

Japan's Climate Change policy and Business Engagement

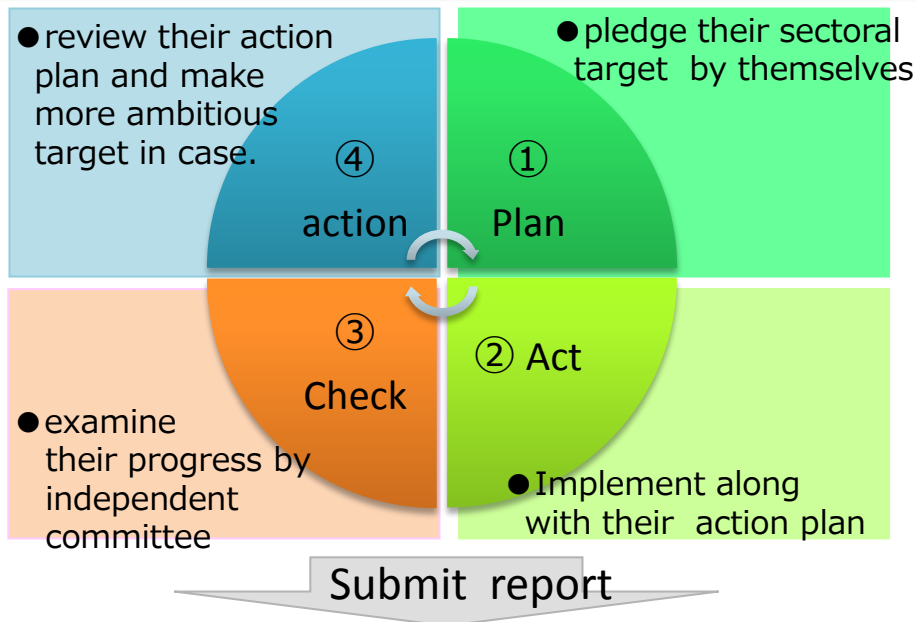
Michihiro Kishimoto

**Deputy Director-General for
Environmental Affairs of METI**

Activities in the industrial sector to combat global warming (Commitment to a Low Carbon Society)

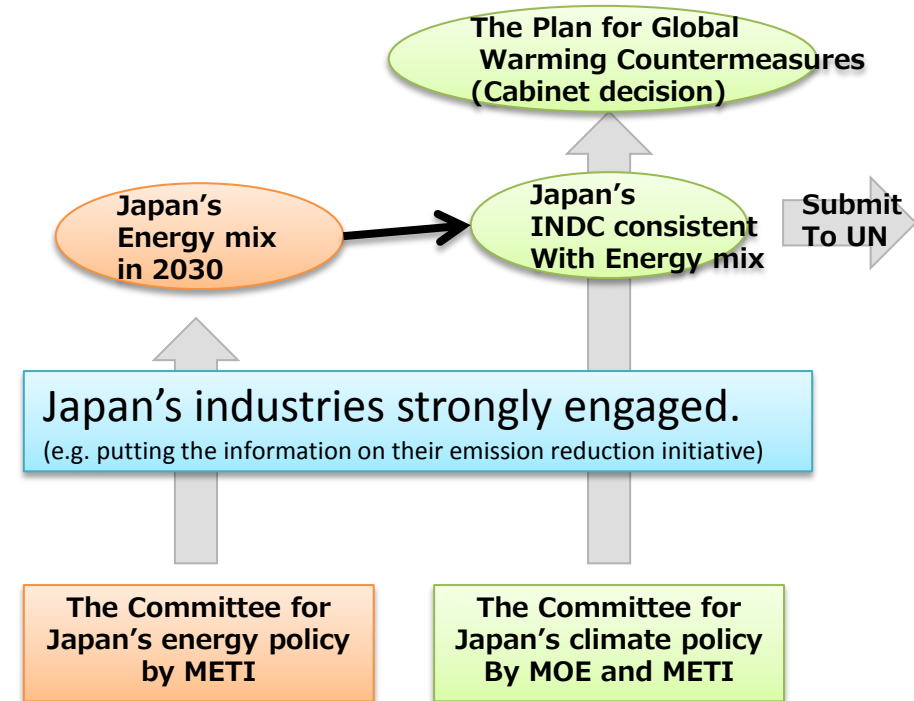
- In Japan, since the Keidanren Voluntary Action Plan on the Environment in 1997, the industry groups have voluntarily pledged their own reduction targets ahead of national targets.
- **Japanese government reviews the industries' initiatives** (PDCA cycle called with “Commitment to a Low Carbon Society”) every year.
- In the 'Plan for Global Warming Countermeasures' (Action plan for 2030 NDC of Japan) decided in the Cabinet, this **"pledge and review system"** is viewed as a central vehicle in the industrial sector.
- **Japanese government views industry sector as the main stakeholder** in deciding energy and climate policies and has dialogues with industries.

