

The Japanese Business Community's Initiative to Tackle Climate Change

September 2

Yasushi KIMURA

Vice Chairman/

Chairman of Committee on Environment and Safety



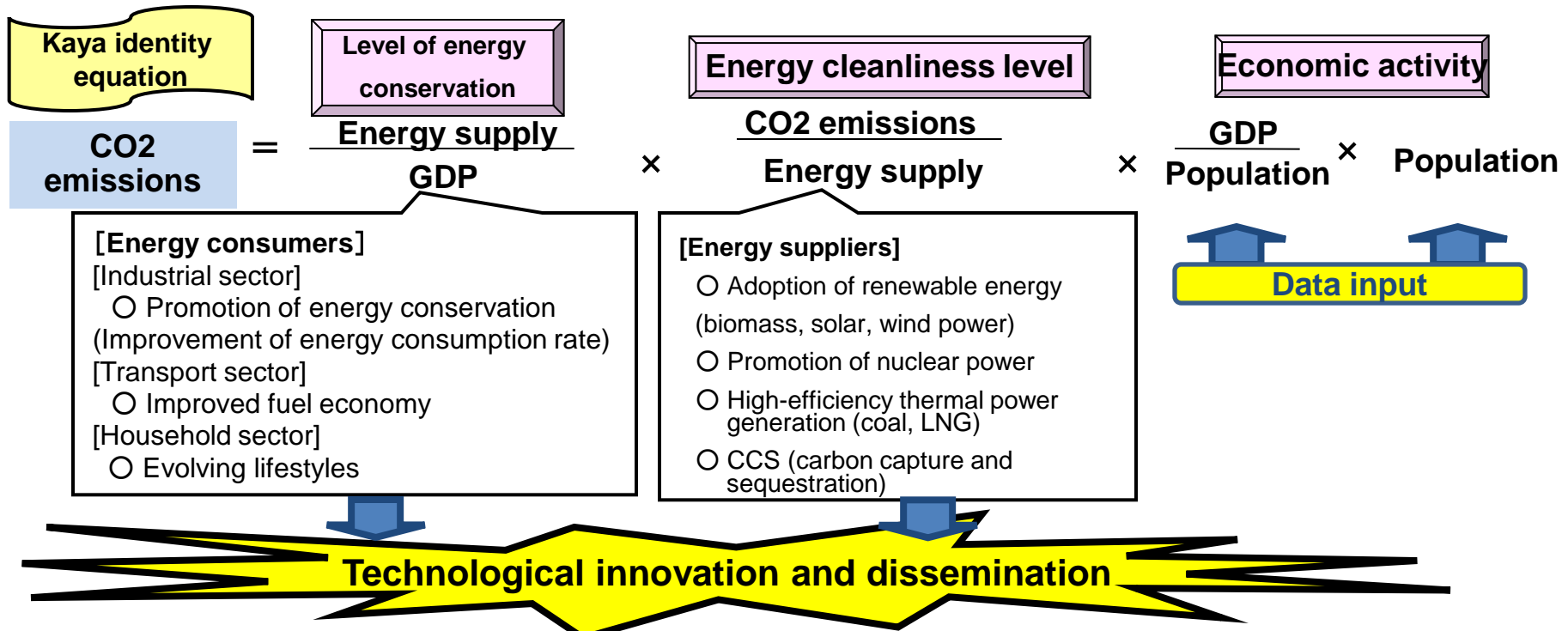
KEIDANREN

1. Basic Concept

Basic Viewpoint on Global Warming Countermeasures

- (1) Climate change should be addressed globally in the long turn. Technology holds the key to successful countermeasures to this issue.
- (2) It is important to promote widespread use of BAT (Best Available Technologies) domestically as well as disseminate existing technologies on a global scale.
- (3) In addition, developing and diffusing innovative break-through technologies will be essential in order to tackle global warming in the long term.

○ **Technological innovation** is the key to reconcile economic growth and emission reduction.




2. What have we done so far?

~Promotion of the Keidanren Action Plan~

1997 ~2012

History of KEIDANREN' s Global Warming Countermeasures

- 
- | | |
|-------------|---|
| Apr. 1991 | <u>Keidanren Global Environment Charter released</u> |
| Jun. 1992 | United Nations Earth Summit (Rio de Janeiro) |
| Jul. 1996 | <u>Keidanren Environment Appeal (implementation policy for Action Plan on the Environment) released</u> |
| Jun. 1997 | <u>Keidanren Action Plan on the Environment released</u> |
| Dec. 1997 | Kyoto Protocol adopted |
| Dec. 1998 | First follow-up on Action Plan on the Environment (annual follow-ups thereafter) |
| Jul. 2002 | Establishment of third-party evaluation committee for Keidanren Action Plan on the Environment |
| Dec. 2009 | Keidanren Commitment to a Low Carbon Society (basic policy) released |
| Jan. 2013 | Keidanren Commitment to a Low Carbon Society formulated and released |
| Apr. 2013 - | Keidanren Commitment to a Low Carbon Society initiated |

Overview of the KEIDANREN Action Plan on the Environment

Industrial sector

31 industries
(separate targets for each industry)

Energy conversion sector

3 industries
(separate targets for each industry)

Business operations sector

14 industries
(separate targets for each industry)

