

COP21

- Expectations, Japan's Contribution and Future Global Governance -



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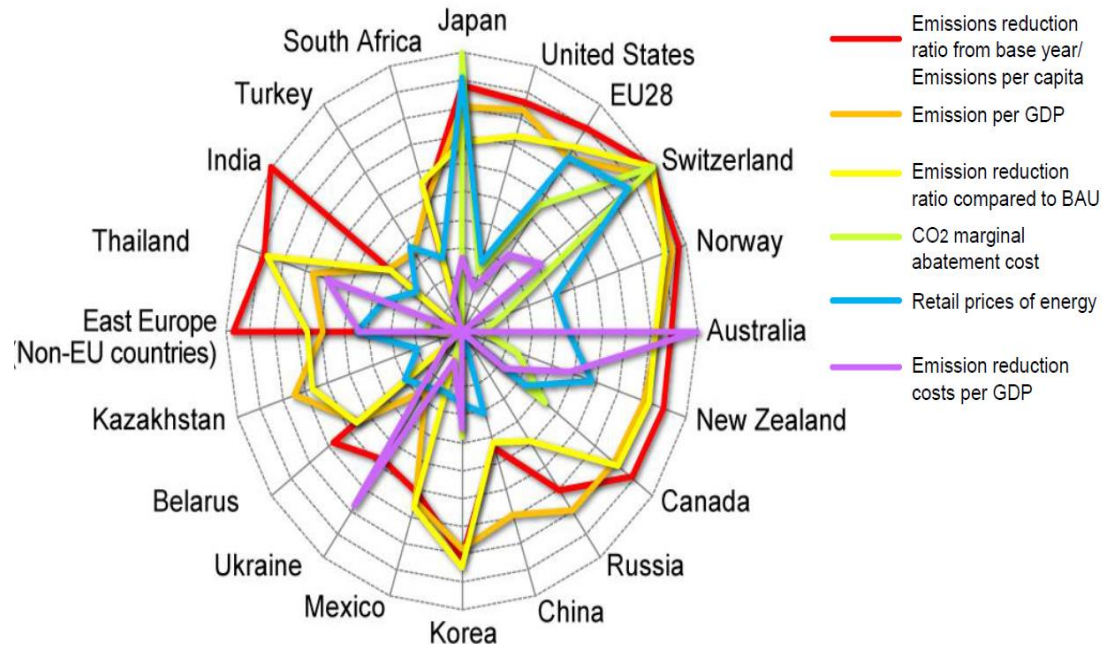
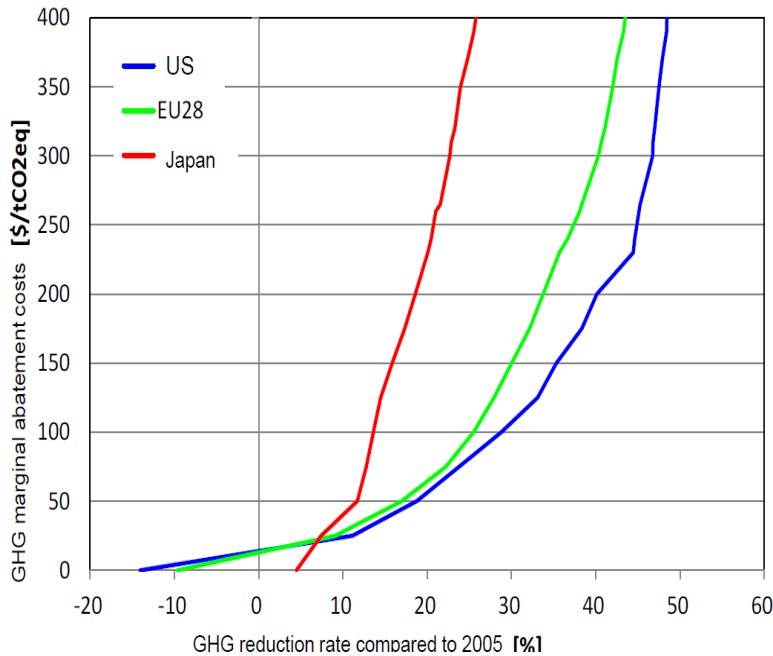
Expectations for COP21

- ◆ **Top-down and stringent Kyoto Protocol failed to effectively reduce global GHG emissions due to its limited coverage. Bottom-up and flexible framework with the participation of all countries is far more effective.**
- ◆ **“Kyoto elements” (e.g., legally binding targets, Annex I/Non-Annex I dichotomy) are the “recipe for failure”.**
- ◆ **Utmost priority is to agree on a framework where all the major emitters including US and China participate in the global mitigation efforts and to establish an effective and facilitative pledge and review system.**
- ◆ **The position of the new US administration must be confirmed. Don’t repeat Kyoto.**

Japan's INDC: How Ambitious?