Industry's PDCA cycle (Commitment to a Low Carbon Society) and review by the government



Governmental Committee reviews the report every year

Process in formulating the target for 2030



- Including Electric, Oil & Gas, Iron & Steel, Chemical, Electronics & Machinery, Automobile, 115 major industrial associations have been keenly tackling with climate change through their action plans “Commitment to a Low Carbon Society” for 2020 and 2030.
- The action plans cover more than 50% of Japanese energy-originated CO₂ emissions (**roughly 80% of energy & industry sectors**).

Examples of 2030 reduction target

	Target indicator	base year	Target reduction level for 2030
Japan Iron and Steel Federation	CO ₂ emissions	BAU	▲9 Mil t-CO ₂
Japan Chemical Industry Association	CO ₂ emissions	BAU	▲2 Mil t-CO ₂
Japan Paper Association	CO ₂ emissions	BAU	▲2.86 Mil t-CO ₂
Japan Cement Association	Energy consumption per unit	2010	Less than ▲49MJ/t-cem (more than ▲1.4%)
Liaison Group of Japanese Electrical and Electronics Industries for Global Warming Countermeasures	Energy consumption per unit	2012	▲16.55% or more*
Japan Automobile Manufacturers Association, Japan Auto-body Industries Association	CO ₂ emissions	1990	▲38%
Electric Power Council for a Low Carbon Society	CO ₂ emissions per unit CO ₂ emissions	— BAU	About 0.37 kg-CO ₂ /kWh ▲11 Mil t-CO ₂
Petroleum Association of Japan	Energy consumption	BAU	▲1 Mil t-CO ₂ kl
Japan Gas Association	CO ₂ emissions per unit Energy consumption per unit	1990	▲89% ▲84%