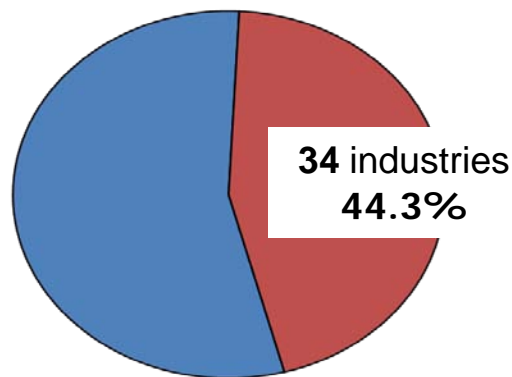
Transport sector

13 industries
(separate targets for each industry)

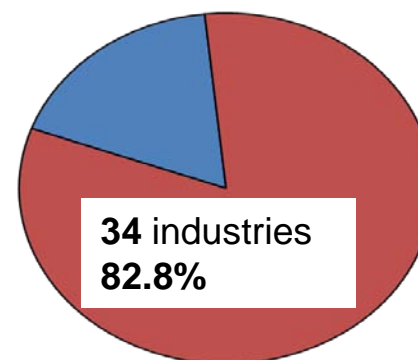
**Common target = $\pm 0\%$ change from FY1990 levels
(average over FY2008-FY2012)**

- (1) **Participants consist of a total of 61 industries or enterprises** from not only the manufacturing sector, a large energy consumer, but also a wide range of other fields including business operations such as logistics and financial services.
- (2) **With regard to manufacturing processes (at the service provision stage)**, four separate **quantitative targets** are set (total CO2 emissions, CO2 emission intensity, total energy consumption, energy consumption rate) and the most appropriate target selected for each process, taking into account differences among industries and business categories.
- (3) When results exceed initial predictions, **more ambitious targets are set**. At the same time, **in some industries large numbers of CDM (clean development mechanism) credits or other credits are purchased** in order to meet targets.
- (4) **Annual reviews by government councils (Central Environment Council, Industrial Structure Council) and third-party evaluation committee.**

Share of Japan's total CO2 emissions, FY1990
(1,143.4 million tons)

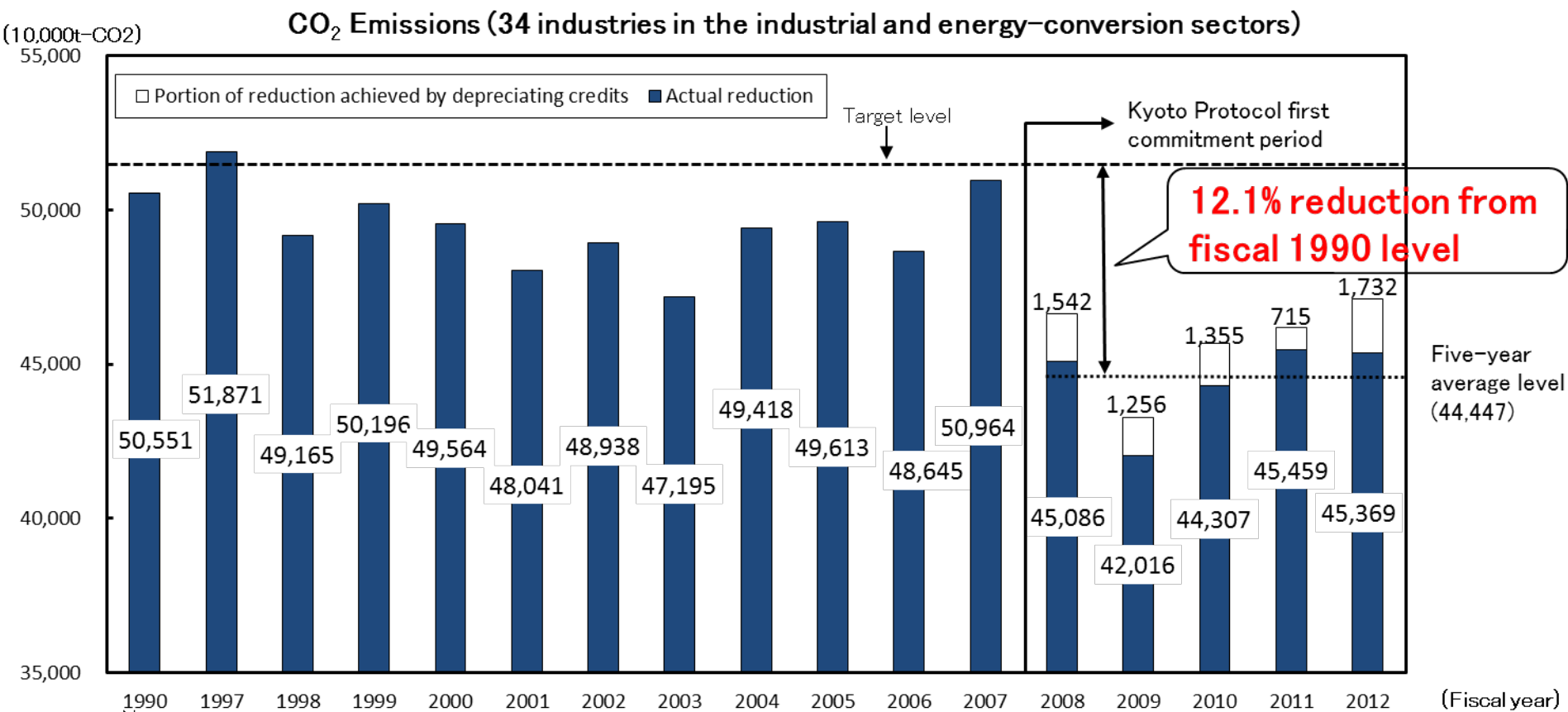


Share of industrial and energy conversion sector CO2 emissions, FY1990
(612.2 million tons)

