image, containing the text 'Policies and Measures'.

## ■ Policies and Measures



# Plan for Global Warming Countermeasures (May 2016)

## ■ Purpose of the Plan

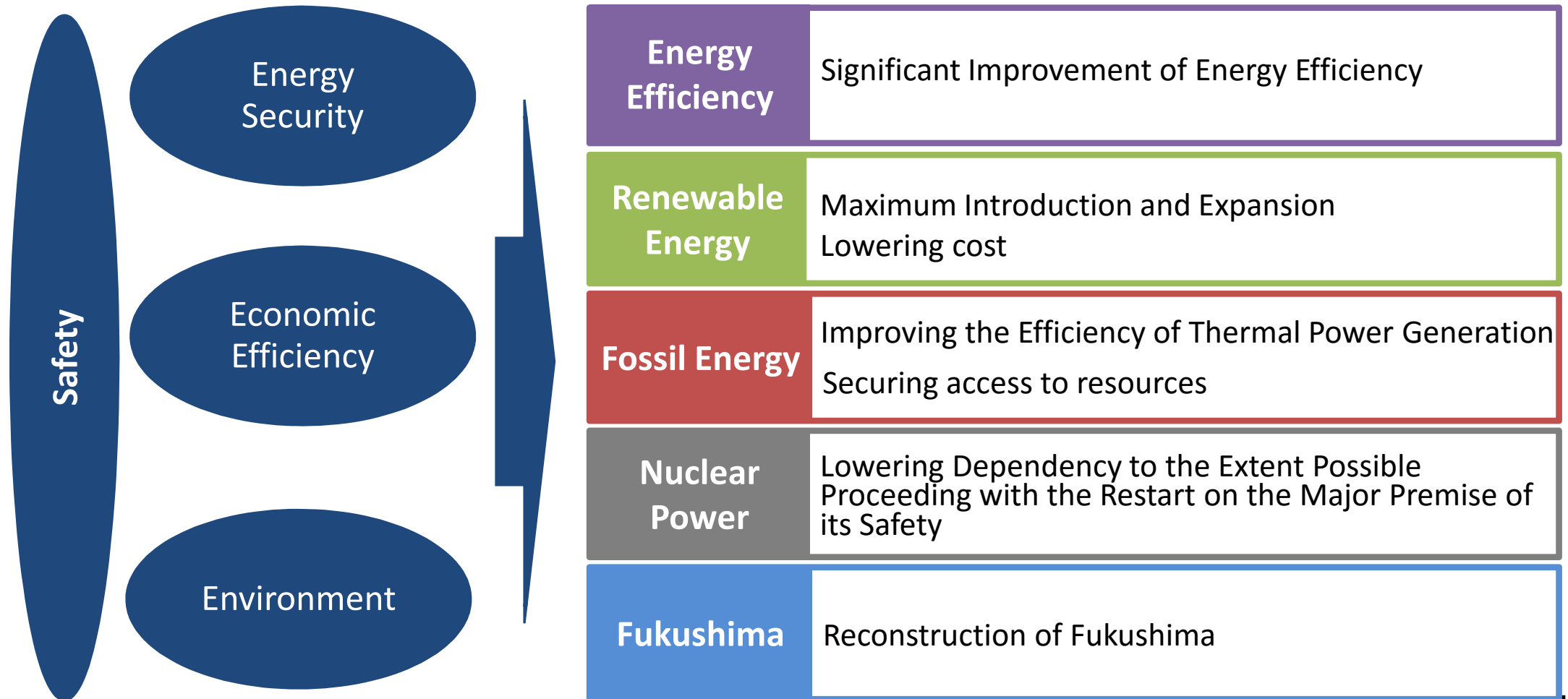
Promote Japan's global warming countermeasures in a comprehensive and a well-planned manner

## ■ Contents

- ✓ Basic direction regarding the promotion of global warming countermeasures pursuing actions toward:
  - National mid-term target : 26% reduction by 2030
  - National long-term goal : aim for 80% reduction by 2050
  - Global GHG reduction
- ✓ GHG reduction target
  - BY FY2030 : 26% (25.4%) reduction compared to FY2013 (FY2005)
  - BY FY2020 : 3.8% or more reduction compared to FY2005
- ✓ Progress Management of the Plan
  - Progress review : every year
  - Revision consideration : every 3 years
- ✓ Polices and measures for achieving targets

# Japan's Energy Policy

- Energy-originated CO2 emissions:  
approximately 90% of Japan's GHG emission
- Basic principles of Japanese energy policy:  
3E+S (“Energy Security”, “Economic Efficiency”, “Environment” and “Safety”)





