

Private Sector Perspective on GHG Market: role and its potentials of Korean Industry

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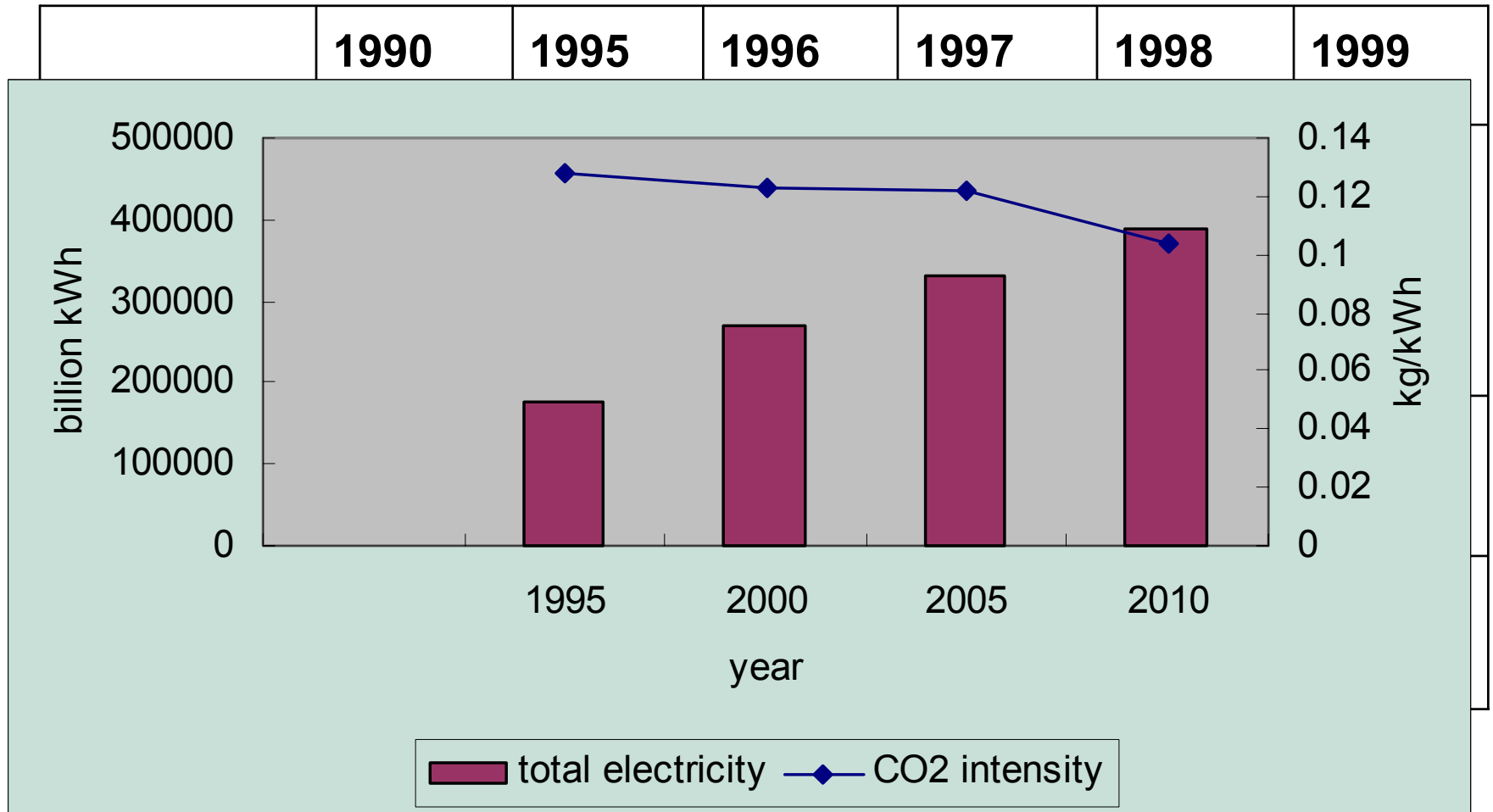
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Status of Korea in 3E(economy, electricity, and emissions)