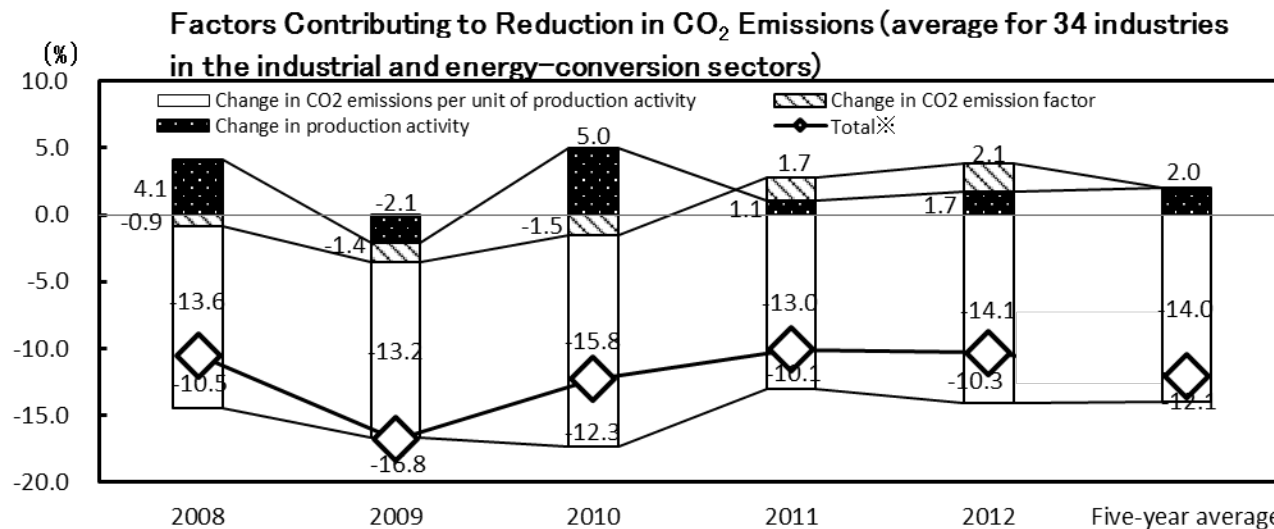


CO₂ Emissions by 34 Industries in the Industrial and Energy Converting Sectors

◆ With regard to the uniform target (endeavor to reduce average CO₂ emissions from the industrial and energy-conversion sectors between fiscal 2008 and 2012 to below the level of fiscal 1990), participating industries marked a 12.1% reduction, a significant achievement far beyond the initial target.



The Attribution of the Follow-Up



Note: Sum of items may differ from total due to rounding.

	Comparison to FY 1990
Change in production activity*1	+2.0%
Change in CO2 emission factor*2	+0.0%
Change in CO2 emissions per unit of output (efficiency improvement)	-14.0%
Total	-12.1%

Efficiency improvement is the driving force to reduce CO2 emissions

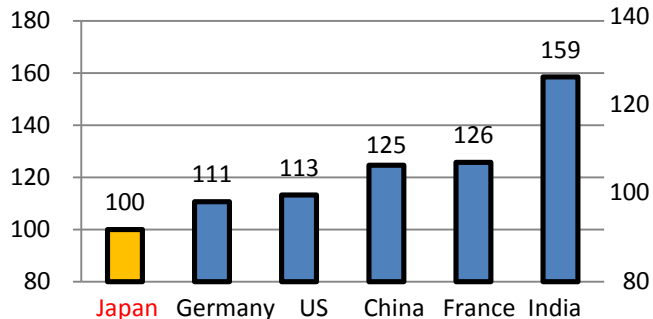
*1 For change in production activity, the indices with the closest relation to energy consumption in each industry were selected.

*2 CO₂/MJ for fuel use and CO₂/kWh for electricity consumption.

International Comparisons of Energy Efficiency in Industrial and Energy-conversion Sectors

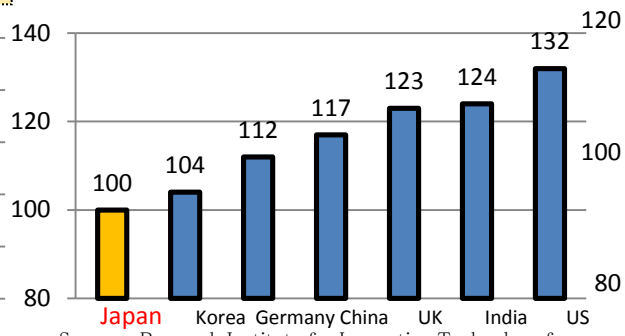
Energy efficiency in key industries is among the world's highest

Energy required to produce 1kWh of electricity through thermal power generation (2010)



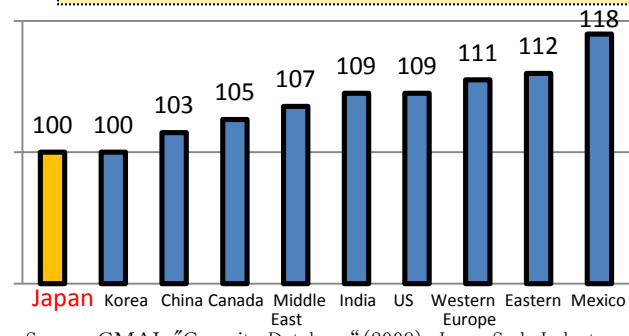
Source: INTERNATIONAL COMPARISON OF FOSSIL POWER EFFICIENCY AND CO2 INTENSITY (2013) (ECOFYS)

Energy required to produce 1 ton of iron (2010)