- ◆ Japan's INDC (▲26% from 2013 by 2030) is premised to an energy mix based on a very delicate balance for overcoming “quadlemma” (lowering energy self sufficiency, outflow of national wealth, rising energy cost and growing CO2 emissions).
- ◆ In light of various indicators, Japan's INDC is highly ambitious as well as highly transparent.

Marginal GHG Emissions Reduction Cost of Major Countries (2030) Ranking Index of Emission Reduction Efforts of INDCs by Indicators



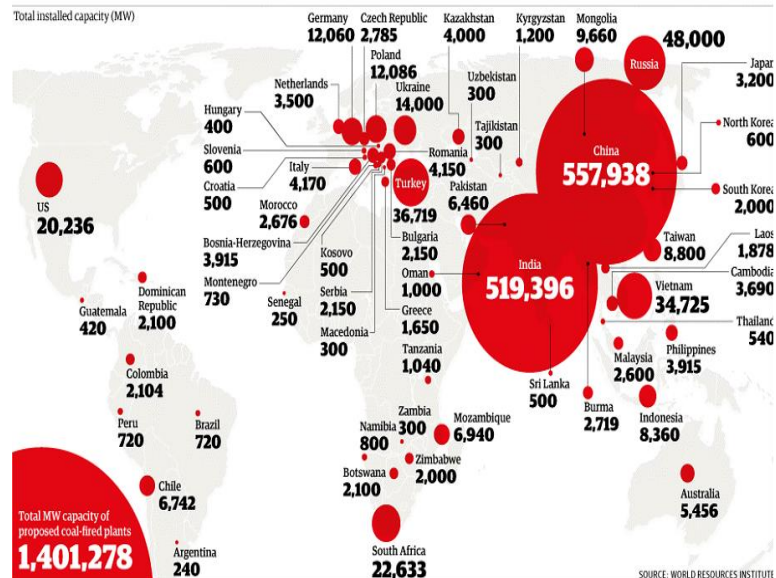
Japan's Contribution

- ◆ **Obsession with comparison of percentage numbers of mitigation targets is anachronistic “Kyoto Protocol” mind-set.**
- ◆ **New framework would be a bottom-up pledge & review scheme. As the pioneer, Japan should share its successful experience pursuing the PDCA cycle through the voluntary action plan of industries.**
- ◆ **Japan's most meaningful contribution to the ultimate resolution of global warming issues should be through its technology capability.**
 - **dissemination of low-carbon technologies**
 - **development of innovative technologies.**

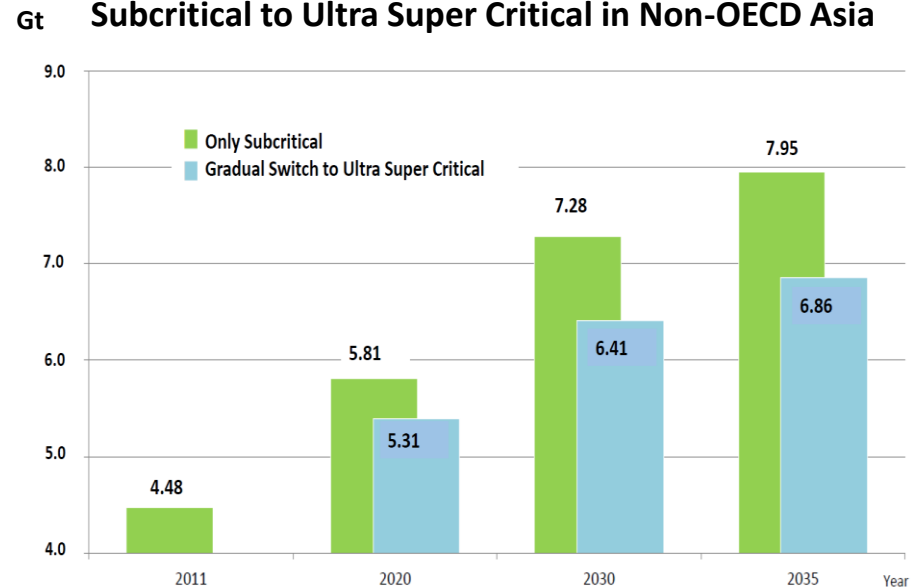
Importance of High Efficiency Coal Technology

- ◆ Due to low cost, abundant and widely distributed reserves, coal demand will continue to grow in developing countries. Some developing countries (e.g. India) are aiming at thermal efficiency improvement of their coal fired power plants as part of their INDCs.
- ◆ WEO2014 states “if all coal-fired plants globally achieved ultra-supercritical efficiency levels (43-47%) by the end of the projection period, coal fired CO2 emissions in 2040 would be 17% lower than in the New Policies Scenario”.
- ◆ Japan’s high efficiency coal thermal technologies could avoid CO2 emissions caused by maintaining or deploying less efficient technologies.

