Multinational Cooperation in East Asia to Address Climate Change
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Status and prospects for domestic climate-change policy and international cooperation in East Asia (Japan)

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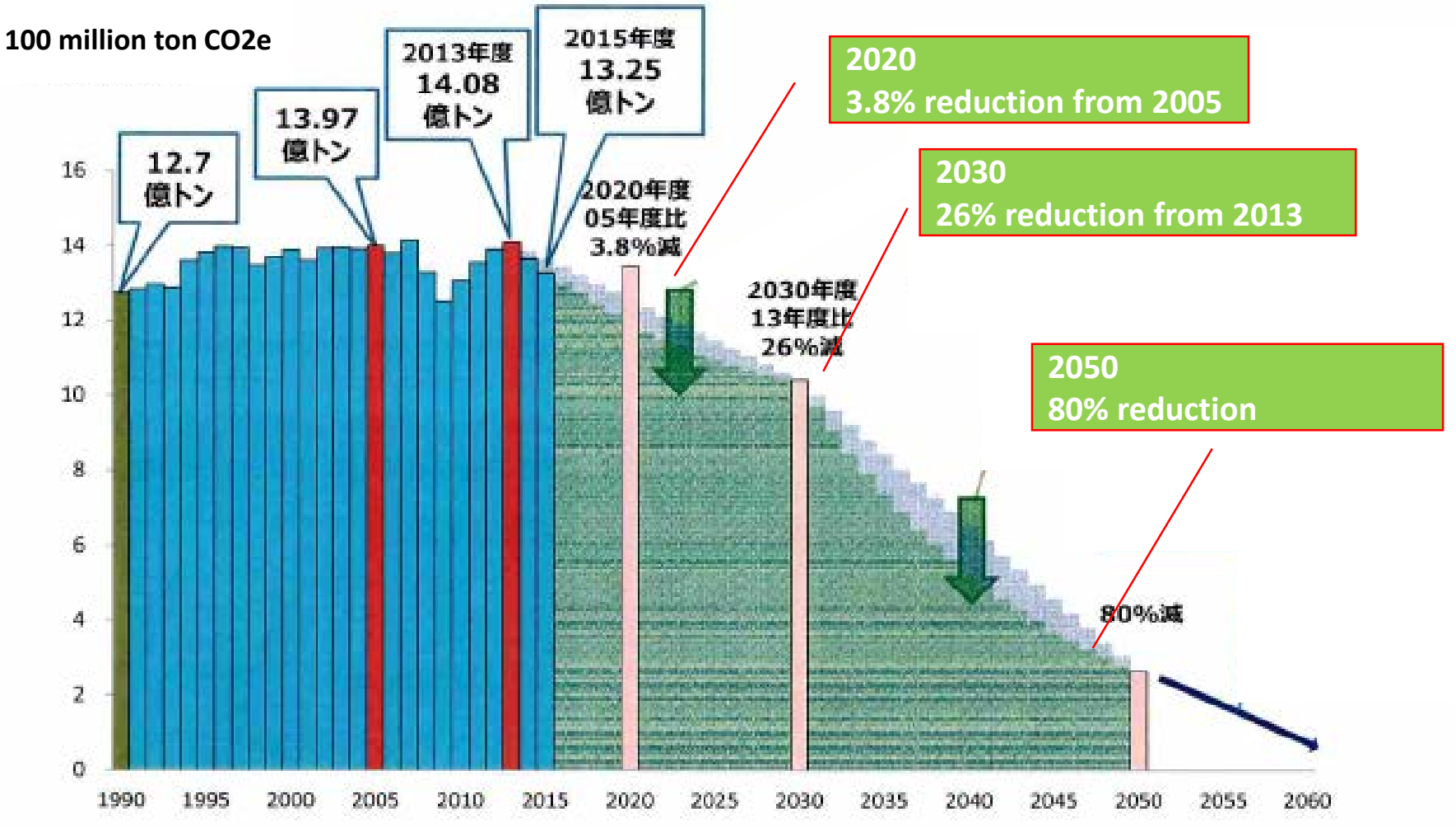
Trend of GHG emission and reduction targets