Source: Research Institute for Innovative Technology for the Earth, "International Comparison of Energy Efficiency"

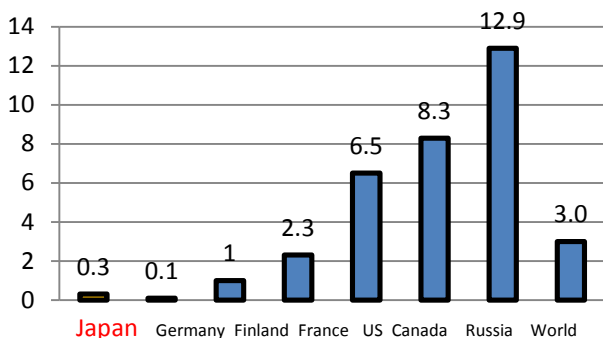
Energy required to produce 1 ton of electrolytic caustic soda (2009)



Source: CMAI "Capacity Database" (2009), Japan Soda Industry Association "Soda Handbook" (2009)

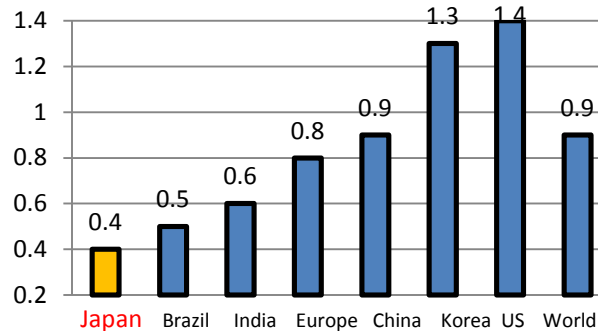
Japanese industries' have introduced Best Available Technologies aggressively.

Energy saving potential by adopting BAT (Pulp and Paper) (GJ/T)



Source: IEA Energy Technology Perspective 2012

Energy saving potential by adopting BAT (Cement) (GJ/T)



Source: IEA Energy Technology Perspective 2010

P-D-C-A cycles of the Keidanren Action Plan



Plan

- Establishment of the Action Plans by Each Individual Association
 - Numerical Target Setting & Specified Measures
 - Actions for Climate Change Mitigation, etc.
- Compilation (with Verification by the Keidanren Committees) & Publication as the 'Keidanren Action Plan on the Environment'
- Constitution of Social Commitment

Do

- Implementation of the Action Plans by Each Individual Association
- International Cooperative Schemes (e.g. CDM, Joint Implementation, etc.)

Action

- Additional Measures for Further Actions to reduce CO2)
- Publication of the Results, Ensuring Credibility & Transparency

Check

- Check the Progress of the Actions by the Actual Performance (e.g. CO2 Emissions & Energy Consumption in the Previous Year)
- Review of the Follow-up Process by the Evaluation Committee to Improve Credibility and Transparency

Industries which raised their targets

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> ➤ All Japan Freight Forwarders Association (twice) ➤ Association of Japanese Private Railways ➤ Brewers Association of Japan ➤ Flat Glass Manufacturers Association of Japan ➤ Four electrical/electronics-related groups ➤ Japan Aluminium Association ➤ Japan Association of Rolling Stock Industries ➤ Japan Automobile Manufacturers Association (three times) | <ul style="list-style-type: none"> ➤ Japan Cement Association; Japan Chemical Industry Association ➤ Japan Copper and Brass Association ➤ Japan Department Stores Association (twice) ➤ Japan Federation of Construction Contractors ➤ Japan Federation of Housing Organizations ➤ Japan Foreign Trade Council ➤ Japan Gas Association (three times) ➤ Japan Mining Industry Association ➤ Japan Paper Association (twice) ➤ Japan Rubber Manufacturers Association (twice) | <ul style="list-style-type: none"> ➤ Japan Sanitary Equipment Industry Association ➤ Japan Sugar Refiners' Association ➤ Japan Trucking Association ➤ Japanese Electric Wire & Cable Makers' Association (three times) ➤ Japanese Ship-owners Association ➤ KDDI ➤ Lime Manufacture Association (twice) ➤ Petroleum Association of Japan ➤ Real Estate Companies Association of Japan; ➤ Scheduled Airlines Association of Japan (twice) |
|---|---|--|

The role of Keidanren Action Plan in Japanese Government's Climate Change Policy

Quoted in the Government's Kyoto Protocol Target Achievement Plan
(Government Decision: 28 March 2008)

"These voluntary action plans by business operators have thus far produced results and the voluntary action plans of Nippon Keidanren are, in particular, playing a central role in countermeasures in the industrial community. The advantages of a voluntary instrument include the ease of selection of superior countermeasures for each actor based on its originality and ingenuity, the likelihood of providing incentives to pursue aggressive targets, and no procedural costs for both the Government and implementing actors. It is expected that these advantages will be further exploited in voluntary action plans by business operators."