Proposed coal-fired plants



CO2 Emissions Reduction Potential by Switching from Subcritical to Ultra Super Critical in Non-OECD Asia



Assumption: Facilities are replaced within 40 years. Existing plants in 2011 will be replaced by 25% every 10 years. New and replaced plants will use USC technologies. CO2 emissions unit: Sub-C 927.6 gCO2/kWh, USC 726.7 gCO2/kWh Source: METI Estimates, WEO 2013

Future Global Framework

- ◆ While legitimate, the UN process entails various drawbacks.
- ◆ It is unlikely that a bottom-up P&R regime will eventually evolve to a Kyoto-type legally binding regime where UN functions as world government. “Giga-ton gap” approach won’t work.
- ◆ International efforts to prevent global warming would evolve from a UN-based single-layered regime to a multi-layered framework encompassing not only UN process but also various inter-regional, bilateral, industrial, inter-city and sector specific initiatives.
- ◆ Japan should play an active role in non-UN initiatives (e.g., JCM, public-private partnership in key sectors, “coalition of willing” for developing innovative technologies)
- ◆ Ultimate solution depends on innovative technology development (not UN negotiation).

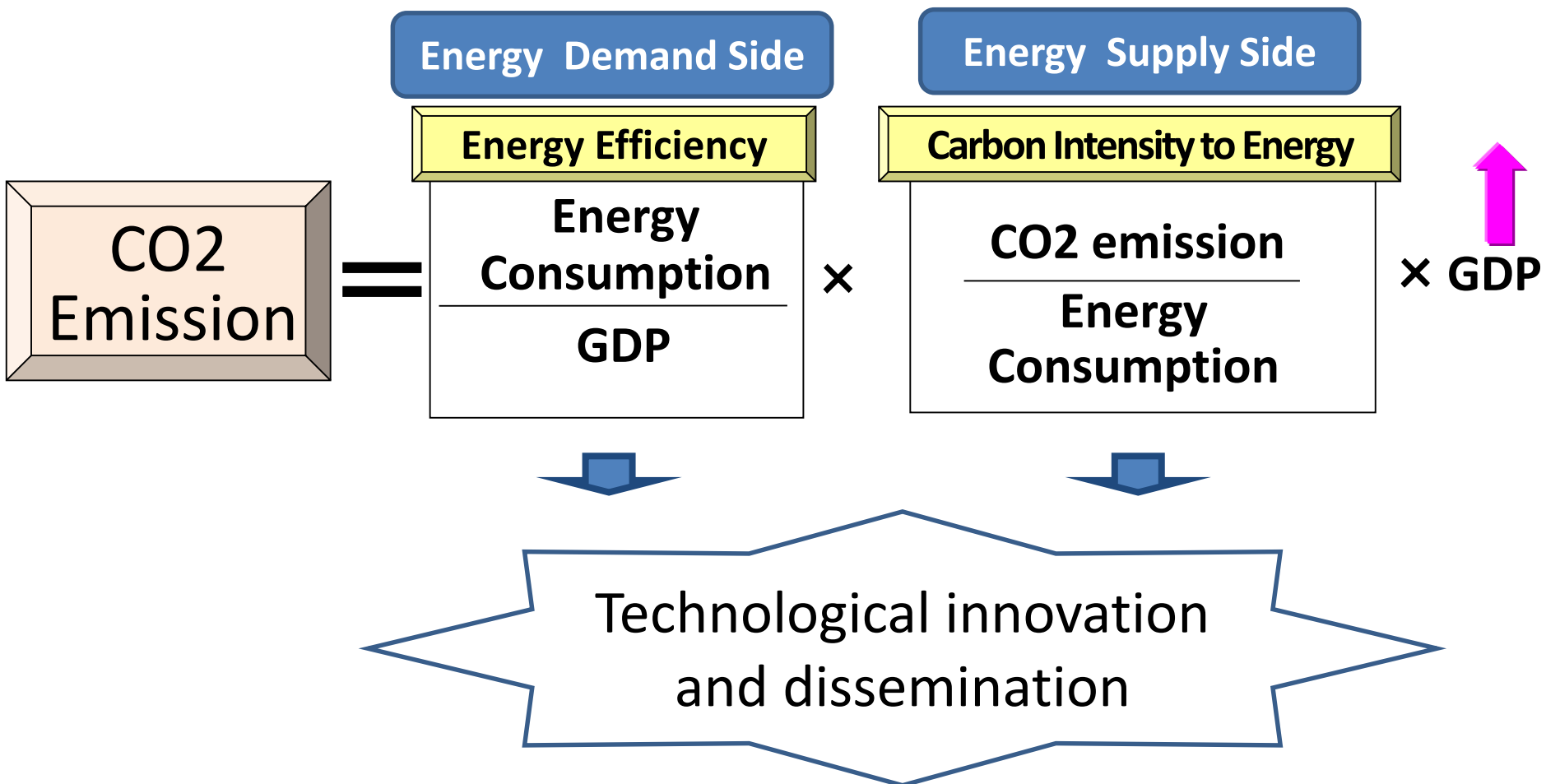
Japan's Strategy toward COP21