# Examples of Policies and Measures (1)

## Industry's Action Plans

- GHG emissions reduction plans for 2020 and/or 2030: 114 industry groups cover 80% of energy related CO<sub>2</sub>
- Based on “Pledge & Reviews” and “Public Private Partnership”

## Low-Carbonization of Electricity

- 44% of non-fossil fuel power supply in 2030 (renewable and nuclear).
- Reform and operation of FIT (feed-in-tariff) scheme for renewable energies
- Utilizing nuclear power generation whose safety is confirmed
- Improving the Efficiency of Thermal Power Generation

Wind power



Small scale hydraulic power



Solar PV



Biomass



Geothermal power





# Examples of Policies and Measures (2)

## The Act on the Rational Use of Energy

- Measurement and reporting of energy consumption by business operators
- Improving energy-efficiency: more than 1% annually for major factories and offices
- “Top Runner program” for household appliances, equipment and automobiles

## Top Runner Program

- Mandatory program for manufacturers and importers to fulfill energy efficiency targets, encouraging competition and innovation

### Improvement in energy efficiency



**Air-conditioners**    **30.7%** (FY2001→FY2014)



**Passenger cars**    **96.7%** (FY1996→FY2014)



# Examples of Policies and Measures (3)

## Highly Energy-Efficient Vehicles

- Share of next-generation vehicles: 50 to 70% by FY2030



*Electric vehicles (EV)*



*Plug-in Hybrid vehicles (PHV)*



*Fuel cell vehicles (FCV)*

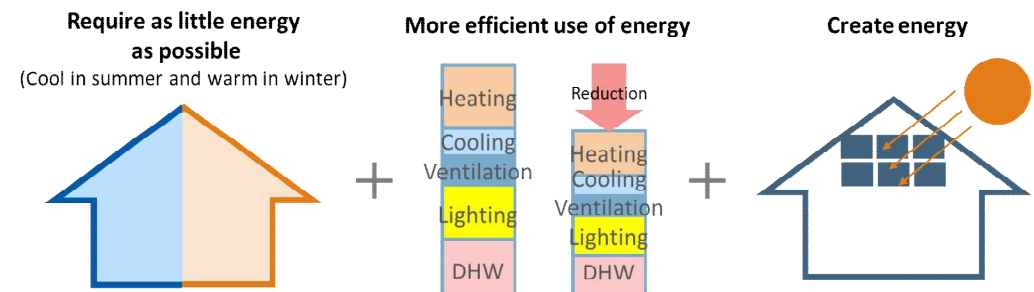


*EV charger*

## Low-Carbonization of Houses and Buildings

- Mandatory energy efficiency standards for newly constructed houses and buildings: gradual introduction by 2020
- Promoting ZEH (Net-zero-energy houses)/ZEB (Net-zero-energy buildings)

**ZEH/ZEB: Net annual energy consumption in the house/building is around zero or below**





## “COOL CHOICE” campaign



Choose now for our future

### **Develop a sense of urgency on global warming crisis**

- ✓ Help people to relate global warming issues with their personal lives
  - ✓ Encourage their voluntary actions as individuals
- e.g. : Production of effective content for crisis education



### **(1) Replacement to low-carbon products**

e.g. : LED and energy efficient appliances

### **(2) Low-carbon services**

e.g. : Promote use of public transport

### **(3) Low-carbon lifestyle**

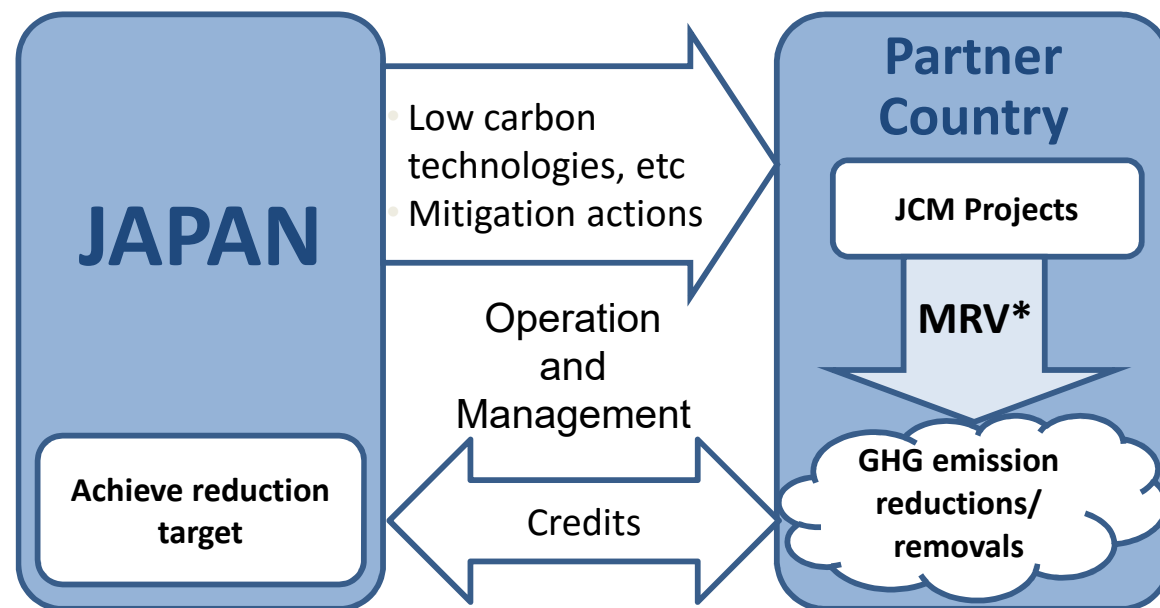
e.g. : Public relations activities on campaigns such as COOL BIZ, WARM BIZ, Eco-drive