Source, Rewrite of Ministry of Environment PP

Climate Policy debate in Japan

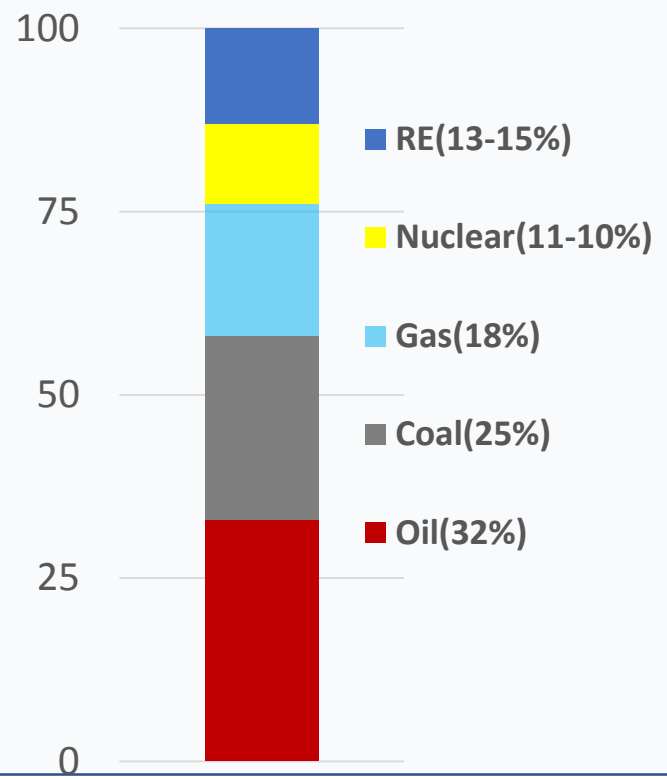
	METI	MOE
Reduction target by 2050 (80%reduction)	✓ Very challenging target ✓ Burden of restructuring is high. ✓ Rather bottom up approach	✓ Inevitable due to the carbon budget ✓ Innovation and lifestyle change is needed.
International contribution	✓ Global reduction is crucial. ✓ Reduction through business can be a part of international contribution	✓ Domestic reduction in principle. ✓ Reduction through business is not excluded from international contribution but no higher priority
Carbon Pricing (General)	✓ Carbon cost including fuel tax in Japan is too high.	✓ Promote. “Carbon Productivity” as a new concept is proposed. That of Japan is not high.
Emission Trading ・JCM is implementing by both ministries	✓ No cap & trade, due to high volatility	✓ Cap & trade is an option
Carbon tax ・\289/ton	✓ Japan’s carbon cost is highest and additional tax shall be avoided	✓ Carbon tax should be increased. ✓ Tax revenue can be used for other purpose like social services.
Role of CCS In 20202’s large scale pilot project as the post “Tomakomai “	✓ Needed but mostly for other countries with better location.	✓ Support for domestic reduction ✓ An condition at EIA for new coal power plant.

Energy Supply and Demand in 2030

Assumption of 26% reduction

- Energy demand in 2030 is 13% less than 2013.
- 1.7% GDP growth is assumption.
- Share of electricity in 20130 is 28% (3% point increase from 2013)

Energy supply (2030, primary)