	GNP		ENERGY/ELEC.		CO2 EMISSIONS		
	Billion\$	%	Quad. btu	Bill. kwh	mtc	Mtc/\$1990	Mtc/pop
CHINA	1130	7.5-8.0	31.8	1178	668.7	0.72	0.53
JAPAN	4800	1.5-2.0	21.7	1018	306.6	0.09	2.4
S. KOREA	406.7	8.2-10	7.4	221	107.5	0.25	2.3
N. KOREA	21.8	6.2	1.5	32	33.4	1.7	1.5
RUSSIA	593.4	3.2-5.0	26.0	772	400.1	1.1	2.7

Source: www.eia.doe.gov, *International Energy Trend 2000*

Emission trends in power sector



Korean primary energy consumption

	1997		1998		1999		Growth rate (%)
	toe	%	toe	%	toe	%	
COAL	34,799	19.3	36,039	21.7	38,155	21.0	5.9
OIL	109,080	60.4	90,582	54.6	97,270	53.6	7.4
GAS	14,792	8.2	13,838	8.3	16,849	9.3	21.8

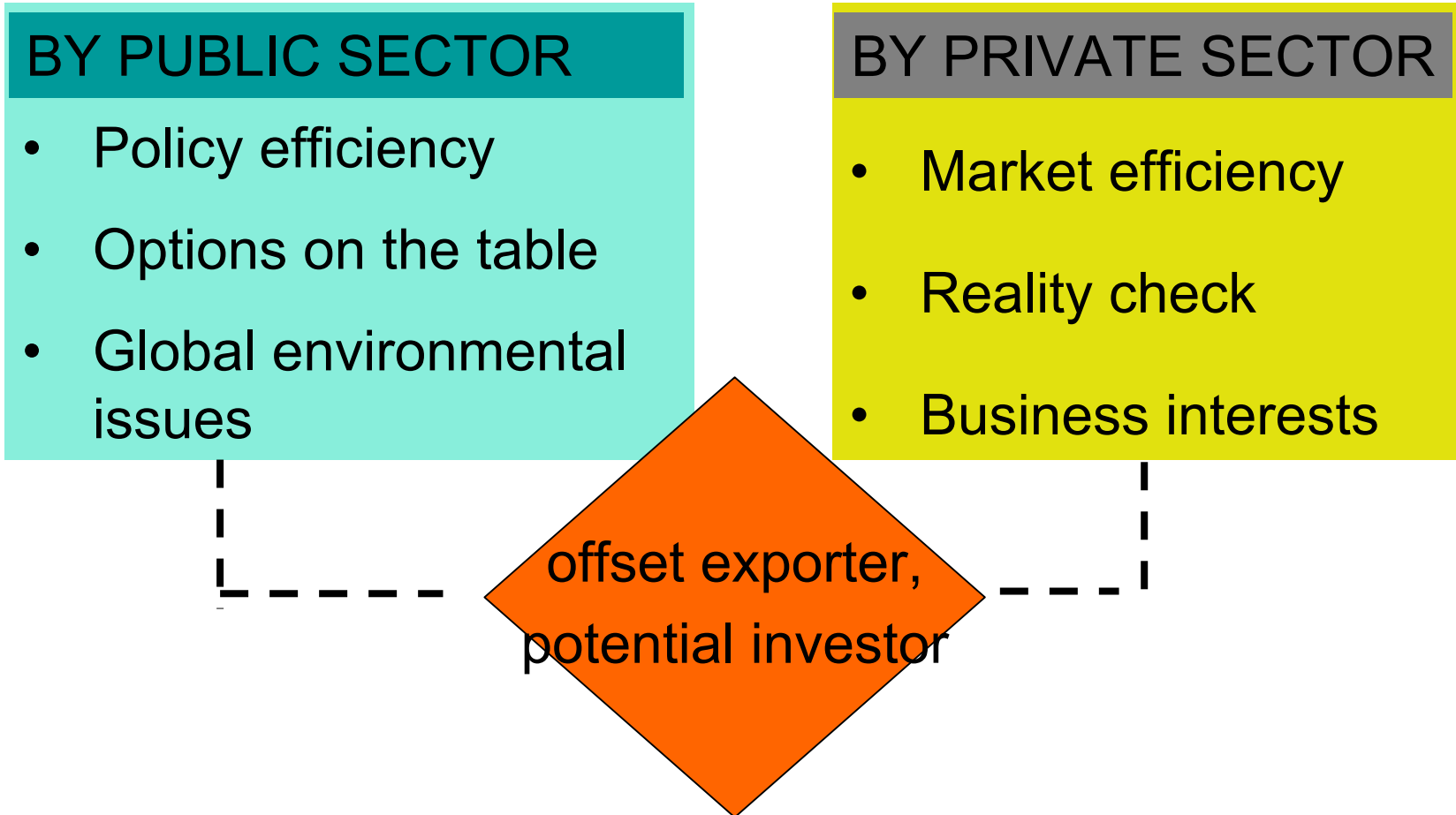
- dominates 9.3% share in primary energy consumption
- is expected to be 49.8toe(=14.9% share in primary energy) in 2020

