

# **The Role of Business in Developing and Disseminating Low-Carbon Technology**

**November 16th, 2016**

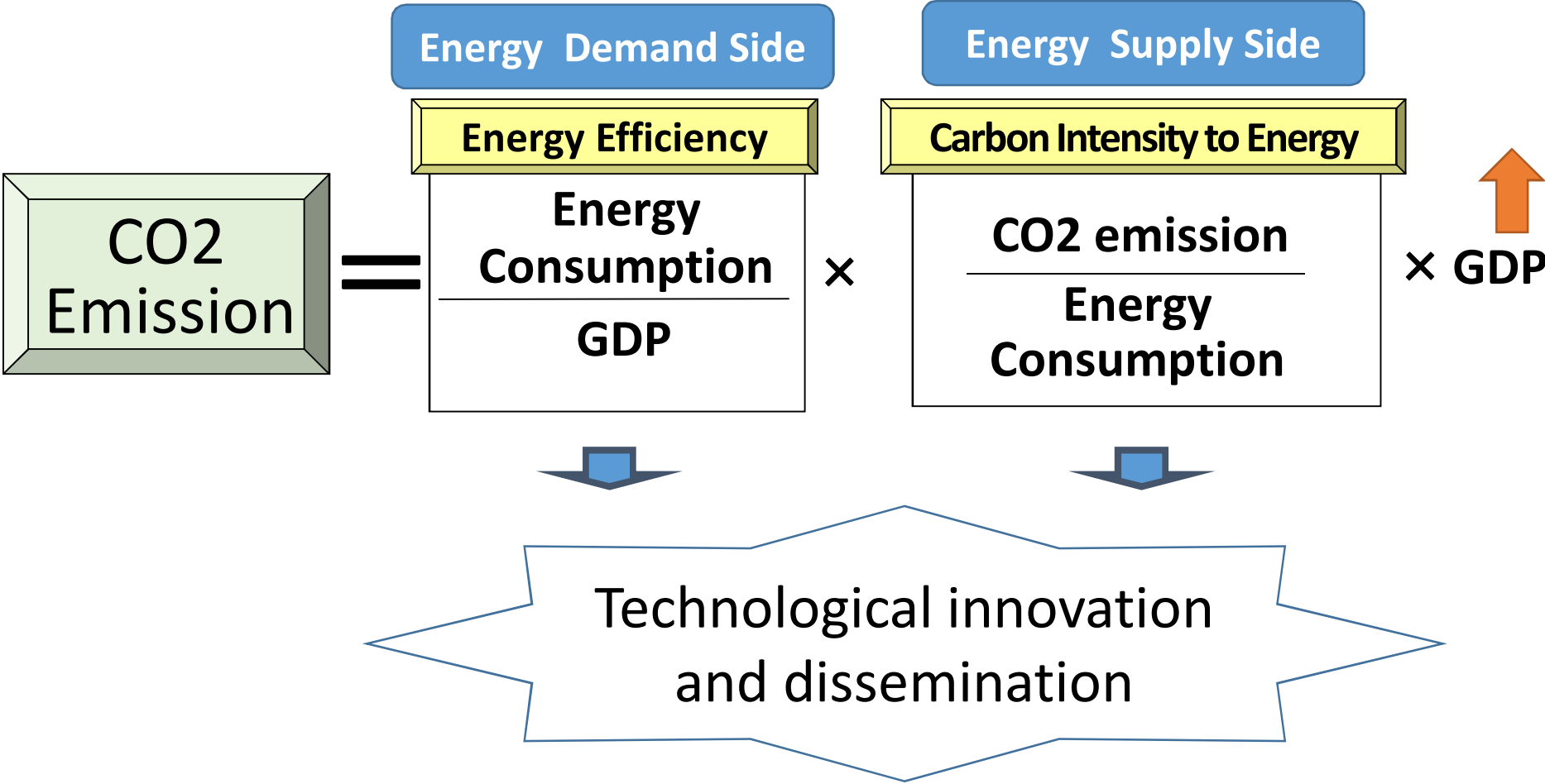
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Committee on Environment and Safety,  
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# (1) Our Basic Concept