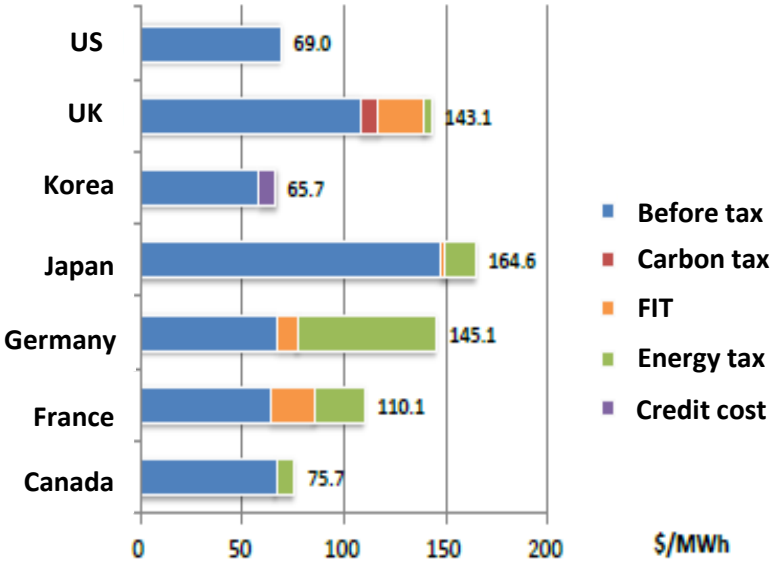
Uncertainty

- Nuclear : reopen of nuclear power plants is delayed due to the negative public perception.
- RE : additional burden by the current FIT is around JPY1.8 trillion a year and will increase JPY to 3-4 trillion a year(0.5-0.6% of GDP) . FIT is under review.
- Electrification : Variable RE is increasing and grid restructuring is needed. (In 2030, around a half of RE is hydro) EV's grid integration is possible solution.
- Energy demand : 1.7% GDP growth is assumption. Digitalization (optimization of supply chain) has not been studied well.

“Carbon Price”

- Carbon Price in Japan is at internationally extremely high level.
- “Marginal abatement cost” of Japan is the second highest after Switzerland.

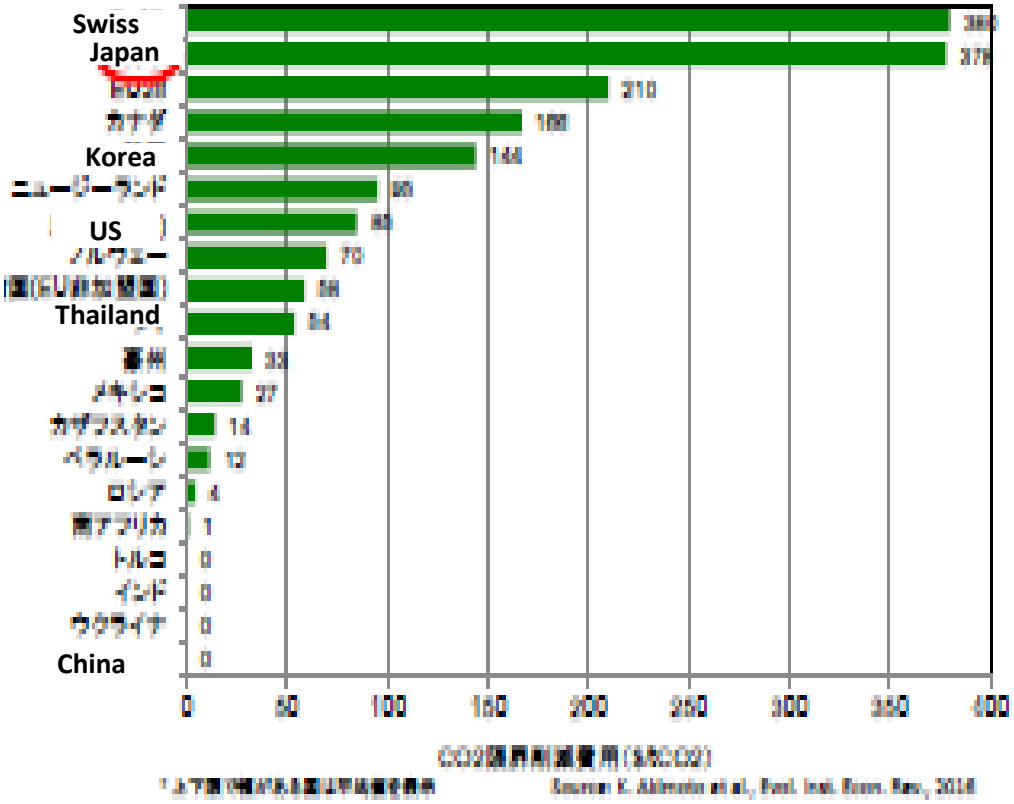
Electricity Price (Industry)