How Business can Contribute

Hiroyuki Tezuka
November 2015

Viewpoint on Climate Protection Measures

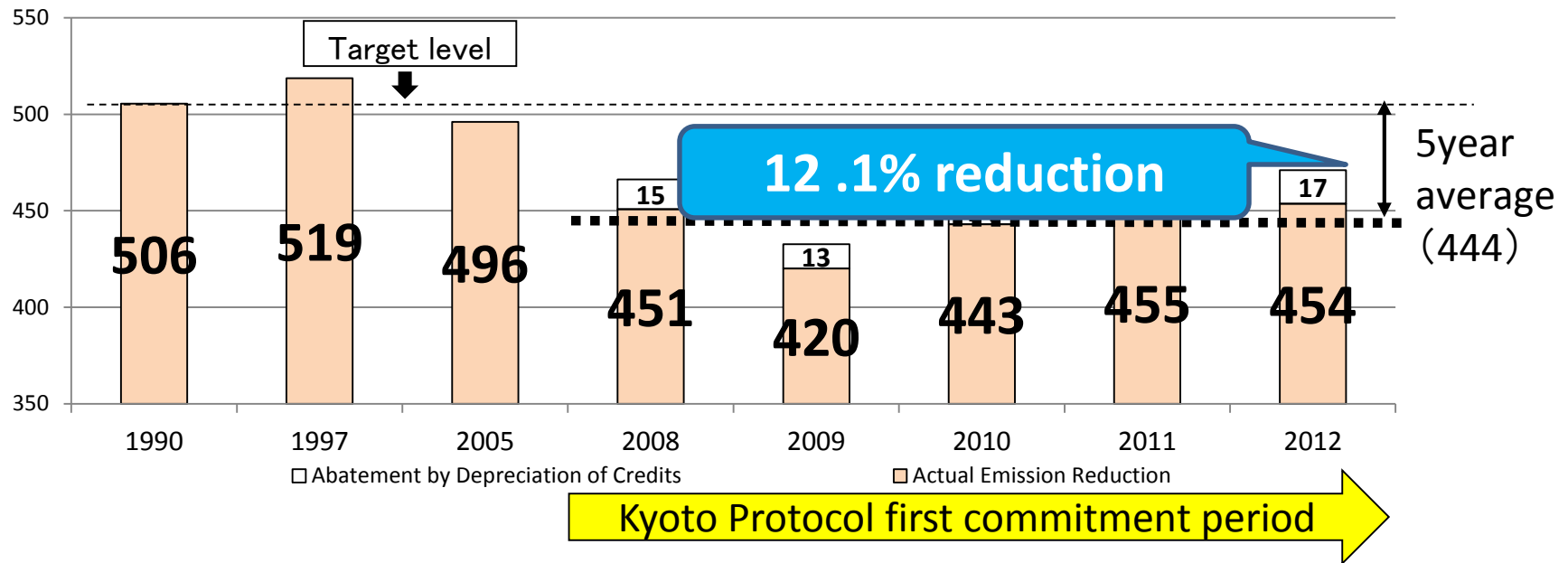
➤ Technological innovation is key to reconcile economic growth and emission reduction.



History of Keidanren's CC Initiatives

- | | |
|------------------------------|---|
| Apr. 1991 | Keidanren Global Environment Charter released |
| Jun. 1992 | United Nations Earth Summit (Rio de Janeiro) |
| Jul. 1996 | Keidanren Environment Appeal (implementation policy for Action Plan on the Environment) released |
| Jun. 1997 | Keidanren Action Plan on the Environment released |
| 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 | Released Basic Policy of Keidanren Commitment to a Low Carbon Society |
| Jan. 2013 | Formulated and released Keidanren Commitment to a Low Carbon Society |
| Apr. 2013 - initiated | Keidanren Commitment to a Low Carbon Society |
| Apr. 2015 | Formulated and released the new initiative: Phase II of Keidanren Commitment to a Low Carbon Society |

Results of Keidanren's Action Plan



Factors Contributing to Reduction (Average of 2008-2012)	Comparison to FY 1990
Change in production activity	+2.0%
Change in CO2 emission factor	+0.0%
Change in CO2 emissions per unit of output (efficiency improvement)	-14.0%
Total	-12.1%