3. Where are we heading?

~ Keidanren's Commitment to
a Low Carbon Society ~

2013 ~ 2050

15 Dec. 2009

Announced the "Basic Concept"

17 Jan. 2013

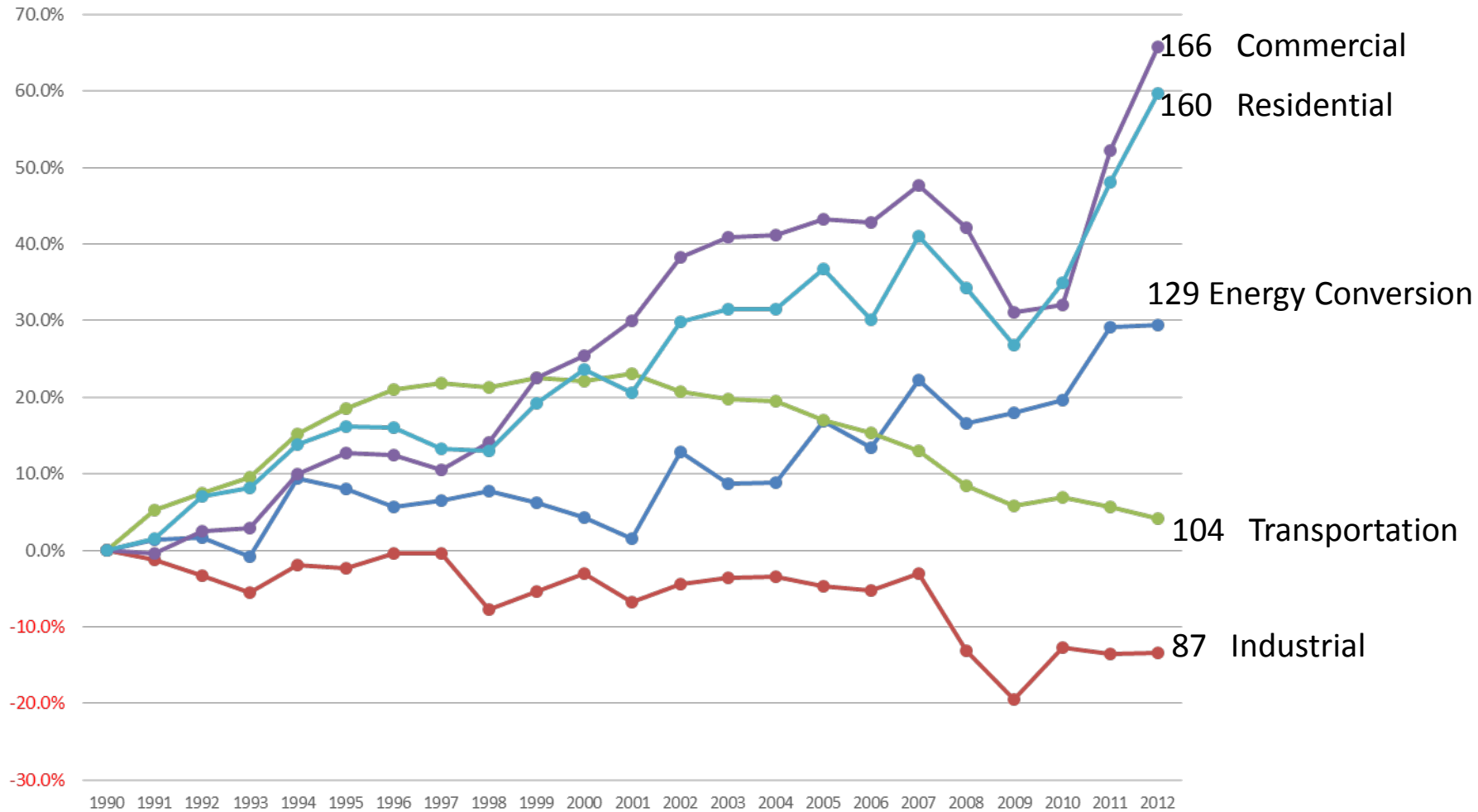
Released the "Commitment" integrating participating industries' action plans (as of January 2013)