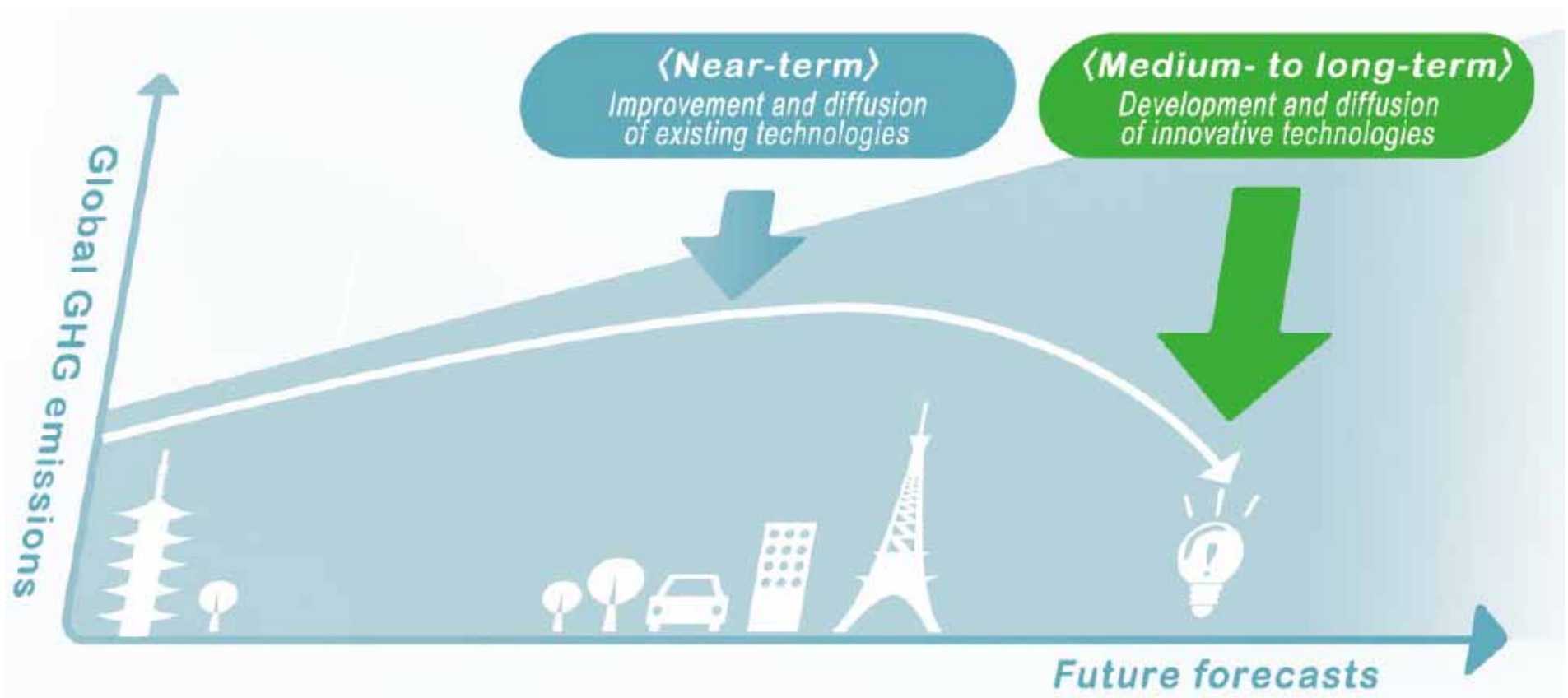
# Viewpoint on Climate Protection Measures

➤ Technology is a key to reconcile economic growth and emission reduction.



## Image of achieving dramatic reductions by technologies

- By developing and disseminating low-carbon technologies, we can reduce global GHG emissions dramatically in the long-run.