注：韓国は2009年。

注：電力については、各国で電源構成が大きく異なるため、MWhあたりの負担
比較することとした。

Marginal abatement cot for NDC

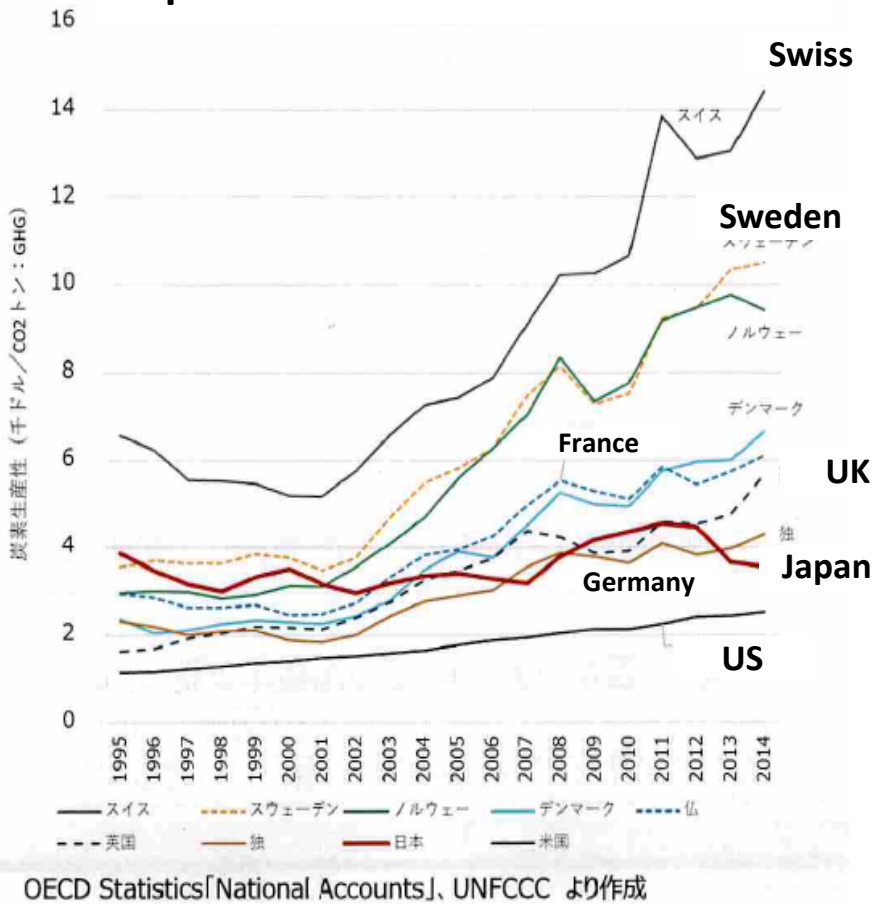


Source Ministry of Economy, Trade and Industry

“Carbon Productivities”

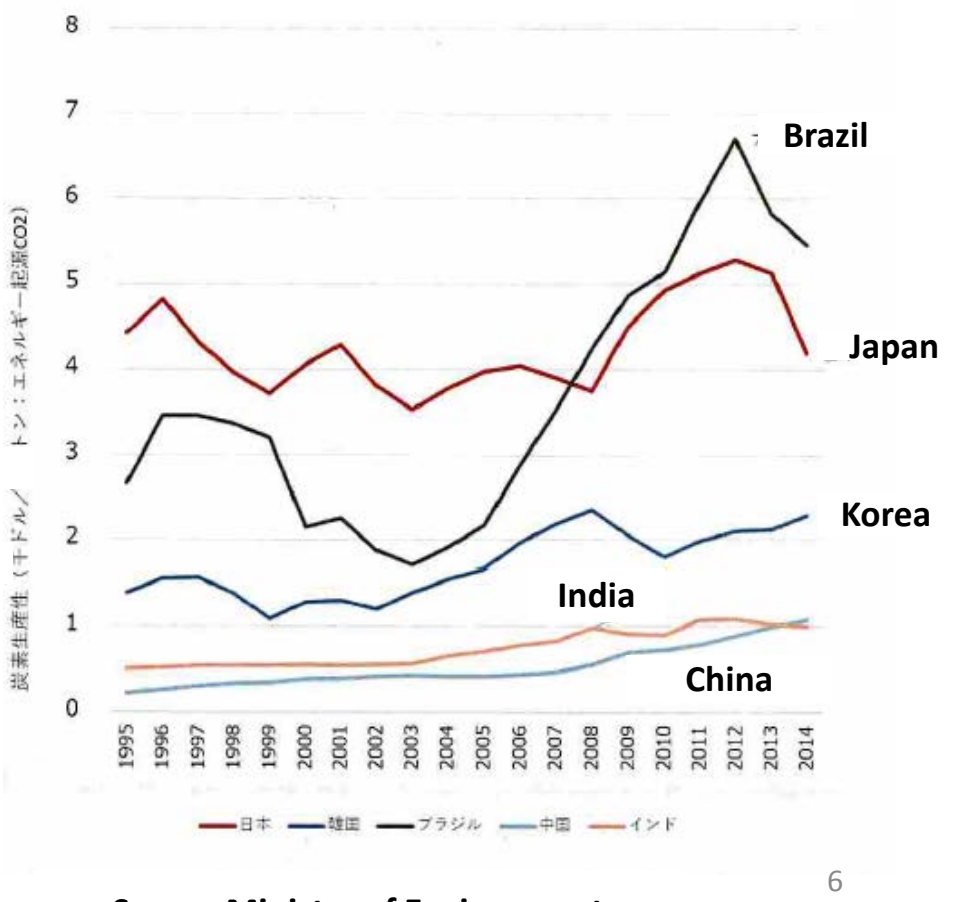
- ◆ Carbon Productivity = GDP $000 /ton GHG
- ◆ The higher “Carbon Productivity” is, the lower share of energy intensive industry is.
- ➞ Restructuring of industry structure. Leakage shall be remarked.

