
Climate Change and Perspectives for Japan-EU Cooperation

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GHGs Emissions Trading Discussion in Japan

Hidenori NIIZAWA

University of Hyogo, Japan



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Multi-level Environmental Governance for Sustainable Development

contents

- recent developments of domestic policy in Japan
- discussions on emission trading in Japan
 - observation of EU-ETS



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Target Achievement Plan

- revised in March, 2008
- Domestic emissions trading is still one of the subjects of *immediate further* consideration.
- deepening and widening voluntary action
 - additional 18 MtCO₂ reduction
- Large amount of reduction by household and business is expected.



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GHGs emission estimating and reporting system since 2007 - preparation of new policy?

- industrial: site base
 - EU-ETS = installation base
- office: site base
- surface transportation: company base
 - like EU-ETS aviation proposal



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Voluntary action in 2007

- included in the Target Achievement Plan
- Governments review each *sector as a whole* since 1998.

- 35 industrial sectors
- target year : 2010

- absolute target : iron & steel,
- rate-based target : power, chemical, paper, cement, electrical machinery, oil,

- achieved: 24 sectors
- tightened: 21 sectors
- not achieved: 11 sectors



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Kyoto Mechanisms

voluntary action and Kyoto Mechanisms

industrial sector	emission in 2006*	unit of target	base	target	2006	planned purchase*
iron & steel	193	energy consumption (PJ)	2527	2274 (-10%)	2394	8.8
power	365	kg-CO ₂ /kWh	0.417	0.34 (-20%)	0.441	24.0

* MtCO₂ per year

planned governmental purchase
CERs, ERUs, greened AAUs
20 MtCO₂ per year



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Voluntary Emissions Trading Scheme

- Since 2005
 - 31 company participated in 2005
 - 58 in 2006, 61 in 2007
- subsidy of one third investment cost
 - incentive of voluntary commitment
- Subsequent one year is commitment period.
- 13 of 31 was buyer.



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Domestic CDM

- initiated by METI
- offset at sources not included in voluntary action
- issues
 - Baseline
 - boundary consistency with emissions trading in the future



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objections against emissions trading

- general
 - absolute cap restricts economy
 - difficulty of equitable initial allocation
- based on observation of EU-ETS
 - volatile price
 - lack of incentive for innovation
 - distortions



three channels of emission reduction

- abatement
 - output reduction or substitution
 - input reduction or substitution
-
- Cost-effective emission reduction can be achieved by equalizing marginal cost of those three channels.



allocation method

- *auction*
- free allocation
 - *grandfathering*
 - one time perpetual free allocation based on the actual emission, output or input in a past base year
 - no allocation for new entrants
 - allocation for closed plants
 - no ex-post adjustment



– current allocation

- free allocation based on current output or input multiplied by some emission factor

– updating

- free allocation based on the actual emission, output or input in a previous year or previous period



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distortions by initial allocation

- Purpose of emissions trading is cost reduction.
- Distortions increase the cost.
- auction and grandfathering : not distortional



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- current allocation : distortional
 - The incentive to reduce emissions by reducing output or input is foregone.
 - results in excessive high output or input use
- updating : distortional



auction in 2nd phase of EU-ETS

	Mt CO ₂	%
Germany	40.00	8.8
UK	17.23	7.0
Italy	11.28	5.8

✓ distributional concern (windfall profit) or efficiency concern (distortion) ?



auction in 3rd phase and beyond?



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conclusion

- ✓ Transition to an auction system is necessary.
- ✓ Increasing auction unilaterally by EU is difficult to agree because of competitiveness concern.
- ✓ We had better increase auction multilaterally.
- ✓ Part of revenue of auction can be used for adaptation internationally.



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niizawa@econ.u-hyogo.ac.jp



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