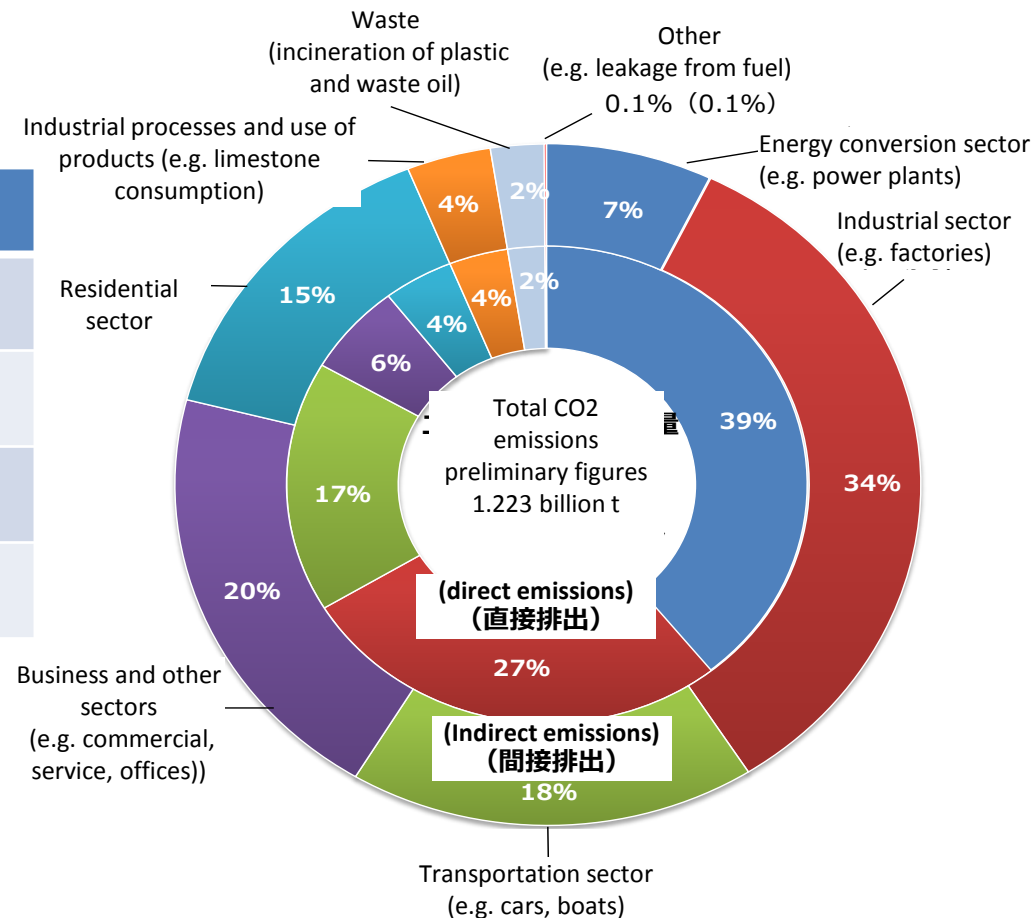
Domestic CO2 emissions

- The total volume of greenhouse gas emissions in Japan in FY 2015 (preliminary figure) was 1.321 billion ton, which has been decreasing for two years in a row.
- CO₂ emissions in the industrial sector was 413 million ton in FY 2015, and **decreased by 17.7 % (compared with FY 1990) with the pledge and review system such as “Commitment to a Low Carbon Society” etc.**

**Indirect CO₂ emissions by sector
(preliminary figures for FY 2015)**

Mil ton	1990	2015 (compared with 1990)	2030 (compared with 2015)
Industrial	502	413 (▲17.7%)	401 (▲2.9%)
Transport	206	216 (+4.8%)	163 (▲24.5%)
Business	137	249 (+81.7%)	168 (▲32.5%)
Residential	131	182 (+38.9%)	122 (▲33.0%)