# Joint Crediting Mechanism (JCM)

## Progress:

- 17 partner countries with 105 projects in the pipeline
- Credits already issued from 5 projects
- 35 MRV\* methodologies



MRV: measurement, reporting and verification

## (Example of pipeline projects)



【Waste heat recovery in cement industry】  
(Indonesia)  
122,000tCO<sub>2</sub>/y.



【Waste to Energy plant】  
(Myanmar)  
4,732tCO<sub>2</sub>/y.  
Start operation: Apr. 2017



【Energy-efficient data center】  
(Laos)  
1,074tCO<sub>2</sub>/y.  
Start operation Jan. 2017



【Low carbon hotel by development of BEMS】  
(Viet Nam)  
605tCO<sub>2</sub>/y.  
Start operation: Jan. 2017



# Japan's Assistance

## Actions for Cool Earth: ACE 2.0

- Mobilize JPY 1.3 trillion of climate finance in 2020 to commit USD 100 billion goal

## Innovation for Cool Earth Forum: ICEF

- Annually host a global conference on innovative technologies to tackle climate change

## Japan's Assistance Initiatives to address Climate Change

- Meet the needs of developing countries
- Main areas of Japan's contribution
  - ✓ Mitigation
  - ✓ Adaptation
  - ✓ Transparency
  - ✓ Measures against fluorocarbons
  - ✓ SDGs

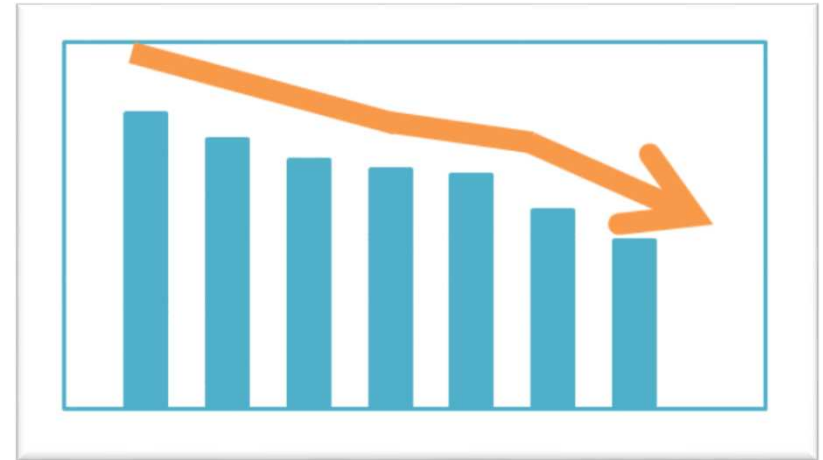


Olkaria geothermal plant, Kenya



# Long-term low GHG emission development strategy

- Relevant ministries convene to consider and discuss long-term strategy.
- Japan is committed to formulate and communicate well ahead of 2020 deadline, stated in G7 Ise-Shima Leaders' Declaration. The timing of submission to be decided.



G7 Ise-Shima Summit 2016





## ■ Summary



# Summary

- Japan succeeded in reducing its emissions in the recent 2 years, overcoming challenges of the Great East Japan Earthquake.
- Japan is committed to achieve emission reduction targets.
  - ✓ By 2020: 3.8% or more emission reduction compared to 2005
  - ✓ By 2030: 26.0%(25.4%) reduction compared to 2013(2005) (Japan's NDC)
- Japan established “the Plan for Global Warming Countermeasures” that
  - ✓ helps to implement a variety of policies and measures,
  - ✓ requires continuous progress review, and
  - ✓ promotes government and public-private partnerships to achieve the reduction targets