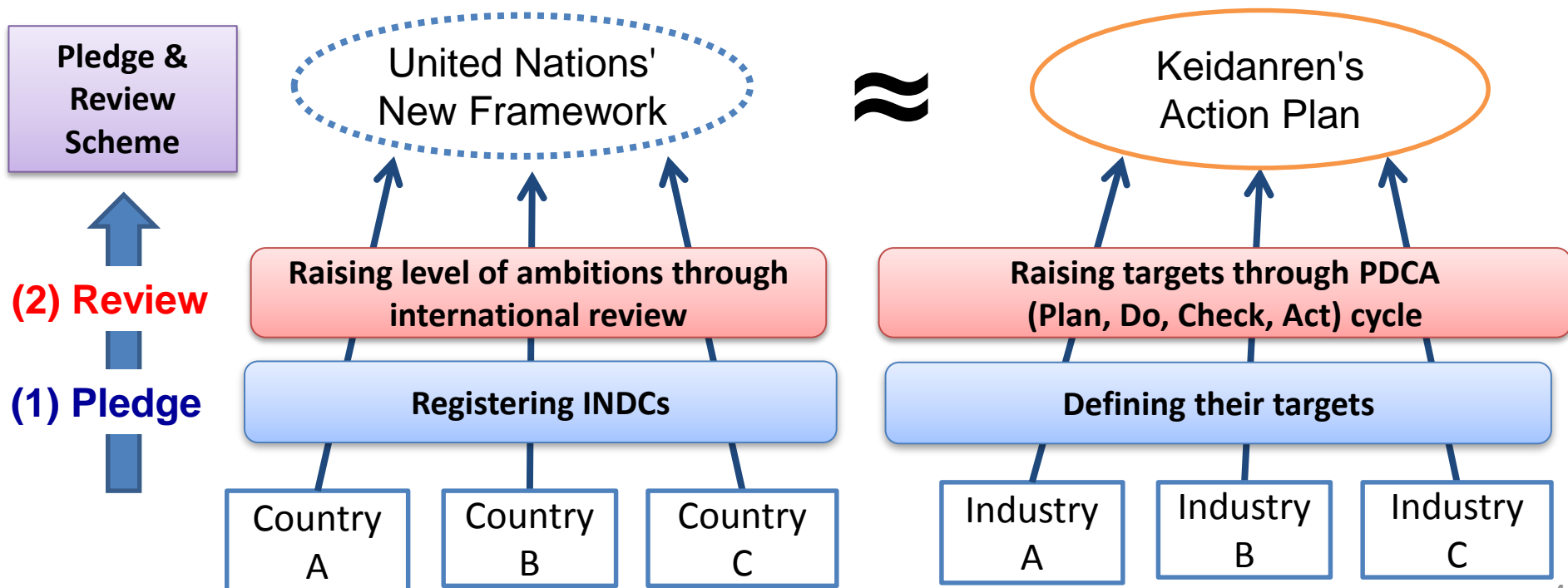
Efficiency improvement was the driving force to reduce CO2 emissions in KEIDANREN's plan.

Lessons for Paris Agreement: Pledge & Review

Keidanren's Action Plan has proven the effectiveness of a pledge and review approach.