## (2) Recent Developments

# Efforts by Japanese Government to Promote Innovation

## ICEF (Innovation for Cool Earth Forum)

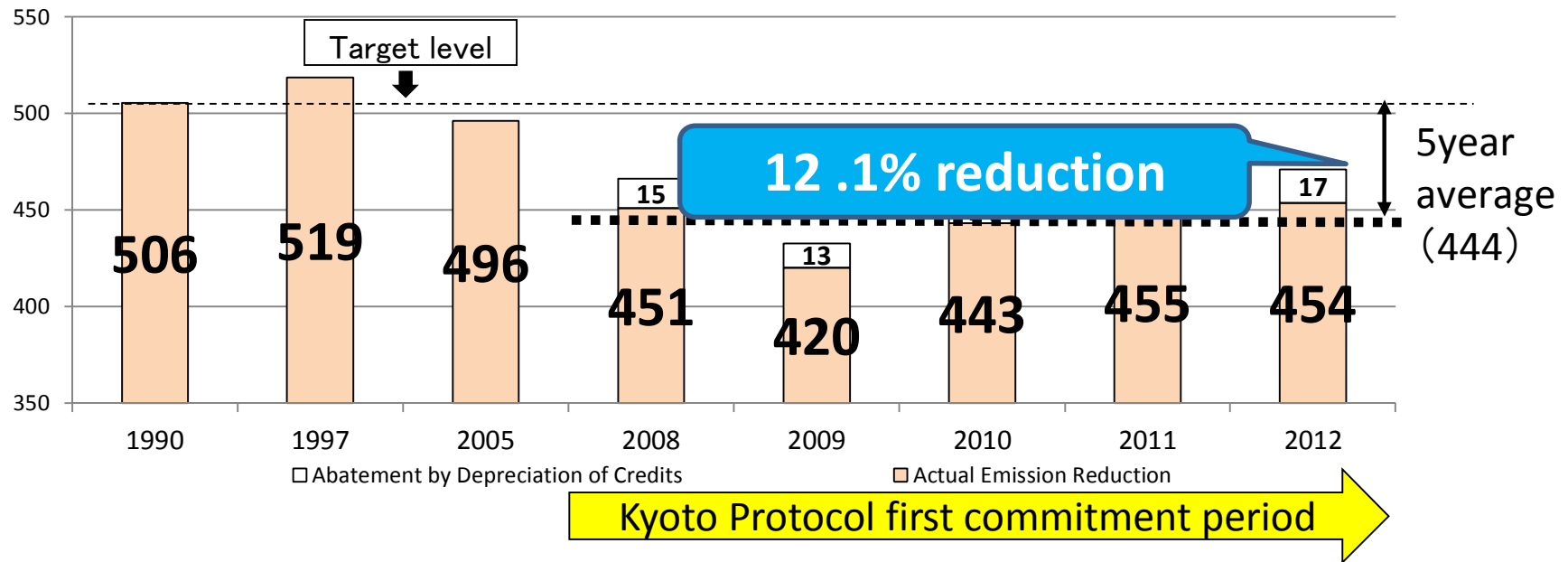
- ICEF is aimed at addressing climate change through innovation, and held in Tokyo every year by METI.
- ICEF investigates via discussion in the forum what innovative measures should be developed, how the innovation should be promoted, and how cooperation should be enhanced among the stakeholders.

## ACE 2.0 (Actions for Cool Earth 2.0 )

- Japan has released the ACE 2.0 on November 26th, 2015. This is a reinforcement of Japan's contribution to climate change actions which was presented as "ACE" in 2013.
- One of the major components of ACE 2.0 is innovation. Japan will formulate the "Energy and Environment Innovation Strategy" by next spring. Prospective focused areas will be identified and research and development on them will be strengthened.