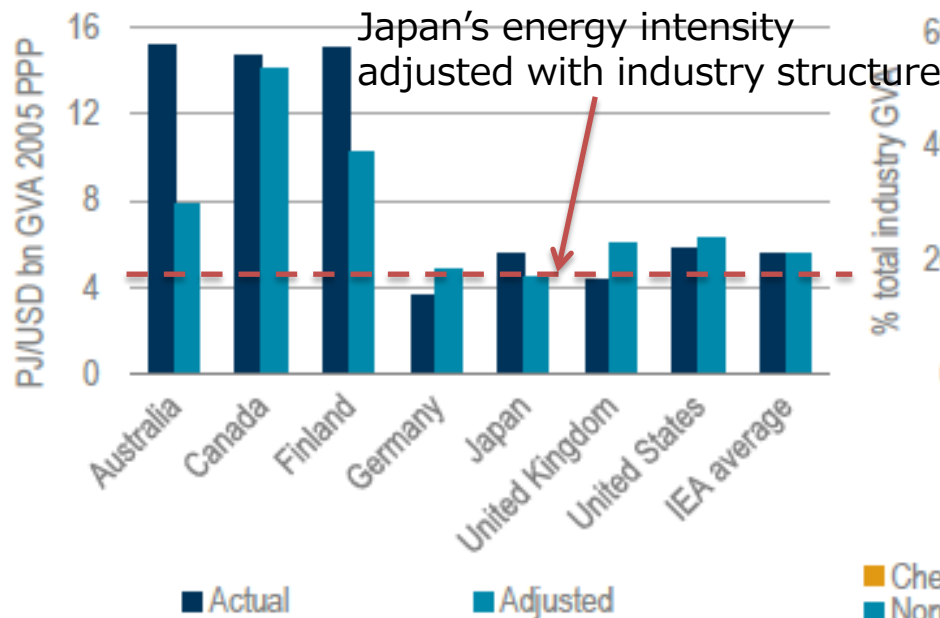
Changes in CO₂ emissions by sector



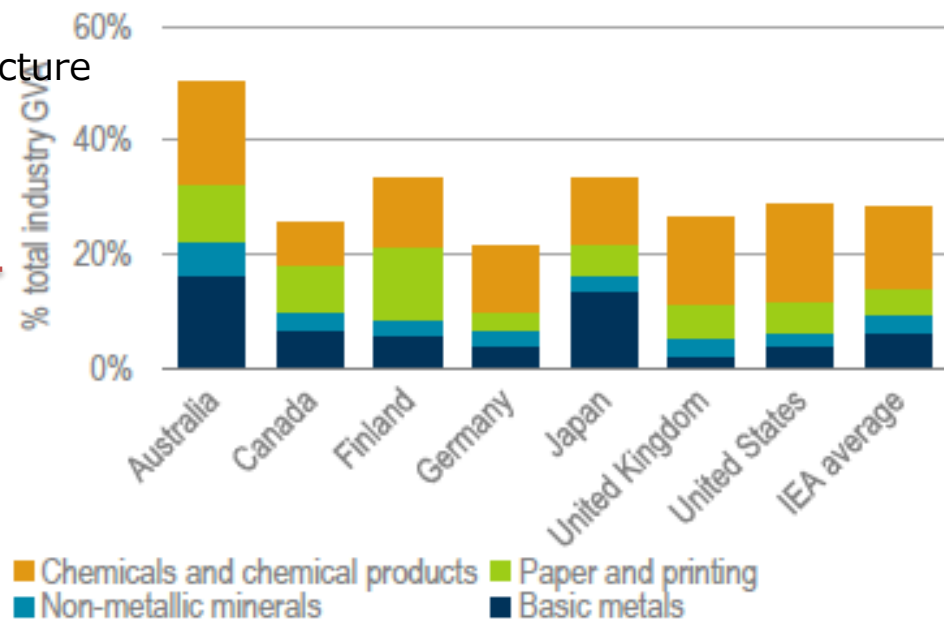
Energy intensity adjusted with industry structure

- According to IEA report published this October, **the industry energy intensity of Japan is in the best levels among the main countries after adjustment**, considering the difference in industry structure.

<Energy intensity>



<contribution of energy intensive sub-sectores to industry GVA>



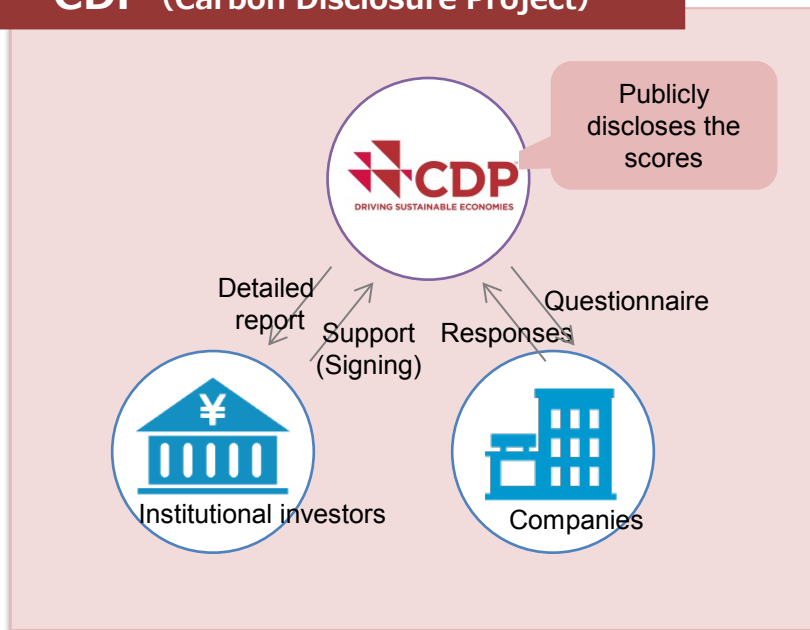
Source: Adapted from IEA (2017a), *Energy Efficiency Indicators* (database), www.iea.org/statistics/topics/energyefficiency/.