1 Apr. 2013

Launch its PDCA cycle for the "Commitment" for 2013 onwards

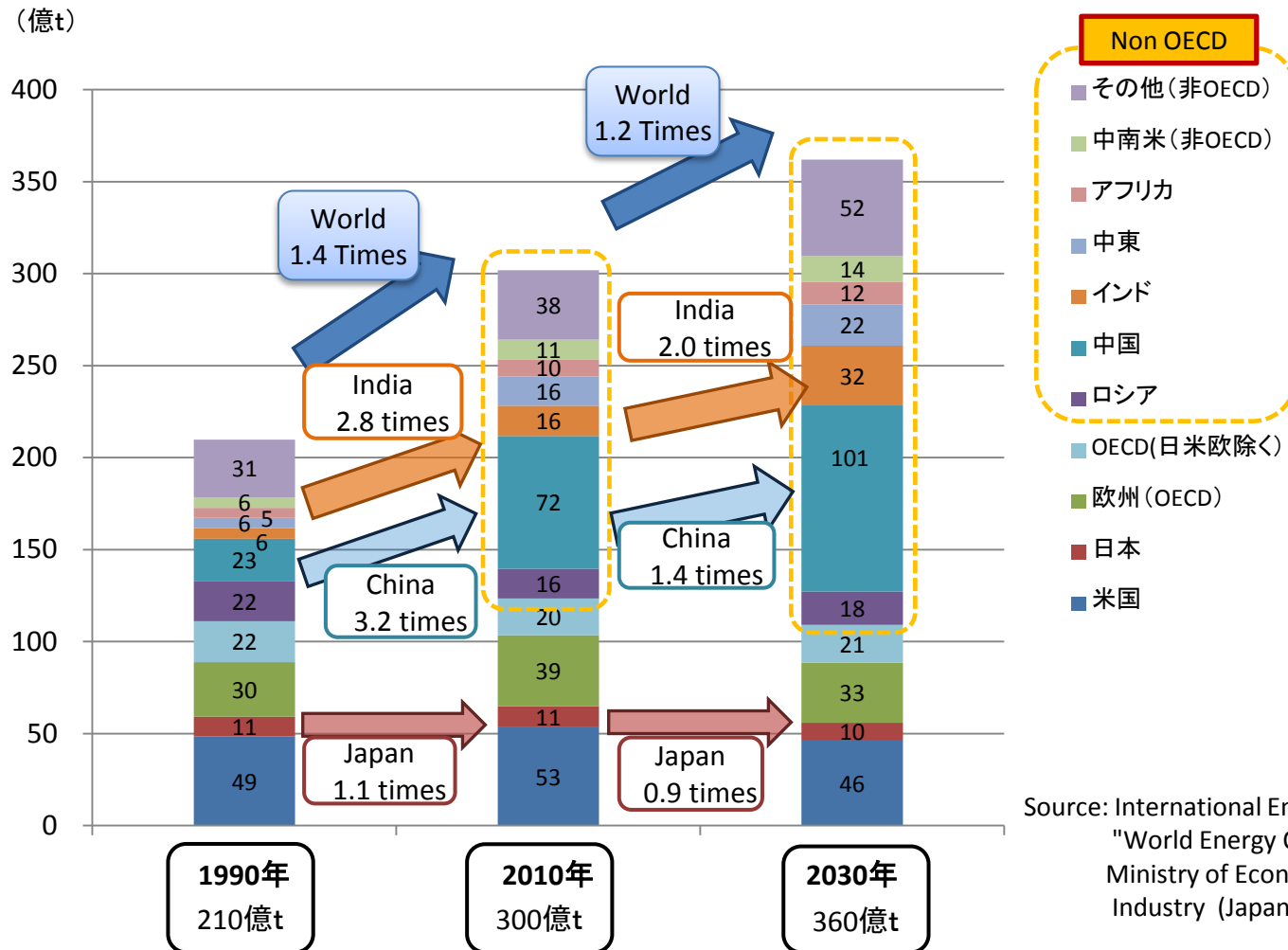
Japan's CO2 Emission Per Sector



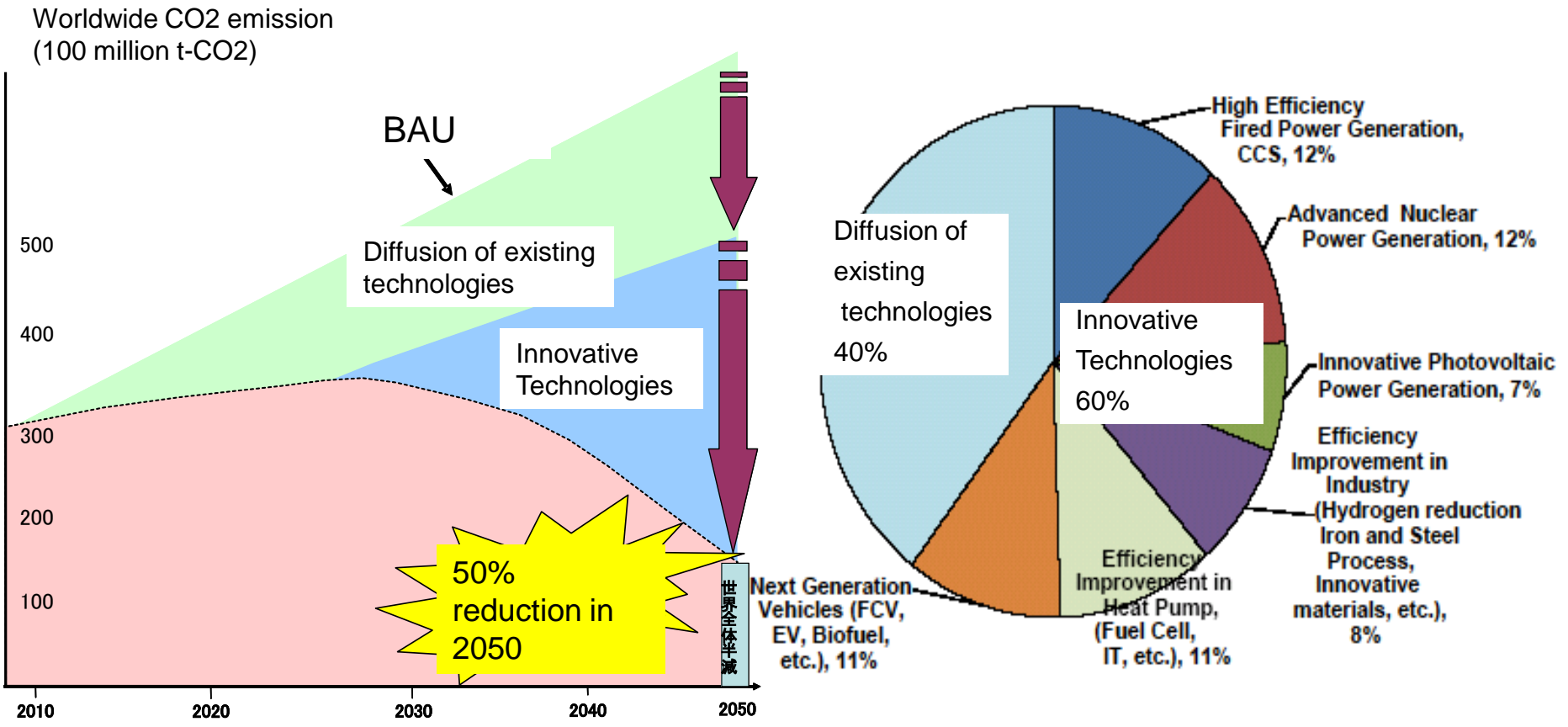
Source: Ministry of Environment, Japan

CO2 Emission Worldwide

- Emission from developing countries such as China, India, and the Middle East is expected to increase drastically in the future.