## (3) Keidanren's Efforts

# Results of Keidanren's Action Plan



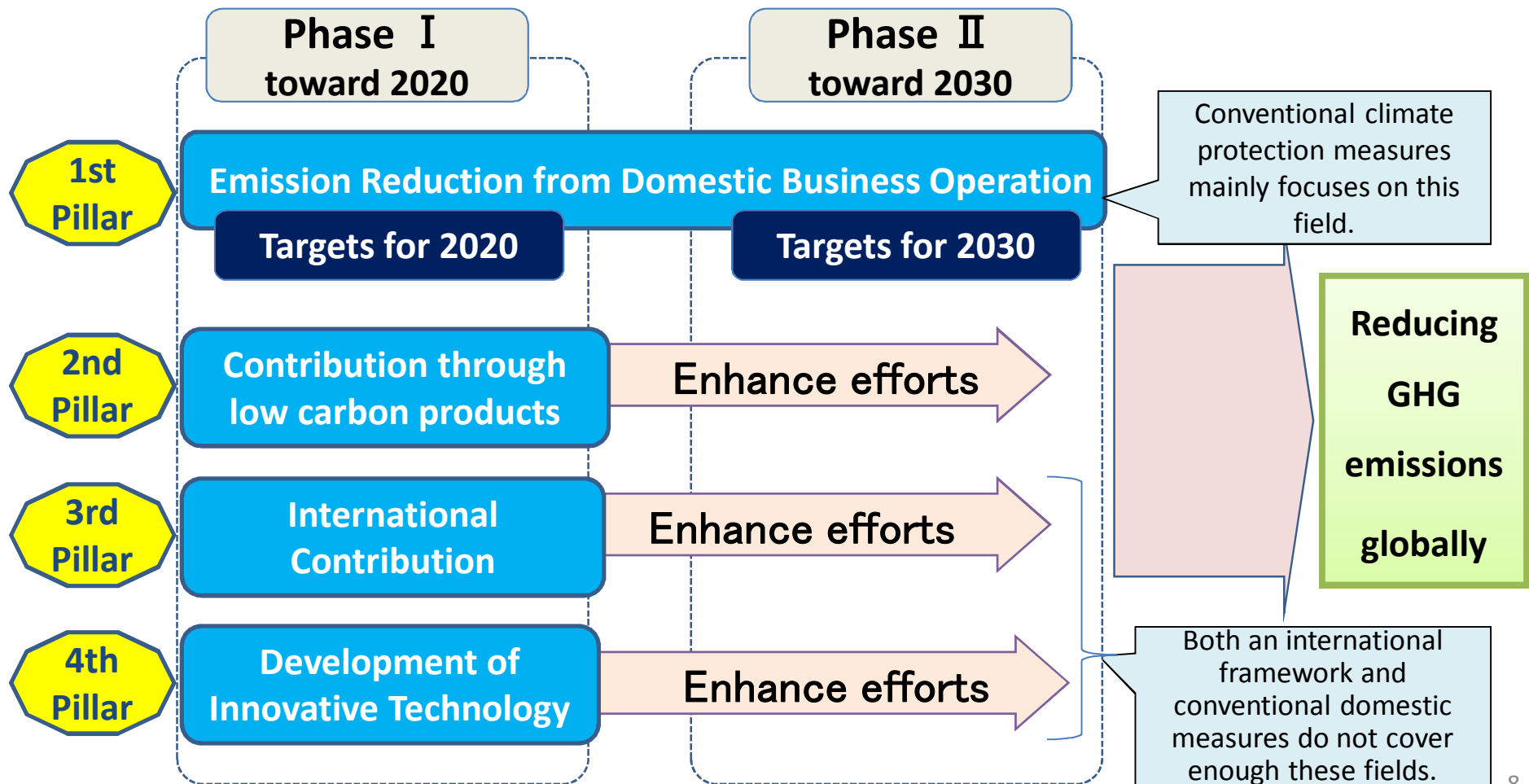
Factors Contributing to Reduction (Average of 2008-2012)	Comparison to FY 1990
Change in production activity	+2.0%
Change in CO2 emission factor	+0.0%
Change in CO2 emissions per unit of output (efficiency improvement)	-14.0%
<b>Total</b>	<b>-12.1%</b>