Private companies' proactive action

- Japanese industry and companies have traditionally taken their actions toward global warming voluntarily by the pledge and review system, and **they actively participate in the ambitious international initiatives such as CDP and SBT.**
- The number of Japanese company answering CDP's Questionnaire is 283 (No.2 in the world). Among them, **about 60% earned A or B valuation** (the same level with U.S.A and U.K). And **13 companies earned the highest rank A** (111 in the world. USA 18; UK 11; South Korea 10, Germany 6, France 6, Switzerland 6 etc.).
- 12 Japanese companies' target has already been approved by Science Based Targets (SBT) (76 in the world).

【Source】 CDP Climate Change Report 2017, CDP (2017) (Japanese version) and others

CDP (Carbon Disclosure Project)



Science Based Target (SBT)

【Companies with SBT】

Daiichi Sankyo, Dentsu, Fujitsu, Kawasaki Kisen Kaisha, Kirin Holdings, Komatsu, Konica Minolta, Nabtesco, Panasonic, Ricoh, Sony, TODA

U.S.A 21, U.K 10, France 5, Switzerland 5, Germany 3 etc.

【source】 <http://sciencebasedtargets.org/companies-taking-action/>

For achieving global sustainable development, it is vital for all countries to work on climate change policy and to reduce GHG emissions. Japan is committed to taking effective measures both domestically and internationally, but there are increasing opportunities for further actions in the world. Therefore, METI has set the following **“three arrows”** below, as promoting further actions for Japan to contribute to global emission reductions.

(1) International Contribution (1st arrow)

- (1) **Reducing GHG emissions at the global scales** is an absolute necessity to solve the issue of global warming. Japan recognizes its role to supply the world low carbon technologies and others, facilitating economic growth and innovation in Japan.
- (2) Therefore, **we should maximize global reductions with all countries, including Japan, through a healthy competition of the amounts of visualized emission reduction contributions.** Potential scale of emission reductions would be **around 2.9BtCO₂ in 2030 and 9.7B tCO₂ in 2050** (based on 10 developing countries in Asia, South America and Middle East incl. JCM partners)
- (3) Japan contributes to global reductions with its excellent low-carbon technology based on public finance schemes such as ODA, JBIC(Japan Bank for International Cooperation), and JCM. However, **only JCM has been visible as a country's contribution.**

(2) Global Value Chains (2nd arrow)

- (1) In product lifecycles, **GHG emissions are greatest at the utilization stage.** It is important to **broaden the view from reduction only in factories to reduction throughout product lifecycles (value chains),** diffusing worldwide such products as could contribute to low carbon society. .
- (2) **Japan's rich eco-system of industries** has been creating innovative, high-performance products and technologies. Potential scale of reducing emissions would be greater than equal to **1.0B tCO₂ in 2020 and 1.6B tCO₂ in 2030** globally (based on 7 industries' (Steel, Chemistry, Electrical and Electronic, Automobile, City Gas, Power, Papermaking) “The Commitment to a Low Carbon Society”)

(3) Innovation (3rd arrow)

- (1) **The key to acting against climate change without sacrificing economic growth is the development of innovative technologies.**
- (2) **Japan formulated “National Energy and Environment Strategy for Technological Innovation towards 2050” (NESTI 2050), identifying technological fields with potential of huge impacts on emission reductions.** Japan will develop roadmaps for 10 of the identified fields, and establish a platform to identify the bottlenecks under industry-academia-government collaboration.
- (3) Potential scale of reducing emissions would be **between several bln and 10 bln tCO₂** globally (based on target fields of NESTI 2050)