Japan and industrialized countries



OECD Statistics「National Accounts」、UNFCCC より作成

Japan and emerging economies



Source Ministry of Environment

Carbon Tax and Ex-post Evaluation of Incentives

1 Global Warming Prevention Tax ; from Oct. 2012

- ✓ **Tax rate : JPY289/CO2 ton (April 2016 -)**
- **Exclusion items: Coal for blast furnace Aviation etc.**
- ✓ **Expected outcome od reduction in 2020(simulation)**

	CO2 Reduction (%)	CO2 Reduction (ton)
Price effects	-0.2%	1.76 million
Revenue boost effects	-04 to -2.1 %	3.93 to 21.75 million
Total	-0.5 to -2.2%	5.69 to 23.5 million

2 Review of the performance of government subsidies(a part of review)

Program	Cost (JPY '000/tonCO2)	Remarks
Incentives for the adoption of advanced technology(Industry, 2015)	2.1	Incentives is provided to the adoption of technology but reduction is by whole company
Incentives for the adoption of advanced technology(non-Industry, 2015)	4.2	Same as the above
Geothermal heat recovery(non-electricity)	31 - 228	For hotel or houses
Low carbonization of island city	47.6	Seeks for energy independence by RE
Energy efficiency of at industry	5.2	Mostly small scale

What is “International Contribution”?

◆ Background
- ✓ “Climate Change is global issues and reduction of world emission is the purpose of the global flamework”.
- ✓ Japan’s emission account for 3-4% and contribution of domestic reduction to global reduction is small.
- ✓ Highest abatement cost.

◆ Emission trading or “international contribution”
- ✓ Emission trading; Robustness, conservativeness etc. are required for quantification of emission reduction and MRV and value add mechanism is complex . It is big burden particularly for small scale reduction.
- ✓ International contribution; MRV can be simple and practical and in line with business practices. However, what is the incentive mechanism?
- ✓ How shall we evaluate and encourage the reduction contribution through business activities?