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



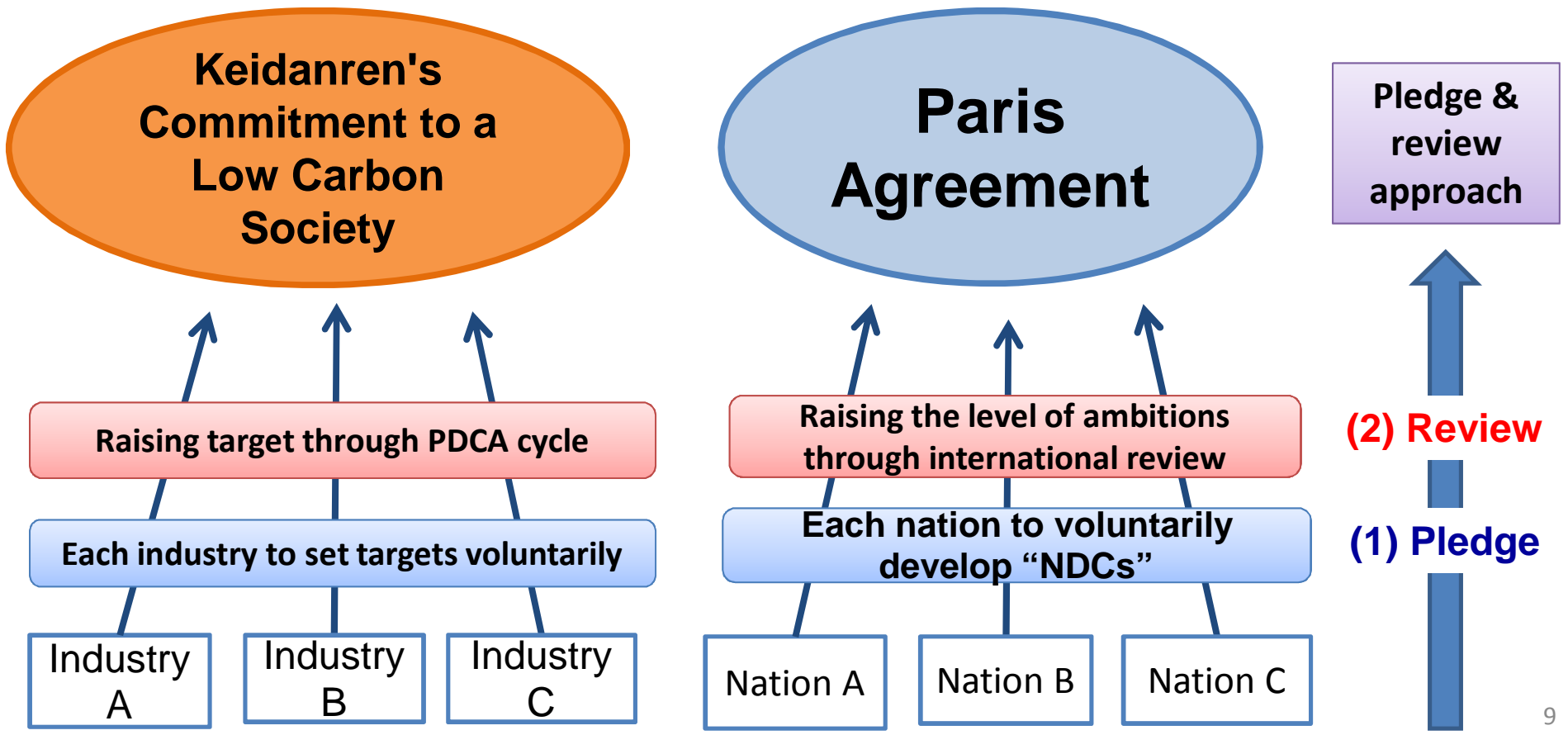
# KEIDANREN's Commitment to a Low Carbon Society

1. Participating industries and companies set their own targets.
2. The plan consists of 4 pillars (shown bellow).
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.



# Implication to the Paris Agreement

1. The Paris Agreement incorporates a “pledge and review” approach, where each participating country commits to their NDCs (pledge), and improve the effectiveness of national measures through periodical international review (review).
2. This is the very same approach Japanese business has implemented for many years through the PDCA cycle in the Keidanren's action plan.