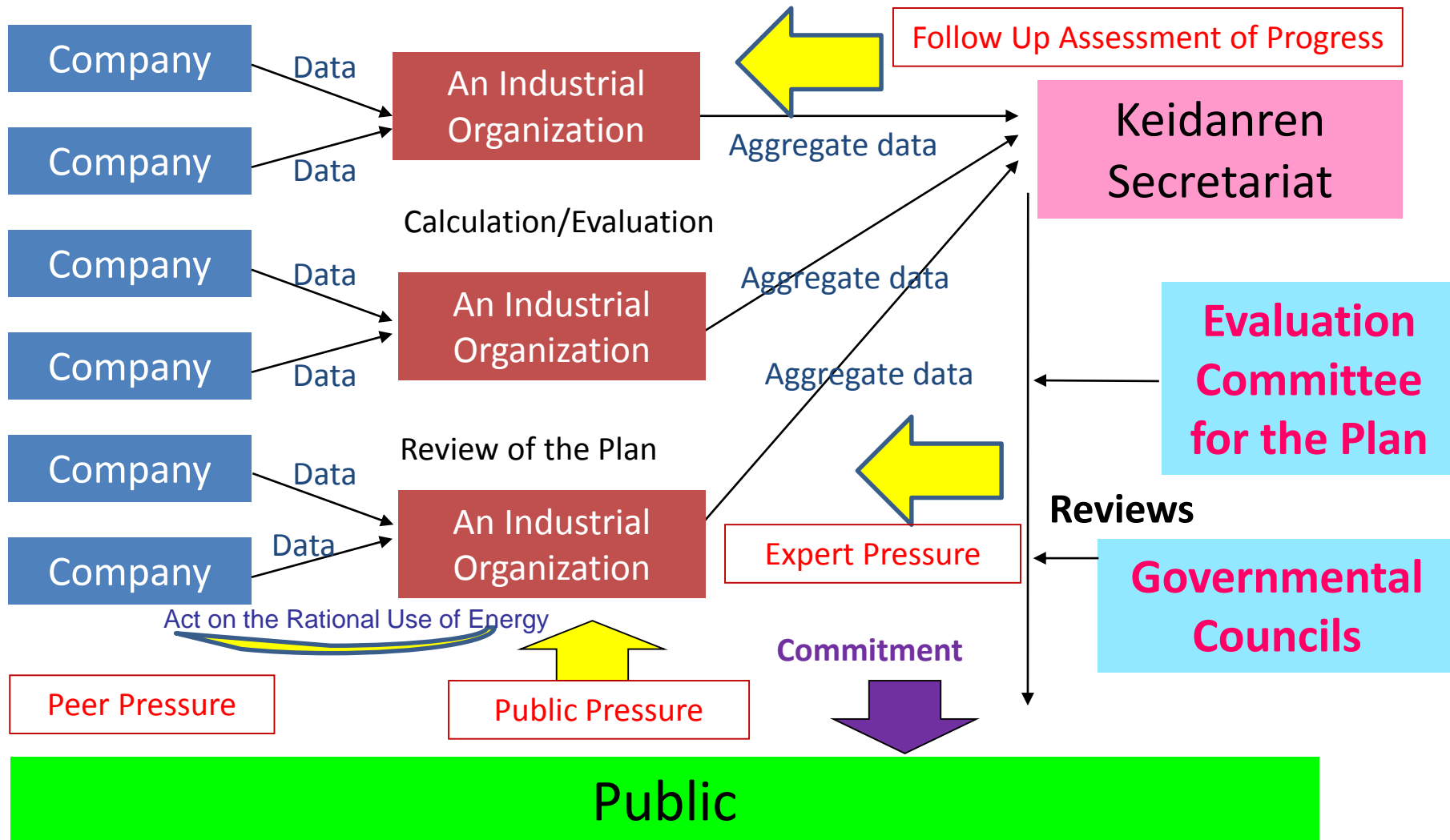
- (1) The number of participating organizations increased from 36 in 1997 to 61 in 2012.
- (2) 29 of 61 organizations raised their targets (enhanced their ambitions.)

A pledge and review type new international agreement can work well !



Review Process of Keidanren's Action Plan

The assessment of progress is conducted every year. The overall performance is publicized by Keidanren Secretariat.



The PDCA Cycle for Keidanren's Commitment to a Low Carbon Society

Plan (At target-setting)

- Participating industries set targets in line with maximum levels they can meet by identifying BATs and related implementation plans, making international comparison of energy efficiency, etc.
- Participating industries are responsible for explaining the adequacy of their targets.

Evaluation Committee

- Participating industries brief the committee on their respective action plans.
- The committee comprehensively assesses and verifies industry action plans.
- Participating industries revise their action plans as necessary with attention to the findings of Evaluation Committee assessments and verification.
- When targets are exceeded: Lift target levels as necessary (without trading the surplus)

Do (implementation)

- Each industry implements its action plan.
- Participating industries explore ways to assure certainty in meeting their targets, with consideration for the course of debate over the UN carbon credit framework including bilateral offset mechanisms.
- Action plans of individual industries are compiled by Keidanren and published on its website.

Evaluation Committee

- The committee assesses and verifies progress of each industry's action plan.