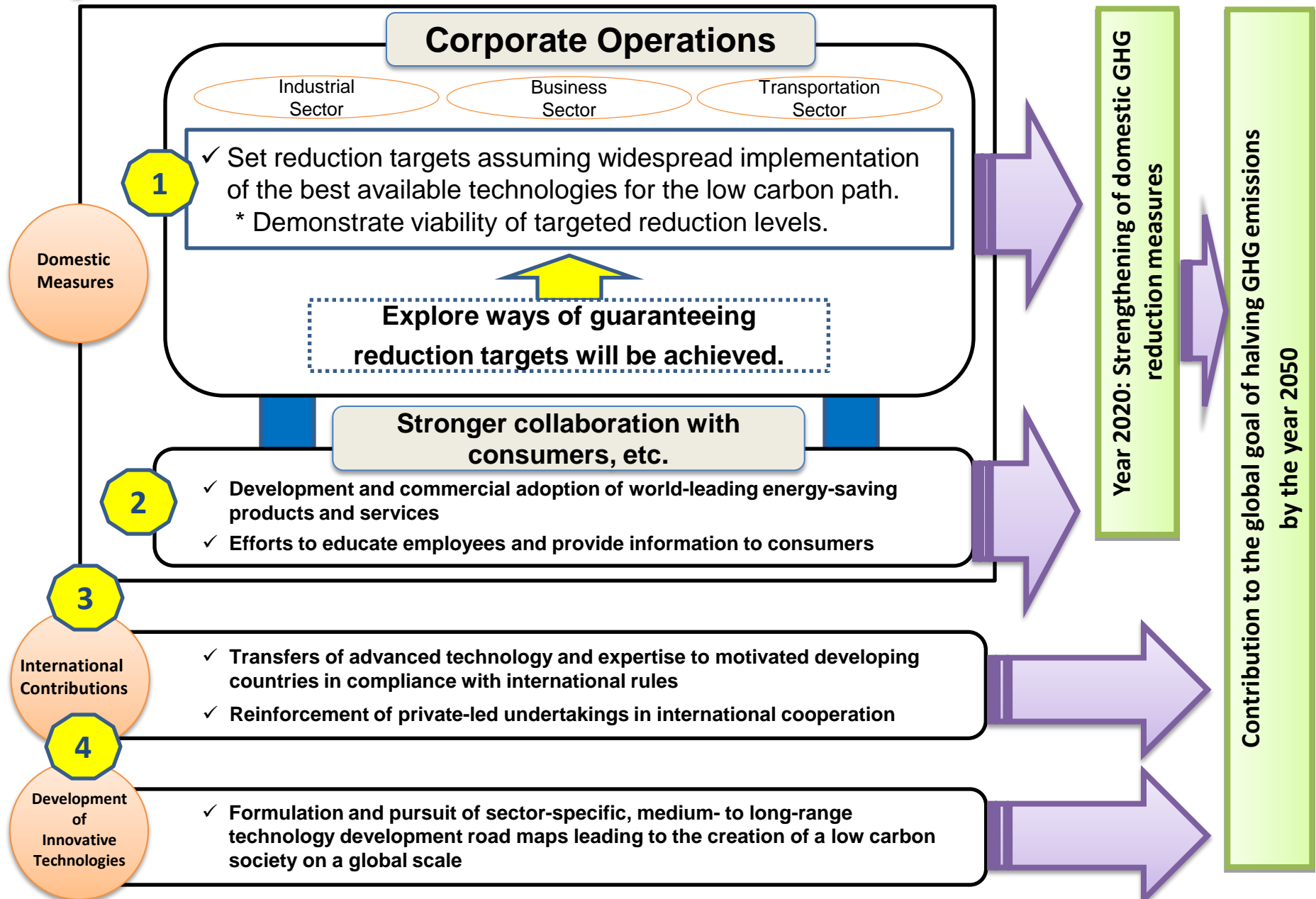


The Importance of Innovative Technology



**Ministry of Economy Trade and Industry,
Cool Earth-. Innovative Energy Technology Program, March2008**

KEIDANREN's Commitment to a Low Carbon Society



Participating Industries

* as of August 2014

■ 55 industries are participating.

【Industrial Sector】

- ① Japan Iron and Steel Federation
- ② Japan Chemical Industry Association
- ③ Japan Paper Association
- ④ Japan Electrical Manufacturers' Association, Japan Electronics and Information Technology Industries Association, Communications and Information network Association of Japan, Japan Business Machine and Information System Industries Association
- ⑤ Japan Cement Association
- ⑥ Japan Automobile Manufacturers Association (JAMA) and Japan Auto-Body Industries Association (JABIA)
- ⑦ Japan Auto Parts Industries Association
- ⑧ Japan Mining Industry Association
- ⑨ Japan Federation of Construction Contractors
- ⑩ Japan Federation of Housing Organizations (Judanren)
- ⑪ Lime Manufacturing Association
- ⑫ The Japan Rubber Manufacturers Association
- ⑬ The Federation of Pharmaceutical Manufacturers' Associations of JAPAN
- ⑭ Japan Aluminum Association
- ⑮ Japan Federation of Printing Industries