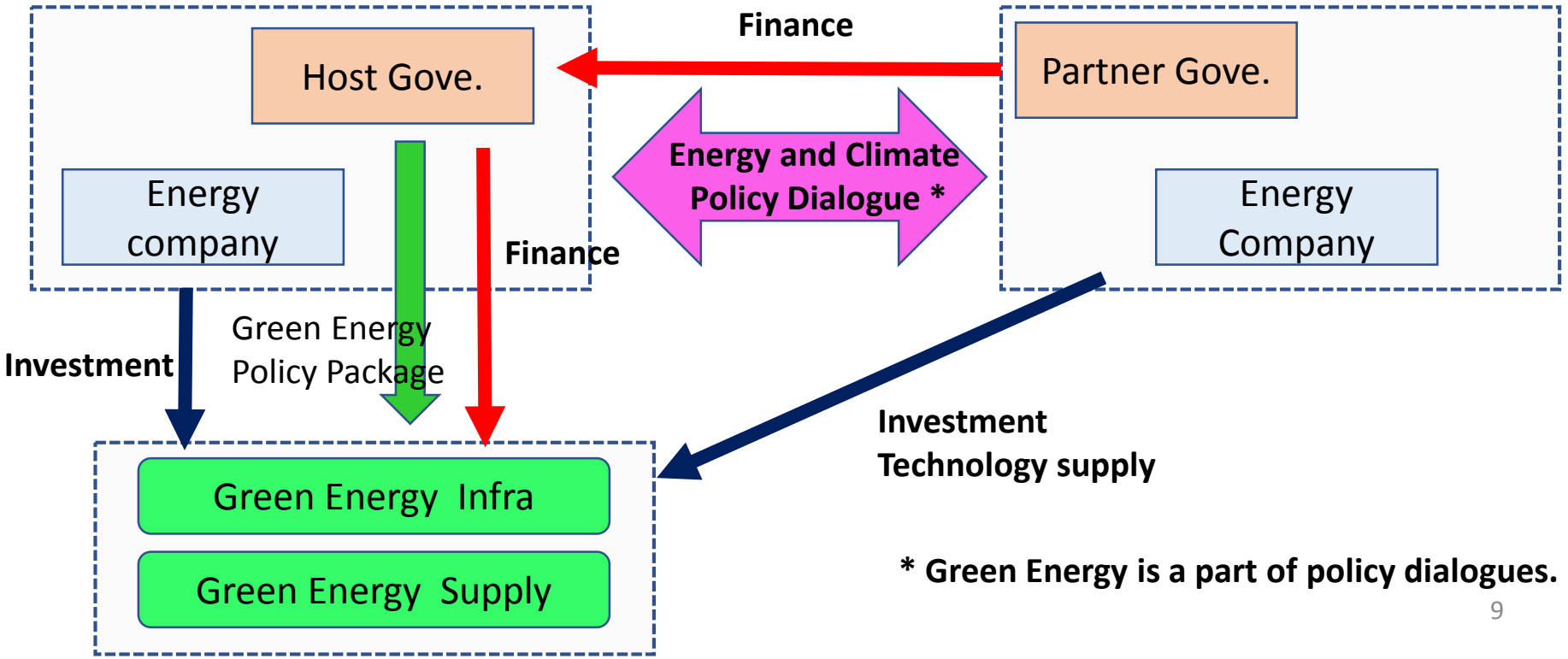
◆ Proposed policy measures
- ✓ Finance with MRV – combination with public finance (JBIC, JICA, NEXI)
- ✓ My proposal – Hybrid Finance and Carbon Club

Innovation of finance – Hybrid Finance for Green Energy

2 keys for “Green Energy” (low carbon energy. e.g. natural gas)

- Infrastructure network
- Comprehensive policy strategy for “competitive approach”

⇒ Policy Dialogue by national, regional and international players.



*** Green Energy is a part of policy dialogues.**

Regional Cooperation – Carbon Club

- Emission reduction target after 2020 following Paris Agreement. All countries needs o report emission and progress of target.
- National emission trading is under the consideration, like Thailand and Vietnam
- Connecting each “market” in the future would provide commercial benefit, by stabilization of carbon market and reducing abatement cost.

Step forward

1st : Common rule for carbon trading (standardized contract including settlement) and sharing experience including MRV for implementation.

2nd: Trading platform (information, matching and settlement)

3rd: Harmonization of climate and energy policy

Strengths **✓New market is emerging in ASEAN, China, Korea and Japan.** **✓Paris Agreement includes bilateral/national scheme**	**Weakness** **✓Difference of energy and climate change policy** **✓Less flexibility.**
Opportunity **✓Reduce political risk of Paris Agreement.** **✓ ▪ Improve market stability** **✓ ▪ Push ASEAN cooperation**	**Threats** **✓Sticks on CDM** **✓Earlier start of new integrated UNFCCC market.**