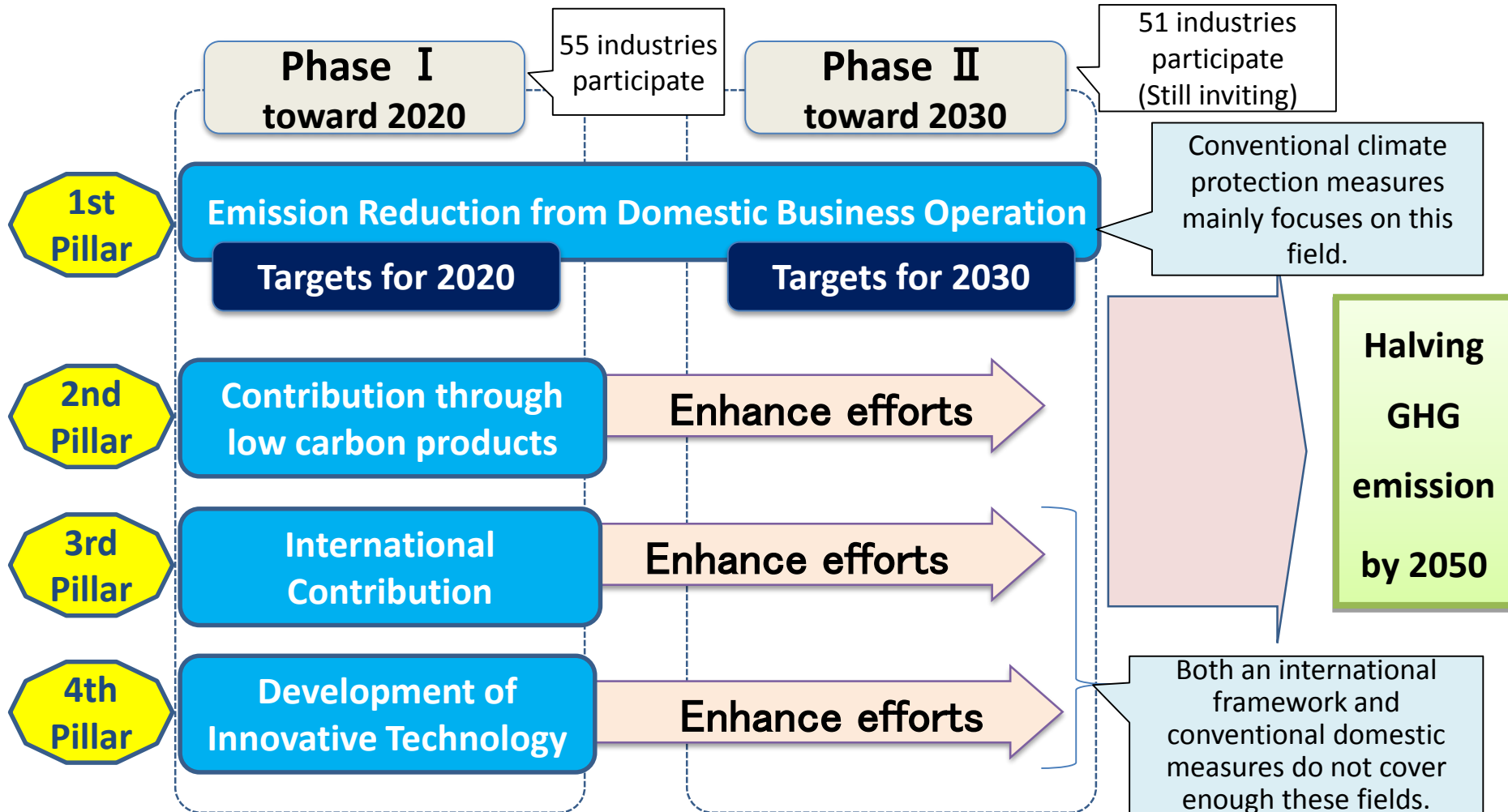
Act (Averification follow-up)

- ✓ Participating industries comply with full information disclosure, for example, by publishing the names of participating companies on their respective industry websites.
- ✓ The Keidanren website contains links to the websites of industrial organisations participating in the Commitment to a Low Carbon Society.
- ✓ The Commitment to a Low Carbon Society will undergo a sweeping review in fiscal 2016.

Check (implementation verification)

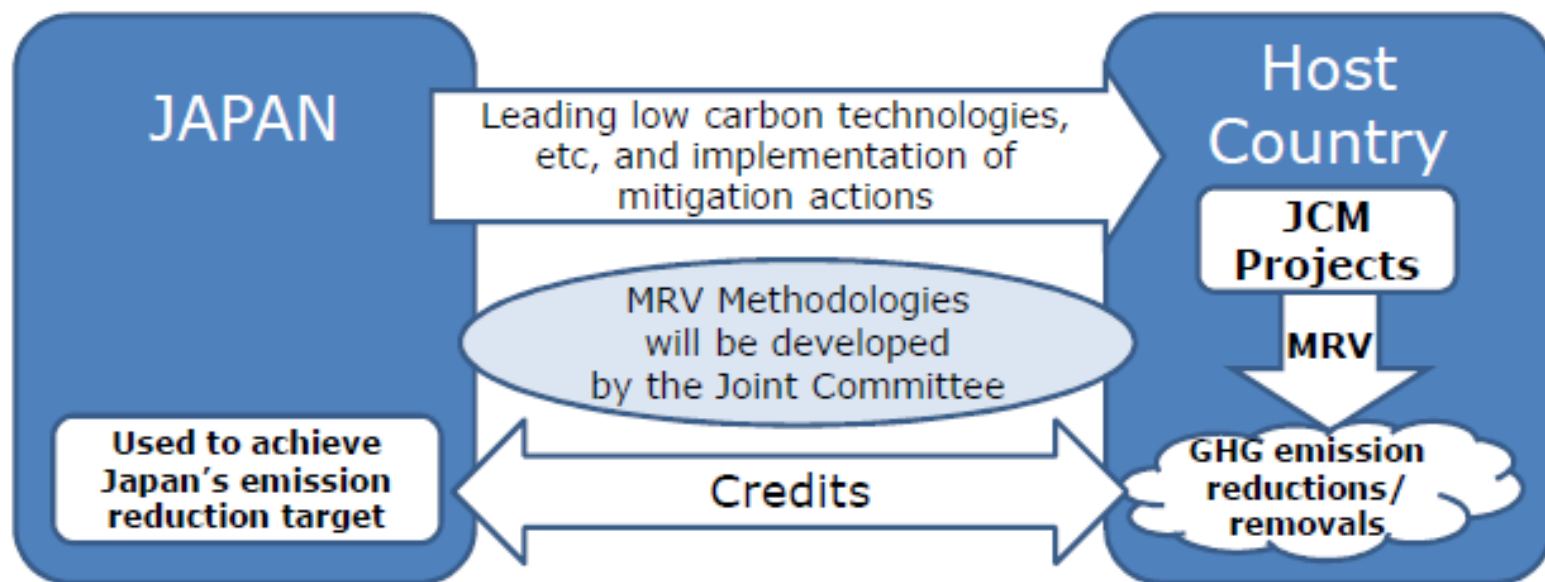
KEIDANREN's Commitment to a Low Carbon Society