Source: keei(2000)

Expectations

- as an exporter
- as an investor

Role allocation



Expectations from getting involved with KP implication process as an exporter

- To lessen financial burden on venturous projects
- Capacity building for sustainable development: Integration of Energy-environment policy framework by internalising externalities(taxes, trading scheme, etc)
- Technology transfer with risk sharing
- Lessons from the experience

What to expect from participation in GHG market as an investor

- To provide another business option
- To utilize financial instruments for risk management of energy commodities
- To obtain learning by doing experience
- To ease north-south economic cooperation: especially on infra development in North Korea

How to formulate market participation within Kyoto frame

- Bilateral arrangement with private sector involvement
 - Design bilateral Clean Development Mechanism
- Multilateral commitment in accordance with national registry
 - Participate in multilateral carbon fund with financial instruments
 - Coordinate public-private partnership(IOs, NGOs, academia)
 - Build electricity-emission trading platform in Northeast Asia

potentials

Evaluating CDM potential in Korea

		volume	tech	finance	econ	OVERALL
ENERGY EFFICIENCY	INDUSTRY	+	+	++	+	challenging
	ESCO	++	+++	+++	++	great
RENEWABLE ENERGY	WIND	+	++	++	+	moderate
	SOLAR	++	+	+++	+	moderate
LANDFILL GAS	WASTE	++	+++	++	++	great
FOREST / REFOREST	SEQUES TRATION	+	++	+	+	moderate

Source: BeSeTo-Korea and KEI, 2000

Projects under consideration by Korean gas industry

- Irkutsk long-distance gas pipeline project
- Kaesung-Seoul gas pipeline project
- Fugitive gas related project
- natural gas vehicle

Barriers vs. requirements

Barriers for being competitive in GHG market

- High share of energy-related GHG emissions: most of long-term energy projects are considered as BAU
- Small room for offset creation due to the significant energy efficiency improvement in industry over the last decade
- Relatively high abatement costs
- Uncertainty in status of government: non-Annex I for 1st commitment period and beyond?
- Lack of incentives for early action for industry

Market and institutional requirements to be more aggressive in the market

- Access to multilateral CDM(including south-south)
- Clearness on right to claim the offset credit and liability (investor on energy network? Or power company?)

Non-market requirements

- Being realistic to definition of baseline and additionality
- Building partnership between south and north with local experts involved
- Ensuring governance with legal foundations in national and international framework: Northeast Asia needs attentions

Conclusions

- Risks and opportunities surrounding GHG offset market coexist
- Rule should support global participation under strong compliance regime
- CDM potential in Korea seems to be moderate in quantity, but high in quality
- Market activities of Korea as an investor are expected to increase market liquidity