# (4) Technology Transfer

(Examples of Iron & Steel Industry)

## The public and private collaborative meeting between Indian and Japanese iron and steel industry (1/2)

### Purpose

To 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

Indian steel companies  
(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 (2/2)

## Meetings – since 2011



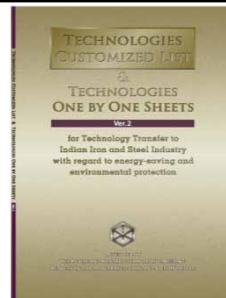
## Three pillars of the energy management in the steel plant

### ISO14404



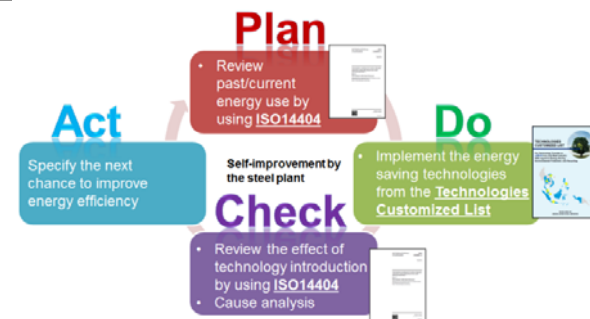
**Steel Plant Diagnosis using ISO14404 (2013-2016)**

### Technologies Customized List



**Technology reference of energy saving technologies suitable for each country/region**

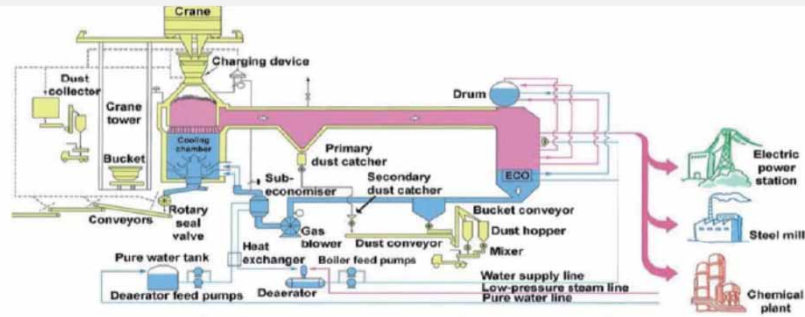
### Energy Management System



**Help steel plants to establish a framework to plan, do, check and act for the energy saving activities**

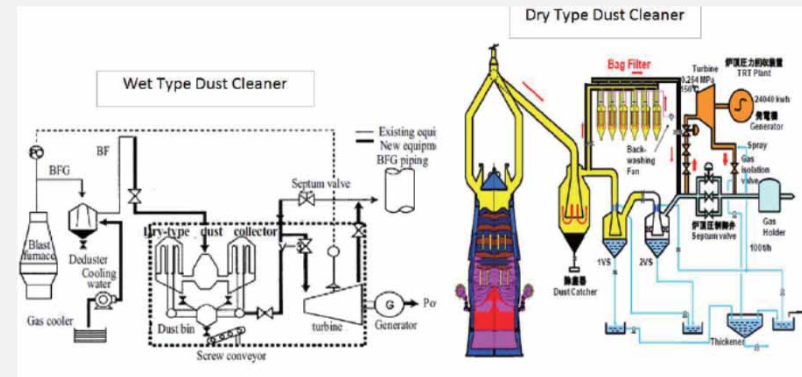
# Emission Reduction by Technology Transfer to Indian Steel Industry

## CDQ (Coke Dry Quenching)



**10 CDQs** have been installed by Japanese engineering companies to India triggered by NEDO model project

## TRT (Top Pressure Recovery Turbine)



**5 TRTs** have been installed by Japanese engineering companies to India

With Japanese energy saving technologies,  
Indian steel industry will be able to reduce CO2 emission  
by 13 Mt per year.

# (5) Policy Proposals

## **To promote technology transfer**

1. Promote diffusion of advanced low carbon technologies particularly through “visualizing” its contribution to global emission reduction, so as to develop a favorable environment to encourage international contribution.
2. Involve the Climate Technology Centre and Network (CTCN) and the Green Climate Fund (GCF), and enable them to collaborate effectively.

## **To promote technology development**

1. Build an international framework where contribution and efforts to develop innovative technologies would receive higher evaluation.
2. Every government should clearly indicate a numerical target of raising its investment in R&D programs, and make steady efforts to realize it.
3. Provide tax incentives for promoting private R&D investment.<sup>15</sup>