1. Participating industries and companies set their own targets.
2. The plan consists of 4 pillars (shown below).
3. 55 industries made their plans as for the Phase I toward 2020.
4. Endeavor to expand our efforts for the Phase II toward 2030.



Basic Concept of the JCM

- Facilitating diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- Appropriately evaluating contributions to GHG emission reductions or removals from Japan in a quantitative manner, by applying measurement, reporting and verification (MRV) methodologies, and use them to achieve Japan's emission reduction target.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals, complementing the CDM.



The public and private collaborative meeting between Indian and Japanese iron and steel industry

Purpose

To exchange of knowledge and experiences and consequently encourage technology transfer from Japanese to Indian steel industry and thereby contribute to the energy saving in India and in the world.

Members – Public and Private sectors of India and Japan

Public and Private Partnership

India

Public members and observers

Ministry of Steel
Bureau of Energy Efficiency etc.

Private members and observers

India Steel Association (ISA)
(SAIL, RINL, Tata, JSW, Bhushan, BPSL, Essar, Jindal etc.)

Japan

Public members and observers

Ministry of Economy, Trade and Industry/ NEDO / JBIC / JETRO

Private members and observers

The Japan Iron and Steel Federation
(Nippon Steel & Sumitomo Metal, JFE steel, Kobe steel, Nisshin Steel etc.)

The public and private collaborative meeting between Indian and Japanese iron and steel industry

Meetings – since 2011

2011

1st meeting

(Nov. 2011, New Delhi)



2012

2nd meeting

(Nov. 2012, New Delhi)



2013

3rd meeting

(Feb. 2013, Tokyo)



2014

4th meeting

(Feb. 2014, Tokyo)



2015

5th meeting

(Mar. 2015, New Delhi)



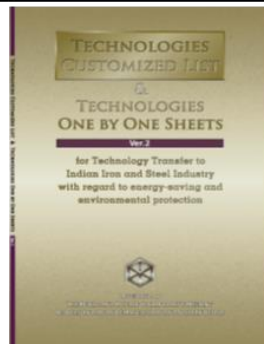
Three Pillars of Energy Saving

ISO14404



Steel Plant Diagnosis using ISO14404 (2013 and 2014)

Technologies Customized List



Technologies Customized List Ver.2 (2014)



Business Seminar with regards to the technologies on TCL (2014)

Energy Management



Site Visit in Japan (2013 and 2014)



Oil & Coal TAX and additional Climate Change Measure Rate

1978 Oil TAX introduced (Tax on Oil and Gas)

2003 Oil & Coal TAX (Expanded to charge on Coal)

2012 Special additional rate based on carbon content for CC measures

Oil & Coal Tax ¥ 460B + Special rate on CC ¥ 170B *= ¥ 630B

¥ 540B Dedicated + ¥ 170B Dividend
etc.



*expand to ¥ 260B from 2016
(¥ 289/ tCO₂)

Special Account for Energy Measures ¥ 710B

Energy Security

METI : ¥ 280BY

- Captive well/resources
- Restructuring refineries
- Oil/Gas Storages

Etc.

Energy Improvement

METI: ¥ 320B

- Energy Saving Policies
- Energy R&D
- Renewable Policies etc.

MOE: ¥ 110B

- Climate Change Policies etc.

Thank you