- ⑯ Flat Glass Association
- ⑰ The Japan Soft Drinks Association
- ⑱ Japan Dairy Industry Association
- ⑲ Japan Electric Wire and Cable Makers' Association
- ⑳ Japan Bearing Industrial Association
- ㉑ Japan Society of Industrial Machinery Manufacturers
- ㉒ Japan Petroleum Development Association
- ㉓ Japan Brass Makers Association
- ㉔ Brewers Association of Japan
- ㉕ The Shipbuilders' Association of Japan, The Cooperative Association of Japan Shipbuilders
- ㉖ Limestone Association of Japan
- ㉗ Japan Machine Tool Builders' Association
- ㉘ Japan Sanitary Equipment Industry Association
- ㉙ Flour Millers Association
- ㉚ Japan Industrial Vehicle Association
- ㉛ Japan Association of Rolling Stock Industries

【Energy-Conversion sector】

- ① The Federation of Electric Companies of Japan (FEPC)
- ② Petroleum Association of Japan
- ③ Japan Gas Association of Japan

【Commercial Sector】

- ① Japan Chain Stores Association (JCA)
- ② Telecommunications Carriers Association
- ③ Japan Franchise Association
- ④ Japan Department Stores Association
- ⑤ Japan Association of Refrigerated Warehouses
- ⑥ Japanese Bankers Association
- ⑦ The Life Insurance Association of Japan (LIAJ)
- ⑧ Japan Foreign Trade Council
- ⑨ The General Insurance Association of Japan
- ⑩ Japan LP Gas Association
- ⑪ The Real Estate Companies Association of Japan
- ⑫ Japan Building Owners and Managers Association

【Transportation Sector】

- ① The Japanese Shipowners' Association (JSA)
- ② Japan Trucking Association
- ③ The Scheduled Airlines Associations of Japan
- ④ Japan Federation of Coastal Shipping Associations
- ⑤ Non-governmental Railways Association
- ⑥ East Japan Railway Company
- ⑦ West Japan Railway Company
- ⑧ Central Japan Railway Company
- ⑨ All Japan Freight Forwarders Association

The role of Keidanren Action Plan in Japanese Government's Climate Change Policy

Interim Policy on Global Warming Measures

(Decision made by Headquarters for Global Warming Measures, 15 March 2013)

Regarding sector-specific measures to cope with CO₂ emissions of energy origin, voluntary approaches taken by industries participating to the Commitment to a Low Carbon Society shall undergo evaluation and verification, and institutional measures, including the formulation, announcement and implementation of guidelines on emission regulations, and various support measures shall be promoted.

*provisional translation

4. Further Challenges by the Japanese Business Community

*~Phase 2 of our Commitment
to a Low Carbon Society ~*

Overview on Countermeasures on Global Warming

	2008~2012	2013~2020	Post 2020
International Framework	<ul style="list-style-type: none"> ➤ Countries participated to Kyoto Protocol undertook reduction commitments. 	<ul style="list-style-type: none"> ➤ Pledge and review under Cancun Agreements 	<ul style="list-style-type: none"> ➤ Adopt a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties ➤ Intended nationally determined contributions ..in advance of COP21 (by the first quarter of 2015 by those Parties ready to do so)
Japanese Government	<ul style="list-style-type: none"> ➤ 6% decrease compared to 1990 (achieved) ➤ Promoted policies and measures based on Kyoto Protocol Target Achievement Plan 	<ul style="list-style-type: none"> ➤ 3.8% emission reduction from 2005 ➤ A firm target will eventually be set. 	<ul style="list-style-type: none"> ➤ Estimated to discuss policies at the latter half of 2014 (fiscal year).
		<ul style="list-style-type: none"> ➤ Intend to formulate New Global Warming Measures Plan. 	
KEIDANREN's Initiative	<ul style="list-style-type: none"> ➤ Promoted Voluntary Action Plan 	<ul style="list-style-type: none"> ➤ Promote KEIDANREN's Commitment to a Low Carbon Society 	<ul style="list-style-type: none"> ➤ Promote Phase 2 of KEIDANREN's Commitment to a Low Carbon Society

* KEIDANREN's Commitment to a Low Carbon Society is based on four pillars (p16).
 Time period above is about the first pillar (Domestic emission target).

KEIDANREN's Commitment to a Low Carbon Society Phase 2

➤ Endeavor to expand our efforts based on the Commitment to a Low Carbon Society in order to further enhance our contribution to long-term measures against global warming.

Four Pillars of the Action Plan

1. Emissions from domestic business operations
2. Strengthened cooperation with other interested groups, including consumers and customers
3. Contributions at the international level, including technology transfer to developing countries
4. Development of innovative technologies

Targets etc. shall be established for 2030, in addition to those for 2020

Efforts shall be enhanced to the extent possible

- In order to ensure the effectiveness, transparency and credibility, KEIDANREN shall continually encourage the implementation of the PDCA cycle.
- It will become increasingly important to consider various factors, such as structural changes in society and industry or advancements made in technological innovation.

5. Keidanren's Opinion

~ on Climate Change Policy ~

Opinion on Climate Change Policy

National Target

- (1) Should adopt a bottom-up approach and aggregating individual efforts that will have a direct impact on reductions, instead of being bound to rates of reduction from emission levels of certain baseline years.
- (2) Should make a realistic energy policy that enables the achievement of Japan's growth strategy (Abenomics).
- (3) Should ensure international fairness, feasibility of implementation, and appropriateness of the burden on the people.

Domestic Countermeasures

- (1) Incorporate the Commitment to a Low Carbon Society into Government policies (such as the Action Plan for Global Warming Countermeasures, etc.), as the pillar of industrial measures.
- (2) Should not adopt cap-and-trade style domestic emission trading scheme which not only hinder corporate initiatives taken from an LCA perspective but also slow R&D efforts by enabling companies to meet targets by simply purchasing credits.